An Bord Pleanála

Inspector's Report ABP-311233-21

Development	10-year permission for proposed Shannon Technology and Energy Park consisting of power plant, battery energy storage system, floating storage and regasification unit, jetty, onshore receiving facilities, above ground installation and all ancillary structures/works.
Location	Townlands of Kilcolgan Lower and Ralappane, Ballylongford, Co. Kerry.
Planning Authority	Kerry County Council
Applicant	Shannon LNG Limited
Type of Application	Permission
Third Parties:	Adams of Glin Ltd, Shane Adams Amber Service Station – Patrick Horgan Ardfert Quarry Products Athea Community Council Ltd – Domhall deBarra Atlantic Economic Corridor Business Forum Ballybunion Community Forum, Donal Liston Ballydonoghue GAA Club

Ballylongford Boat Club – Noel Fennell

Ballylongford Enterprise Association

Ballylongford, Tarbert and Ballybunion Farmers Group

Ballylongford, Tarbert, Kilcolgan Development Group – Noel Lynch

Beale GAA Club, Brid Ni Ghriofa

Brian Leddin TD

Communities for Environment First – Eddie Mitchell

Costello Quarry Products

Cumann Luthchleas Gael Tairbeart, Joseph Coolahan

Doyle Shipping Group

Environmental Trust Ireland, Michelle Hayes

Eoghan Harris and Others

Friends of the Earth – Jerry MacEvilly and Others

Friends of the Irish Environment – Tony Lowes

Fr. Philip O'Connell

Futureproof Clare

Gas Networks Ireland

Great National South Court Hotel, David Byrne

Green and Gold Composting Ltd.

Green Party Kerry, Green Party Clare and Green Party Limerick

Greg Ryan

Heaphy Centra Ltd., Noel Heaphy

IDA

Irish Climate Science Forum, Jim O'Brien.

Irish Whale and Dolphin Group.

James Donovan – GAA Clubs Limerick and North Kerry.

Jerry O'Connell

Joan Murphy

John Fox

John Mulvihill

JP McElligett

Just Transition Greens, Oliver Moran.

Kennelly's Hardware Ltd., Michael Kennelly.

Kerry Mechanical Engineering Ltd, Fergus O Keeffe.

Kilcolgan Residents Association, Teresa Parkinson.

Kinvara Climate Action, Jen Fisher.

Lenamore Rovers FC

Limerick Chamber

Listowel Business and Community Alliance, Rose Wall.

Listowel Livestock Market ltd.

Mac Fuels and General Supplies Ltd., Eoghan McEnery.

McMunns of Ballybunion Ltd., Greg Ryan.

Mc Namara Contracting Ltd., Fiona Mc Namara.

Michael and Deirdre Finucane

Michael Dunne

Cllr. Michael Foley

Michael Mc Ellistrem

Moyvane Development Association, Noreen McEvoy and Others.

Noel Lynch

Not Here Not Anywhere - Aideen O'Dochartaigh

North East and West Kerry Development, Eamonn O Reilly.

North East West Kerry Farm Family Group, John Dalton.

O'Connor Hardware and Farm Supplies

O'Connor Kerry Haulage Ltd.

O'Rahilly Ballylongford GAA

Safety Before LNG, John Mc Elligott.

Senator Pauline O Reilly.

Shannon Estuary Business Alliance - Tim Kennelly

Shannon Foynes Port Company

Shannon Rangers GAA Club

Southern Scientific Services Ltd., Michael Murphy.

St. Marys Asdee GAA, Sean Doran.

Tadhg McEllistrem

Tarbert Development Association - Joan Murphy

Tarbet Island Maritime Club, John Mulvanhill.

Tarbert Traders Group, Brosnan Bridewell Stores.

Tim Hannon and Others

	Tim Kennelly Uplift People Powered Change.
Prescribed Bodies:	Minister for the Environment, Climate and Communications Transport Infrastructure Ireland (TII) An Taisce Development Applications Unit - Department of Housing, Local Government and Heritage. Inland Fisheries Ireland (IFI) Health and Safety Authority (HSA) Environment Protection Agency (EPA) Limerick City and County Council Clare County Council
Date of Site Inspection	08/06/2022 & 27/02/2023
Inspector	Conor McGrath SPI

Contents

1.0 Introduction

This report relates to a direct application to An Bord Pleanála by Shannon LNG for a development under section 37E of the Planning and Development Act 2000, as amended. It follows pre-application consultations between the applicant and the Board in relation to the proposed development (ABP-304007-19), and the subsequent determination by the Board that the proposed development would constitute a seventh schedule development within the scope of section 37A(2)(a), (b) and (c) of the Act and would constitute strategic infrastructure development.

The Application was accompanied by and EIAR and an NIS. Operation of the proposed development will be subject to an Industrial Emissions Licence from the EPA and the proposed development is also subject to the requirements of the COMAH Regulations. In this regard expert advice was sought and obtained by the Board from an external consultant, Byrne O'Cléirigh, and their report is contained as an appendix to this report.

2.0 Site Location and Description

The site comprises a stated area of 52ha on the southern shores of the Shannon Estuary, in the Townlands of Kilcolgan Lower and Ralappane, Ballylongford, approx. 5km west of Tarbert Co. Kerry. The site is predominantly in agricultural use but also includes an area of approx. 11ha within the estuary foreshore. Surrounding lands are generally in agricultural uses, with an area of coniferous forestry to the east. The lands comprise part of a larger landbank in the ownership of Shannon Commercial Enterprises DAC (formerly SFADCo).

Access is from the local road network L1010 (Coast Road) to the south, which provides a secondary route between Tarbert and Ballylongford, approx. 4km southwest of the site. From the road, ground levels fall somewhat before rising to a low intervening ridgeline, from which ground levels fall again toward the estuary. The north-eastern area of the site is more elevated and slopes relatively uniformly from approximately 35m OD to approx. 5m OD over the estuary shoreline. Maximum gradients in this part of the development site are c.1:20. To the west, the lands

generally fall from southeast to northwest. There is an area of wetter and partly overgrow ground in the northwestern part of the site and there are a number of disused farm buildings at a low level in this quarter of the site. The estuary provides deep water of >13m off the shore of the site and the rocky shoreline includes areas of shingle, backed by low clay cliffs in places. There is one residential property to the south of the site, Ralappane House, and a number of dwellings further south on the L1010. To the east of the site on Ardmore Point, are the remains of a WWII Coastal Defence Artillery Installation, known as Fort Shannon. This comprises a number of concrete structures located close to the shoreline including one structure within the application site.

Within the wider area, energy infrastructure is a significant feature of the landscape. Moneypoint power station lies approx. 2.5km north of the site in Co. Clare, while Tarbert power station lies approx. 4km east of the site. Kilpaddoge 220 kV substation lies approx. 3km to the east of the site, to which a number of high voltage overhead lines are connected. Wind energy projects within both Co. Clare and Co. Kerry form part of the background to views in this area.

There are a number of designated conservation sites located in the vicinity including:

- Lower Shannon candidate Special Area of Conservation (cSAC), 002165.
- Shannon-Fergus Estuary Special Protection Area (SPA), 00407
- Ballylongford Bay proposed Natural Heritage Area (pNHA), 1332.

3.0 Proposed Development

The proposed development primarily occupies the north-eastern portion of the overall site, covering an area of approximately 14 ha, and comprises three principle elements:

1. A gas-powered power plant capable of 600 MW of electricity generation;
2. A 120 MWh battery energy storage system (BESS); and
3. An LNG Terminal capable of offering up to 180,000m^3 of LNG storage capacity and regasification capacity of up to 22.6 million standard cubic metres per day (MMsm3/d) of natural gas.

The development is described in more detail as follows:

1. The Power Plant will principally comprise 3 no. turbine halls (approx. 6,175m^2 each, and approx. 30.145m in height), each containing 1 no. Combined Cycle Gas Turbine (CCGT). Each turbine hall will have capacity of approx. 200MW, providing a total installed capacity of 600MW, and will include:

- 2 no. gas turbines with generators;
- 2 no. heat recovery steam generators with 35m high exhaust stacks;
- A steam turbine with generator and exhaust duct;
- An electrical equipment room;
- An auxiliary control room;
- A Distributed Control System (DCS) room;
- A batteries room;
- A standby diesel generator room;
- An overhead crane and ;
- An auxiliary transformer.

Each turbine hall will be linked to an Air-Cooled Condenser (ACC) (approx. 2,711.9m^2 each, and 32.6m high). Each ACC will comprise:

- An electrical Power Distribution Centre (approx. 103.7m^2 and 4.25m high);
- A condensate collection tank;
- A condensate polishing equipment enclosure (approx. 103m^2 and 5m high);
- An air extraction and equipment enclosure (approx. 196m^2 and 10.25m high).

The Power Plant will also include the following ancillary structures:

- A 2-storey electrical (GIS) substation (approx. 1,096m^2 and 13.5m high);
- An air-cooled heat exchanger structure (approx. 1,292.5m^2 and 10m high), with sound retention wall;
- A workshop / store / canteen building (approx. 732m^2 and 8.013m in height);
- Auxiliary boiler building (approx. 204m^2 and 13.050m in height) and exhaust stack (approx. 32m high);
- A central control operations building (approx. 318m^2 and 6.41m high);
- An administration building (approx. 318m^2 and approx. 5.435m high);

- A single-storey firewater pumps enclosure (approx. 47m^2 and 7.185m high);
- An effluent sump;
- A water treatment building (approx. 630m^2 and 7.445m high);
- 2 no. raw / service / fire water storage tanks (approx. 24.15m in height);
- 2 no. demineralised water storage tanks (approx. 15.65m in height); and
- 3 no. generator step-up transformers (each approx. 104m^2 and approx. 6.004m in height), each with a sound retention wall.

2. A 120MW 1-hour (MWh)) Battery Energy Storage System (BESS) (approx. 5,552.7m^2 and 6.296m in height), comprising 27 no. lithium ion battery containers, approx. 4.5 MWh each, and ancillary power conversion system (PCS) skids, as well as a step-up transformer and sound retention wall.

3. A proposed Floating Storage and Regasification Unit (FSRU), with a Liquified Natural Gas (LNG) storage capacity of up to 180,000m^3, 292.6m long and 43.4m wide, with a scantling draft water line of 12.9m. When measured at mid-tide the highest point (its communication mast) will be 46.0m OD. The FSRU will include:

- LNG storage tanks;
- LNG vaporisation process equipment, to meet a natural gas send-out capacity of up to 22.6 million standard cubic metres per day (MMsm3/d), equivalent to approx. 250 gigawatt hours per day (GWh per day);
- Seawater intake in the hull approx. 2 m below water level; and
- Heat exchangers.

LNG will be delivered by a visiting LNG Carrier (LNGC) which will moor on the seaward side of the FSRU.

4. A piled jetty for the mooring of the FSRU, the deck of which will be set at +9 m OD (Malin Head), comprising:

- A hydraulic gangway tower;
- An unloading platform, with 2 no. Gas Loading Arms (GLAs);

- 8 no. mooring dolphins, 2 no. breasting dolphins, and catwalk;
- An access trestle, approx. 315m long with a 5m wide roadway, pipeway, pipe rack support, mobile crane platform, sliding gangway, pontoon capable of accommodating 4 no. tugs, maintenance platform, abutment and run-on slab;
- Ancillary structures including 2 no. power and control units, 2 no. elevated fire water monitors, 2 no. spill containment kits, lighting, CCTV system, and 1 no. temporary berth and associated 2 no. barges for construction purposes only.

5. Proposed onshore receiving facilities which will include:

- A main control building (approx. 318m^2 and 5.435m in height);
- A fuel gas metering enclosure (approx. 166m^2 and 5.725m high);
- A fuel gas regulating enclosure (approx. 166m^2 and 5.725m high);
- A fire water pump enclosure (approx. 47m^2 and 7.185m high);
- A warehouse / workshop building (approx. 504m^2 and 5.72m in height);
- N_2 generation package control building (approx. 288m^2 and 5.438m high);
- An electrical switchgear enclosure (approx. 234m^2 and 6.75m high);
- An electrical switchgear enclosure (approx. 90m^2 and 6.75m high);
- 3 no. Continuous Emissions Monitoring System (CEMS) enclosures (approx. 3.6m^2 and 4.4m in height each);
- 3 no. nitrogen compressor buildings (approx. 103m^2 and 5.4m in height each);
- A security building (approx. 63.8m^2 and approx. 3.657m high);
- 3 no. metering & regulating enclosures, including a kiosk enclosure (approx. 9m^2 and 3m in height), an analyzer enclosure (approx. 13.2m^2 and 3m high) and an instrument enclosure (approx. 13.2m^2 and 3m high);
- Ancillary structures include: 3 no. fuel gas heaters; 5 no. SUS transformers; 1 no. black start diesel generator; 3 no. generator breakers; 3 no. air cooled heat exchangers; 3 no. gas turbines with exhaust stack; 2 no. instrument air packages; 2 no. firewater storage tanks (approx. 16.15m in height);
- 3 no. nitrogen purification skid / absorbers; and 3 no. nitrogen evaporator / cold boxes.

6. An Above Ground Installation (AGI) which will facilitate the export of natural gas to the national gas transmission network via a previously consented 26 km pipeline (ABP Reg. Ref. PL08.GA0003 and PL08.DA0003). The AGI will be operated by Gas Networks Ireland and will include:

- 2 no. chromatograph buildings (approx. 14.19m^2 and approx. 2.7m in height);
- A control & instrumentation building (approx. 186.7m^2 and 4.29m in height);
- A metering building (approx. 480m^2 and approx. 5.175m in height);
- 5 no. boiler unit buildings (approx. 42.24m^2 and 8m high each including flues);
- A regulator building (approx. 243.6m^2 and 5.27m in height);
- A generator kiosk building (approx. 60.72m^2 and 3.25m high);
- Ancillary structures: 2 no. odorant tanks; heat exchangers; filtering; reverse flow valve arrangement; pig trap; and fuel gas let down units.

7. Ancillary structures / works, including:

- Demolition of a small farm complex and a former dwelling, a gun emplacement structure, a well, and a field boundary wall structure, all in ruins;
- 2 no. oil / water separators;
- 1 no. retaining wall;
- 1 no. firewater retention pond;
- Utility racks; utility sleepers; crossover platforms;
- Water supply connection;
- Pre-engineered / package biological wastewater treatment system and surface water drainage network, which will discharge to the Shannon Estuary;
- Car parking, including mobility and EV spaces, and cycle parking;
- Access off the L-1010 (Coast Road);
- 2 no. culverts; internal roadways; pre-cast concrete bridge over the Ralappane Stream;
- Temporary construction and site development works, include laydown area, earthworks to create a level platform at +18mOD for the main development footprint (excluding the proposed AGI and jetty), and landscaping; security fencing and gates, including 2.9m high chain link outer site perimeter fence, a 4m high inner site security fence, internal 2.4m high palisade fencing and

external 2.995m high weld mesh fencing for the AGI; CCTV cameras; telecommunications connections; and all lighting.

Operations

The Floating Storage and Regasification Unit (FSRU) will be moored at the proposed terminal / jetty on a long-term basis. LNG will be transported to the terminal on LNG Carrier ships (LNGC's), which will moor adjacent to the FSRU where the liquid will be unloaded into the FSRU storage tanks. The liquid will be converted back into gas by a regasification process for transmission either to the national gas transmission network via the AGI, or to the power plant.

No dredging works are required to facilitate the proposed development given the existing depth of water available. The application suggests that up to 60 no. visits by LNGC vessels are expected each year. Each berthing, unloading and unberthing operation is expected to take a number of days.

The fuel supply to the Power Plant will normally be from the LNG Terminal, but it can also be powered from the gas grid via reverse flow through the Above Ground Installation. The proposed power plant will generate electricity for its own needs and for the LNG terminal, as well as for export to the national grid via a 220 kV connection, which will be subject to a separate planning application. It is indicated that the proposed LNG Terminal would be operational all year round and could be operational before the power plant and the 220 kV grid connection are completed. Therefore, a medium voltage (10/20kV) electricity connection to supply power to the Terminal will be required, which will also be subject to a separate planning application. In the absence of the 220 kV or medium voltage grid connections, on-site back-up power generation, consisting of three 8 MW gas fired electricity generators will supply power to the LNG Terminal until the new Power Plant becomes operational.

It is indicated that the development has a flexible design that can easily transition to alternative low carbon fuels / hydrogen, subject to future planning applications and once the technology and public policies are established.

A ten-year permission is sought in this case and the application is accompanied by an EIAR and NIS. A high-level masterplan for the Shannon Technology and Energy

Park (STEP) has been prepared and is submitted for information with the application. This includes a (future) Data Centre Campus, which will be subject to a separate planning application.

Other Consent Processes:

The proposed development relates to an activity requiring an Industrial Emission Licence and a submission from the EPA has been received in relation to this application. A Greenhouse Gas Permit will also be required. The development would also constitute an establishment for the purposes of the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I.209 of 2015). A submission from the HSA has been received in this regard.

It is indicated that the Applicant has previously obtained a foreshore lease for a jetty and a foreshore licence for a storm water outfall pipe at the proposed location and the application acknowledges that these may require revision as a result of the proposed development.

Other relevant consent procedures include authorisation from the Commission for the Regulation of Utilities to construct a power plant, and a licence to generate electricity. As part of the licence approval, a Safety Case is also to be submitted for acceptance by the CRU.

It is noted that this development is not identified as a Project of Common Interest.

Further Information

On 05/07/2022 a request for further information was issued to the applicants in relation to a range of matters.

A response to this request was received on 11th August 2022. The response was circulated for comment and submissions from prescribed bodies and observers were received in respect thereof. The matters arising are considered in more detail in the relevant sections of the assessment below.

4.0 Planning History

4.1. Subject lands:

Pre-Application Consultation

- ABP-304007-19: Pre-application consultation request in respect of a liquefied natural gas (LNG) regasification terminal and 600MW power plant including an LNG jetty to facilitate the berthing of a Floating Storage Unit, onshore vaporisation process equipment and administrative and associated buildings, at Ballylongford, Co. Kerry. The Board determined that the proposed development would constitute Strategic Infrastructure Development.

Planning Applications

- PL08B.PA0002 Permission granted in 2007 for an LNG regasification terminal.
- PL08. PM0002 Permission granted in March 2013 for amendments to the phasing of the construction of the permitted LNG Terminal (condition no. 3) and other minor modifications. This was not considered to be material alteration.
- PL08.PM0014: A decision to grant permission to extend the duration of the permission for the LNG Terminal (condition no. 2) from 10 years to 15 years, was subsequently quashed by the High Court in 2020.
- PL08.PA0028: A 10-year permission for a combined Heat and Power (CHP) Plant was granted in 2013. This CHP plant was located at Knockfinglas Point, to the west of the CCGT plant proposed in the current application.
- PL08. GA0003: Permission granted in 2009 under Section 182C of Planning & Development Act 2000 (as amended) for a 26km gas pipeline to connect Shannon LNG Terminal to the existing natural gas network at Leahy's, to the west of Foynes, Co. Limerick. An associated acquisition order was made for the connection of the Shannon LNG Terminal to the Bord Gáis Eireann Network at Leahy's, Foynes, County Limerick under ref. PL08. DA0003.

4.2. Other cases in the wider area:

- ABP ref. ABP-307798-20: Permission granted for the construction of 400kV electricity transmission cables across the estuary between Moneypoint 400kV Electrical County Clare and the existing Kilpaddoge 220/110kV Electrical Substation, Co. Kerry, including work in the foreshore, and extension to the existing Kilpaddoge Substation and associated works.
- ABP-315838-23: Application to the Minister from SSE Generation Ireland Ltd for the construction of temporary a 150MW emergency electricity generation plant at the existing Tarbert power plant, under the Development (Emergency Electricity Generation) Act 2022. This development was to be operational by winter 2023/2024 and would have an operational a life of 5-years. The plant would be limited to a maximum of 500 operational hours per annum.

4.3. Foreshore Licence/Lease Applications relating to the development site:

Reference	Decided	Decision	Description
FS006224	20.04.2010	Granted	Drainage outfall.
FS006225	20.04.2010	Granted	Construction of a LNG jetty.
FS006227	20.04.2010	Granted	Construction of a materials jetty.
FS006228	20.04.2010	Granted	Construction of a seawater intake / outfall.

5.0 Policy and Context

Regard is had to the following national, regional and local policy documents:

National

- National Planning Framework 2018
- National Development Plan 2021-2030
- National Marine Planning Framework 2020
- The Climate Action and Low Carbon Development (Amendment) Act 2021
- Climate Action Plan 2023
- National Adaptation Framework (NAF) (January 2018)
- Sectoral Emission Ceiling Limits (Sept 2022)
- The National Energy and Climate Plan (NECP) 2021-2030
- Government Policy Statement on the Importation of Fracked Gas (May 2021)
- Policy Statement on Security of Electricity Supply (November 2021)
- National Energy Security Framework (April 2022)
- Review of the security of energy supply of Ireland's electricity – Consultation Papers (2022)
- National Ports Policy (2013)

Other Energy Sector Reports

- All-Island Generation Capacity Statement 2022-2031
- CRU Information Paper Security of Electricity Supply – Programme of Actions
- SEAI Energy Security in Ireland (2020)
- Long Term Resilience Study 2018

Regional and Local Policy

- Regional Spatial Economic Strategy for the Southern Region
- Strategic Integrated Framework Plan for the Shannon Estuary (SIFP)
- Kerry County Development Plan 2022-2028
- Listowel Municipal District Local Area Plan 2020 – 2026

5.1. National Policy

5.1.1. National Planning Framework 2018

National Strategic Outcome (NSO) 8 refers to the Transition to a Low Carbon and Climate Resilient Society. The single point of gas supply from the UK and Ireland's limited gas storage capacity, presents a risk in terms of security of supply and seasonal fluctuations in gas prices.

Ireland's national energy policy is focused on three pillars: (1) sustainability, (2) security of supply and (3) competitiveness. Ireland must reduce greenhouse gas emissions from the energy sector by at least 80% by 2050, compared to 1990 levels, while ensuring security of supply of competitive energy sources. The transition to a low carbon energy future requires (inter alia) a shift from predominantly fossil fuels to predominantly renewable energy.

National Policy Objective 55 promotes renewable energy use and generation.

5.1.2. National Development Plan 2021-2030

The NDP sets out investment priorities underpinning the implementation of the NPF. Chapter 13 deals with NSO 8. Strategic Investment Priorities include the delivery of c.2 GW of new conventional (mainly gas-fired) electricity generation to support a predominantly wind/solar electricity system and provide security of supply for when variable electricity generation is not sufficient to meet demand. The CRU and EirGrid will ensure the delivery of this conventional electricity generation capacity.

Ensuring continued security of energy supply is a priority at national level and within the overarching EU policy framework. In the short-to-medium-term, conventional (mainly gas-fired) electricity generation capacity will be critical to support the operation of the electricity system and provide security of supply and will need to be delivered by mid-decade. This conventional generation will spend much of its time in reserve for when needed. Therefore, while there will be significant investment in new generation capacity, the proportion of electricity generated by natural gas is expected to decrease from circa 50% to circa 30% by 2030.

The gas network will continue to have a vital role in providing energy to heat homes and businesses and to generate electricity. By 2030, over 90% of the natural gas will

come from a single source in Scotland. A review of the security of energy supply of Ireland's electricity and natural gas systems is underway, which will inform future policy in relation to security of supply and the need for further investment.

5.1.3. National Marine Planning Framework 2020

Protected Marine Sites Policy 1: Proposals must demonstrate that they can be implemented without adverse effects on the integrity of Special Areas of Conservation (SACs) or Special Protection Areas (SPAs).

Sea-floor and Water Column Integrity Policy 2: Proposals, including those that increase access to the maritime area, must demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise, or c) mitigate adverse impacts on important habitats and species.

Sea-floor and Water Column Integrity Policy 3 Proposals that protect, maintain, restore and enhance coastal habitats for ecosystem functioning and provision of ecosystem services will be supported.

Proposals must take account of the space required for coastal habitats, for ecosystem functioning and provision of ecosystem services, and demonstrate that they will, in order of preference and in accordance with legal requirements: a) avoid, b) minimise , or c) mitigate for net loss of coastal habitat.

Seascape and Landscape Policy 1: Proposals should demonstrate how significant impacts on the seascape and landscape have been considered. Proposals will only be supported if they demonstrate that they a) avoid, b) minimise, or c) mitigate significant adverse impacts, or else d) set out the reasons for proceeding.

In relation to Energy, Chapter 12 notes the objective to support the development of natural gas storage as appropriate in the context of the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems. Security of energy supply is a key energy policy objective.

Chapter 15 refers to Energy – Transmission. Objectives include:

- Support the development of natural gas transmission / import infrastructure where it is in keeping with the outcome of the review of the security of energy

supply of Ireland's electricity and natural gas systems and does not involve the importation of fracked gas.

Transmission Policy 4: Where possible, opportunities for land-based, coastal infrastructure that is critical to and supports energy transmission should be prioritised in plans and policies. Designation of land-based zones for the purposes of co-ordination and integration with relevant Marine Plans must be considered.

Transmission Policy 6: Subject to required assessments for the protection of the environment, and only where in keeping with the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems, and not involving the importation of fracked gas, additional proposals for natural gas transmission / import infrastructure should be supported.

Chapter 18 refers to Ports, Harbours and Shipping

Ports, Harbours and Shipping Policy 1: To provide for shipping activity and freedom of navigation the following factors will be taken into account when reaching decisions regarding development and use:

- The extent to which the locational decision interferes with existing or planned routes used by shipping, access to ports and harbours and navigational safety.
- A mandatory Navigation Risk Assessment;
- Where interference is likely: whether reasonable alternatives can be identified;
- Where there are no reasonable alternatives: whether mitigation in accordance with the principles and procedures established by the International Maritime Organisation can be achieved at no significant cost to the shipping or ports sector.

Ports, Harbours and Shipping Policy 4: Proposals within ports limits, beside or in the vicinity of ports, and / or that impact upon the main routes of significance to a port, must demonstrate that they have been informed by consultation with the relevant port authority, have carried out a navigational risk assessment and have consulted Department of Transport, MSO and Commissioners of Irish Lights.

5.1.4. Climate Action and Low Carbon Development (Amendment) Act 2021

The Act commits Ireland to the objective of becoming a carbon-neutral economy by 2050, reducing emissions by 51% by the end of the decade.

Section 4.8 of the amended act, requires the Minister and the Government to have regard to matters including the risk of substantial and unreasonable carbon leakage as a consequence of measures to pursue national climate objectives. S.6(12) defines 'carbon leakage' as the transfer, due to climate policies, of production to other countries with less restrictive policies with regard to greenhouse gas emissions.

Section 17 amends the principle act such that Section 15(1) requires;

"(1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

(a) the most recent approved climate action plan,
(b) the most recent approved national long term climate action strategy,
(c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
(d) the furtherance of the national climate objective, and
(e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

"Relevant body" means a prescribed body or a public body.

5.1.5. Climate Action Plan 2023 (21st December 2022)

Ireland is committed to achieving a 51% reduction in GHG emissions by 2030 and reaching net-zero emissions no later than 2050. CAP 2023 sets out the roadmap to deliver on Ireland's climate ambition, aligned with the legally binding economy-wide carbon budgets and sectoral ceilings agreed by Government in July 2022.

Section 5.2 identifies the five most important decarbonisation measures for Ireland, which include large scale deployment of onshore and offshore renewables. Shifting to an emissions pathway consistent with the sectoral emissions ceilings will require in the region of 22GW in renewable generation capacity overall by 2030.

An updated draft of the Long-term Strategy Climate Strategy is being prepared, which will be aligned with Climate Action Plan 2023, and both strategy and plan will support Ireland's climate ambition, as set out in the 2021 Climate Act.

Chapter 12 Electricity:

Key Targets

Target	**2025**	**2030**
Renewable Electricity Share	50%	80%
Onshore Wind	6 GW	9 GW
Solar	Up to 5 GW	8 GW
Offshore Wind	-	At least 5 GW
New Flexible Gas Plant	**-**	**At least 2 GW**
Demand Side Flexibility	15-20%	20-30%

Measures and Actions

The electricity sector faces an immense challenge to meet its requirements under the sectoral emissions ceilings. Electricity will play an important role in the decarbonisation of other sectors, including transport, heating, and industry. As emissions in 2021 were 9.98 MtCO2eq., the sector will need to achieve average annual emissions of circa 7.5 MtCO2eq. from 2022 to 2025.

Section 12.1.3 notes that transformational policies, measures and actions, and societal change are required to meet the sector's carbon budget programme and emissions ceilings. During the second carbon budget, Ireland's enormous potential for offshore wind will start to be realised. Rapid delivery of flexible gas generation is needed at scale and in time to replace emissions from coal and oil generation before the second carbon budget period.

12.1.4 Measures to meet the Challenge, include
Achieving further emissions reductions between now and 2030 requires a major step up across three key measures (including):

- Accelerate and increase deployment of renewable energy to replace fossil fuels;

- Deliver a flexible system to support renewables and demand including delivery of c.2 GW of new flexible gas-fired power generation and phasing out of coal and peat in electricity generation;

Table 12.5 identifies Key Metrics to Deliver Abatement in Electricity, including delivery of long-term storage.

Section 12.3.2 Accelerate Flexibility identifies key measures to ensure security of electricity supply and reduce emissions, including:

- ensure an adequate level of conventional dispatchable generation capacity and deliver at least 2GW of new flexible gas-fired generation.
- Expand the gas network to accommodate 2 GW of new gas-fired generation.
- Introduce local flexibility market arrangements to incentivise investment in commercial storage facilities at scale, providing local network capacity for low-carbon technologies.
- Develop a policy framework for electricity storage.

5.1.1. Long-Term Strategy on Greenhouse Gas Emissions Reductions (April 2023)

Section 1, Security of Supply, notes that in the transition to a climate neutral future, the pathway to decarbonisation must be underpinned by affordability and security in how we access and use energy. Having a reliable source of energy is vital for consumers. An Energy Security Package is in preparation with recommendations for strengthening Ireland's energy security with a view to adoption in Q2 2023

A number of security of supply gaps both in the short- and the medium-term have been identified. In the short term, we need to address capacity shortfalls in the electricity system and ensure adequate conventional generation is in place to support the elevated levels of renewable electricity being generated.

7.Pathways to Climate Neutrality by Sector

7.1 Electricity, notes that Ireland will continue its efforts to decarbonise the electricity sector by taking advantage of its significant renewable energy resources in a way that is competitive, cost-effective and ensures the security of our electricity supply. As Ireland decarbonises demand for electricity will increase and total demand for

natural gas will decrease. Deployment of renewable electricity presents challenges, as production is variable, and electricity is not easily stored as energy. Therefore, Ireland will focus on actions set out in the Climate Action Plan to increase the flexibility of the electricity system.

As set out in CAP 23, a long-term electricity system development strategy to achieve our 2050 objective may include the following:

• A policy to require future dispatchable generation to be zero carbon gas ready;

• The continued delivery of variable renewable electricity generation.

• The continued delivery of demand flexibility, to incentivise demand when low carbon variable renewable electricity is available.

• Further policies to incentivise the construction of short and long duration storage to provide for smoothing of electricity supply and demand between times of high variable renewable production and low variable renewable production.

5.1.2. National Adaptation Framework (NAF) (January 2018)

In accordance with the 2015 Act, the framework specifies the strategy for adaptation measures in different sectors and areas in order to reduce vulnerability to the negative effects of climate change and to avail of any positive effects. Sectors are identified for the development of adaptation plans.

5.1.6.1 Electricity and Gas Networks Sector Climate Change Adaptation Plan (2019)

Section 2.2 *Energy Sector Profile*, notes the overarching policy objective to ensure secure and sustainable supplies of competitively priced energy to all consumers. Section 2.3 *Electricity Infrastructure*, notes that a diverse range of power generation assets contribute to the energy mix, which is important in delivering energy security, reducing dependence on any one source.

Section 2.6 notes that reliability of the gas network depends on electricity supply to pumps and other electrical devices. In turn, the electricity network is reliant on gas for generation when renewables are not available. Section 3.1 *Electricity Generation,* notes the period to 2050 will see fundamental changes in technologies, with most

existing power plants having been retired. Variability of wind generation will increase requirements for backup generation / storage.

5.1.3. Policy Statement on the Importation of Fracked Gas (May 2021)

In order to implement the Programme for Government commitment that it does not support the importation of fracked gas, the Government has approved that pending the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems, it would not be appropriate for the development of any LNG terminals in Ireland to be permitted or proceeded with. The review is to focus on the period to 2030, in the context of meeting climate change commitments by 2050.

The 2021 Climate Action Plan will increase ambition in reducing Irelands greenhouse gas emissions, which will lead to a lower annual use of natural gas, thus reducing the potential risks to security of supply. This will be taken into account by the review.

The review will consider the appropriateness of the development of LNG terminals in Ireland and whether, if such terminals were to be developed, they should only be to provide a backup to existing supply infrastructure. It is only on the completion of this review that the Government can conclude, with certainty, the role of any future potential LNG terminals and the type, ownership and use of such terminals.

5.1.4. Policy Statement on Security of Electricity Supply (November 2021)

Section 2 identifies key challenges, including maintaining security of electricity supply throughout the transition to up to 80% renewable energy by 2030.

Much of the older, higher emission conventional generation is expected to close in coming years and will need to be replaced by generation that provides the same support and backup capability but that is also flexible, supporting high levels of wind and solar generation. As more wind, solar, storage and interconnection is added to the system, conventional generation is expected to operate less. Sufficient conventional generation capacity will still be required but will spend much of its time in reserve for when needed. Natural gas will form the vast majority of this conventional generation, for which there will be a continuing need beyond 2030.

Section 3 recognises the need for significant investment in additional flexible conventional electricity generation, grid infrastructure, interconnection and storage. The Government has approved that:

- the development of new conventional generation (including gas and gasoil / distillate-fired generation) is a national priority and should be permitted and supported to ensure security of supply and support the growth of renewable electricity generation.
- it is appropriate that existing conventional generation capacity, including coal, heavy fuel oil and biomass fired generation, be retained until the new conventional electricity generation capacity is developed.
- the connection of large energy users to the electricity grid should take account of the potential impact on security of supply and the need to decarbonise the grid.
- it is appropriate for additional electricity transmission and distribution grid infrastructure, interconnection and storage to be permitted and developed in order to support the growth of renewable energy and security of electricity supply.
- it is appropriate for additional natural gas transmission and distribution grid infrastructure to be permitted and developed to support security of supply.

5.1.5. National Energy Security Framework (April 2022)

The Framework addresses Ireland's energy security needs in the context of the war in Ukraine. It coordinates energy security work across the electricity, gas and oil sectors and sets out a 'whole-of-Government' response. The Framework takes account of the need to decarbonise society and the economy, and of targets set out in the Climate Action Plan to reduce emissions.

Section 2.3.2 *Natural Gas*, notes that Ireland's dependency on imports from a single source in the UK, along with the increasing reliance of the electricity system on natural gas supplies, is the subject of a review of security of supply.

In terms of security of energy supply, Section 6, notes that imports from the UK account for circa 75% of our natural gas needs. As a result, the level of natural gas storage in the EU and UK, and the framework for cooperation, is vital for ensuring continued secure supplies of natural gas over the coming winter.

Section 6.4 Electricity Supply, notes that any disruption to natural gas or oil supplies has the potential to disrupt the generation and supply of electricity. A specific focus is placed on the resilience of the electricity system to disruptions in natural gas supply.

Section 7.3 Diversifying Fossil Fuel Supplies, notes the need for a review of security of supply, to consider risks to both natural gas and electricity supplies, and measures including the need for additional capacity to import energy (such as LNG), energy storage, fuel diversification and renewable gases (such as hydrogen). The completion of the review is a key priority.

5.1.6. National Energy & Climate Action Plan 2021-2030

The NECP was prepared in accordance with Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, to incorporate all planned policies and measures identified up to the end of 2019 and which collectively deliver a 30% reduction by 2030 in non-ETS greenhouse gas emissions (from 2005 levels).

The Plan sets out the strategy in respect of five dimensions together with policies and measures to ensure that these objectives are achieved.

Section 2.3 refers to 'Dimension Energy Security' and notes that following the exit of the UK from the EU, we will no longer be physically connected to the EU Internal Energy Market. Peat and coal will no longer be part of Ireland's electricity generation mix by 2025. This will increase reliance on natural gas, reduce fuel mix diversity and impact on security of supply. A review of the security of energy supply of Ireland's natural gas and electricity systems is being carried out in order to ensure a sustainable pathway to 2050.

In relation to natural gas, challenges include a high import dependency, lack of import route diversity, and declining indigenous supply. In addition, Ireland has a small synchronous island electricity system and increasing integration of renewable energy sources. Given this, our objectives are to:

- Ensure sufficient flexibility to maintain energy security of supply and facilitate the integration and transition to clean energy.
- Support further electricity interconnection.

- Support projects for energy security, consistent with national and EU climate policy objectives, through the PCI process and EU funding mechanisms.

Section 2.4.2 notes that that the gas and electricity networks must be planned and developed to smooth the transition to a low carbon economy. The increased penetration of wind energy places an increased reliance on Ireland's gas network.

Table 12 refers to Shannon LNG as being on the fourth PCI list (since superceded).

5.1.7. Review of The Security of Energy Supply of Ireland's Electricity And Natural Gas Systems (Sept 2022)

(a) Consultation Paper - Sept 2022

On 19th September 2022, the Dept of the Environment, Climate and Communications published a consultation paper to help inform the Department's review of the security of energy supply of Ireland's electricity and natural gas systems. Technical reports were prepared by external consultants to support the consultation paper. Section 5.2 notes that the outcome of the review would supersede the *Policy Statement on the Importation of Fracked Gas*. The consultation period closed in October 2022 and the outcome of the review and consultation process will be brought to Government for consideration.

Section 6.1 describes demand and supply side risks in terms of security of electricity and gas supply. Five Shock Scenarios are described and modelled. Additional modelling was carried out to consider the impact of a complete suspension of Russian pipeline exports of natural gas to European markets. Section 7 describes 19 no. long-listed mitigation options which were then short-listed based on screening against the following criteria:

- Consistency with the Climate Action Plan.
- Security of Supply Impact, &
- Feasibility of implementation.

The short-listed options are described as follows:

Gas mitigation options:	Electricity Supply Mitigation Options:
Gas storage facility	Additional electricity interconnection

(non-commercial, strategic)	
Floating LNG FSRU (non-commercial, strategic)	Additional electricity storage – pumped hydro
Gas Mitigation Package (storage, renewable gas, green hydrogen and demand side response)	Additional generation capacity – (dispatchable low- carbon (e.g., biomass)
Onshore Energy Storage Project	Increased secondary fuel storage at natural gas power stations
Natural Gas Demand Management	Conversion of a gas fired power plant to hydrogen
	Electricity Mitigation Package (DSR and Batteries)

Section 8 identifies other tools and instruments including joint planning between different agencies, regular energy security reviews and international agreements within the EU and with the UK.

(b) Technical Analysis of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems, Department of the Environment, Climate and Communications (16 September 2022) CEPA

5 no. core security of supply shocks are assessed. Modelling identifies issues in gas supply only in Shock Scenarios 4 and 5 where there is a full disruption to both Moffet / Scottish pipelines. Electricity customers remain unaffected under Scenario 4, due to a combination of relatively high wind generation and the use of secondary fuel at gas-fired power stations.

Section 5 assesses a Disruption to Russian Pipeline Gas Supplies, which results in a reduction of aggregate gas consumption across Europe. Remaining gas supplies are sufficient to mitigate all physical impacts on protected consumers. The disruption can result in a physical gas shortage for Irish gas consumers and electricity consumers depending on the scenario and sensitivity.

The final set of short-listed options and their characteristics include (inter alia)the following:

Gas mitigation Option	Rationale for short-listing
Floating LNG FSRU (back-up)	• A floating LNG terminal could be leased for a limited number of years with the terminal being transported elsewhere at the end of the leasing period. • Leasing a floating LNG terminal would deliver security of supply benefits without committing to a long-term gas dependency while reducing the risk of stranded assets. • The risk of importing fracked gas would be limited to periods in which the back-up facility is utilitised.
Gas storage facility (back-up, pipeline gas)	• As a back-up storage facility would only be used in the event of a shock. It would have a minimal impact on future market pathways whilst guaranteeing availability of gas in the event of a security of supply shock.
Electricity Mitigation Options	
Additional electricity storage – batteries	• May not mitigate a long-sustained shock but may help mitigate relatively small but sustained electricity supply shocks by profiling demand to periods of high-RES output. • Could support RES penetration.
Hydrogen	• Consistent with CAP although uncertainties with deployment.

Long-listed options identified but not shortlisted (Appendix B), include the following:

Gas Mitigation	Rationale for not short-listing
Fixed LNG terminal (commercial operation)	• The introduction of commercial LNG would likely result in the importation of fracked gas, contrary to gov policy. • The additional energy requirements associated with LNG relative to natural gas supply may adversely impact on decarbonisation targets. • As storage stocks would be driven by market fundamentals, there would be no guarantee that stored gas volumes would be sufficient to cover a supply shock. This risk could be partially mitigated by requiring the LNG facility to hold a min volume of LNG in reserve to meet any emergent security of supply shocks.
Floating LNG FSRU (commercially operated)	

Fixed LNG terminal (back-up)	• Low utilisation would imply a high cost per unit of gas imported. • Risk of becoming a stranded asset if/when the security of supply shock has been mitigated through other means.
Gas storage facility (commercial)	• As storage stocks would be driven by market fundamentals, there would be no guarantee that stored gas volumes would be sufficient to cover a supply shock.
Electricity mitigation option	
Additional conventional generation capacity – gas fired	• The mitigation option would be less effective against power sector risks related to unavailability of gas supplies (other than as a result of secondary fuel requirement).

The short-listed options were considered against the identified shock scenarios 4 & 5. Modelling indicates that a strategic LNG FSRU is the only short-listed gas option that can fully mitigate all security of supply impacts and unserved demand for all consumer groups over the assessed disruption periods in both Scenario 4 and 5.

The assessment of the risk of disruption to Russian gas supplies in respect of a strategic floating LNG facility finds that during periods of supply disruption, LNG imports to Ireland would displace imports of pipeline gas from the UK. The interconnected nature of European markets is such that increased supply to one country may have benefits for the wider European market as gas flows will follow market prices and demand. Similar findings are made in respect of the strategic gas storage option.

5.1.8. National Ports Policy (2013)

Shannon Foynes is identified as a Tier 1 Port, which are defined as ports which are responsible for 15% to 20% of overall tonnage through Irish ports and have clear potential to lead the development of future port capacity in the medium and long term. Shannon Foynes Port Company was identified as the largest bulk port in the country and its continued commercial development is a key strategic objective of the National Ports Policy.

5.2. Other Energy Sector Reports

5.2.1. All-Island Generation Capacity Statement 2022-2031

Capacity statements set out expected electricity demand and the level of generation capacity required, over the next ten years. The 2022 statement predicts a challenging outlook with capacity deficits identified to 2031. In the short term, deficits will increase due to the deteriorating availability of power plants. In later years the deficits are expected to reduce as new capacity comes forward through the SEM capacity auctions. Further new electricity generation will be required to secure the transition to high levels of renewable electricity. A balanced portfolio of new capacity is required, including new cleaner gas fired generation plant which are renewable gas ready, especially at times when the wind and solar generation is low. This is crucial to ensuring Ireland meets its carbon budgets to 2030 for the electricity sector.

Section 4, Meeting the challenges, notes that actions to be delivered under the Commission for the Regulation of Utilities (CRU), programme of work include the delivery of over 2GW of enduring flexible gas-fired generation capacity, which is renewable gas ready, by 2030.

5.2.2. CRU Information Paper, Security of Electricity Supply – Programme of Actions (Sept 2021)

Key elements in the programme of actions, include:

- Delivery of new, enduring, capacity, complementary to renewable electricity and central to our low carbon transition.
- The procurement of additional temporary emergency generation capacity.
- The extended availability and operation of older generation capacity otherwise expected to retire in this timeframe.

Temporary measures will be unwound on delivery of other measures. The core element is the procurement of 2GW of flexible gas-fired plant, as an enabler of the decarbonisation of the electricity system, particularly as we accelerate the decarbonisation of the natural gas network.

5.2.3. SEAI Energy Security in Ireland (2020)

Energy import dependency is described as one of the simplest and most widely used indicators of a country's energy security, with indigenous energy sources generally more secure than imported energy.

Natural gas accounted for 31% of Ireland's primary energy requirement in 2018. Gas markets have become progressively more globalised due to the increase in LNG trade and the completion of pipeline projects linking producers with new markets.

In 2018, GNI and EirGrid concluded that Ireland met the EU N-1 standard on a regional basis with the UK. The twinning of the interconnector to Moffatt in Scotland improved the N-1 position. While gas will continue to be required in Ireland's electricity generation and heat sectors to 2030, the future beyond 2030 is less certain.

In its 2019 review of Ireland's energy policies, the IEA concluded that developing LNG import facilities would substantially improve gas security in Ireland by providing access to the global LNG market, but emphasised the requirement for cost-benefit analysis when deciding on public investment in infrastructure.

5.2.4. Long Term Resilience Study 2018

This GNI and Eirgrid study was commissioned by the Department of Communications, Climate Action and Energy to examine Ireland's resilience to prolonged gas disruption and make recommendations on futureproofing its gas supply. Potential impacts on the electricity system as a result of gas supply disruptions are also considered.

The gas network is well equipped to deal with forecast peak demand. There are opportunities to build greater flexibility and resilience into the system. The EU-defined N-1 calculation assesses how the gas network would be affected by the loss of its largest piece of gas infrastructure and what percentage of gas demand could be served in such an event, on a day of high gas demand. Ireland met the requirements on a regional basis when assessed alongside the UK. Given uncertainty around Brexit, the study noted the importance of this arrangement being reviewed. Work was ongoing on a project to complete the twinning of the gas interconnector to Scotland to improve the security of gas supplies (since completed).

A major disruption would see little impact on most gas users, and power generation would remain secure due to other types of generation and backup fuels. The report considers ways to improve security of supply. Initial analysis shows that the most economical option is a floating LNG terminal, along with bio-methane integration.

Key recommendations included:

- Conduct a detailed cost-benefit analysis for a floating LNG terminal as the most economically advantageous option to improve resilience of gas supply. However, the social benefits do not outweigh the costs and a detailed assessment of private benefits is required to determine whether such an investment would provide a broad societal benefit and a return for investors.
  A floating LNG terminal would provide a direct connection to the global LNG market and would allow diversification of gas supply. Greater exposure to the LNG market comes with price risk, however, which could result in fluctuating usage of any LNG terminal. This variability of utilisation will impact on cost recovery.
- Monitor opportunities for permanent gas storage in Ireland and gas storage operations in the rest of Europe.

5.3. Regional and Local Policy

5.3.1. Strategic Integrated Framework Plan for the Shannon Estuary (SIFP)

The 2011 Framework Plan was commissioned by Clare, Kerry and Limerick City and County Councils, and Shannon Development and Shannon Foynes Port Company, as a marine and land use plan to facilitate and promote future marine related developments. The SIFP has been incorporated into the County Development Plan of these counties.

Nine Strategic Development Locations (SDL's) are identified (A-I), as likely to generate the greatest potential opportunities in terms of economic and social aspirations, while safeguarding the essential integrity of the natural environment. Their identification was influenced and informed by SEA and Habitats Assessments.

Section 5.4.4 Strategy for Marine Related Industry / Industry, notes the aim to capitalise on the deep-water potential and existing port and maritime infrastructure,

by facilitating and encouraging the environmentally sustainable development of maritime industries at appropriate locations …..

Two definable clusters of marine related industry in the Estuary emerged, including one concentrated broadly around Moneypoint / Tarbert / Ballylongford.

Development Objective MRI 1.1: To safeguard the role and function of the Strategic Development Locations ……., and encourage their sustainable growth, development and appropriate diversification for economic development in accordance with regional and national priorities and subject to the environmental objectives.

5.4.4.8 Strategic Development Location H: Tarbert-Ballylongford Landbank

This SDL is identified and prioritised for marine related industry. It offers significant potential for future development, with the (permitted) LNG acting as a catalyst for additional industrial development. With the extension of the natural gas network and existing electricity distribution infrastructure, the SDL lends itself to sustainable development as a power generation centre for the region.

Objectives MRI 1.2.13: To promote and facilitate the sustainable development of these lands for marine related industry, utilising the presence of deep water, existing infrastructure, natural resources, and waterside location to harness the potential of this Strategic Location. Alternative proposals for general industrial development, compatible / complementary with marine related industry and the level of flood risk, and those creating a synergism with existing uses, and contributing to the development of a strategic energy hub at this location will also be encouraged.

Four Strategic Energy Sites are identified in section 5.6.4, including the Tarbert-Ballylongford Land Bank.

Objective ERG 1.2: To safeguard the role and function of the strategic energy infrastructure existing within and adjacent to the Shannon Estuary, and encourage the further sustainable development of energy, enterprise and industry within these identified strategic energy locations, subject to the requirements of the Habitats & Birds Directive, Water Framework Directive, and all other relevant EU Directives.

Objective ERG 1.3: To facilitate the further development of energy infrastructure at identified strategic energy sites and encourage appropriate diversification projects

subject to compliance with sustainable planning, and the requirements of the Habitats & Birds Directive, Water Framework and all other relevant Directives.

5.3.2. Regional Policy - Regional Spatial Economic Strategy for the Southern Region

Section 3.8 recognises and supports the economic role and potential of settlements as economic drivers in a potential North Kerry / West Limerick / Clare network, connected with the Shannon Estuary and Shannon Foynes Port. Their attributes extend to include the Shannon Integrated Framework Plan (SIFP) area and strategic locations identified under the SIFP as a Shannon Estuary Coastal Network.

RPO 79 relates to the Shannon Estuary and Other Harbour Plans as follows:

(a) The RSES recognises the national and international importance of the Shannon Estuary, its potential to attract multinational development and the work undertaken to progress its promotion and development. It is an objective to support and promote the delivery of the Strategic Development Locations.
(b) To promote the SIFP initiative as a good practice model for the Southern Region.
(c) To support the promotion, marketing and seeking of financial and expertise support for the SIFP and specific projects emerging therefrom.
(d) Such initiatives shall be subject to the relevant environmental assessment requirements including SEA, EIA SFRA and AA as appropriate.

The SIFP is identified as a good practice example, identifying 1,200ha for marine related development (9 no. Strategic Development Locations) building on existing industry connectivity, synergy and existing infrastructure to create a more sustainable and attractive network for investment. Significant tracts of land have been zoned because of the preparation of the SIFP, presenting prime opportunities for employment generating development.

“the zoned lands at Tarbert / Ballylongford in North Kerry with extant planning for strategic energy and marine related industry including the Shannon Gas LNG project are a further example of the regional and national potential of the location”.

RPO 142 refers to ports and the objective to strengthen investment to deliver actions under the National Ports Policy and investment in sustainable infrastructure that:

(e) Support the sustainable development of the 9 no. strategic development locations adjoining sheltered deep-water in line with recommendations of SIFP;

Section 8.3 addresses the Tarbert-Ballylongford lands as an 'Energy Hub Case Study', anticipating that the (previously permitted) project would position the area as a major National Centre for CHP and facilities requiring access to deep water with substantial requirements for electricity and natural gas.

RPO 219 New Energy Infrastructure, supports the sustainable reinforcement and provision of new energy infrastructure to ensure the energy needs of future population and economic expansion within designated growth areas and across the Region can be delivered in a sustainable and timely manner and that capacity is available at local and regional scale to meet future needs

RPO 225 includes the objective to:

(e) Strengthen the gas network sustainably to service settlements and employment areas in the Region, support progress in developing the infrastructure to enable strategic energy projects in the Region. An example is the Tarbert / Ballylongford landbank in Co Kerry which is a strategic development site under the SIFP ….

5.3.3. Kerry County Development Plan 2022-2028

[Note: The Kerry County Development plan was adopted on the 4th of July 2022 and came into effect on the 15th of August 2022.

Chapter 2.0 *Climate Change & Achieving a Sustainable Future*, includes objective KCDP 2-2, to facilitate and support national climate change objectives contained in the Climate Action Plan 2021 and in the KCC Climate Change Adaptation Strategy 2019-2024 and successor strategies….

Chapter 9 *Economic Development - Sustainable Economic Development and Climate Action*.

Section 9.4.2 notes the Council supports the economic role and potential of the established towns as economic drivers in a potential North Kerry/West Limerick/Clare network connected with the Shannon Estuary. This includes the Shannon Integrated Framework Plan (SIFP) area and strategic locations identified

under the SIFP as a Shannon Estuary Coastal Network, the Tarbert/Ballylongford Landbank.

Objective KCDP 9-8: Support the further development of the Kerry Hub & Knowledge Triangle and the North Kerry / Shannon Estuary Networks and their potential to create substantial economic benefit as well as collaborations within these networks to create economic benefits.

Section 9.6.1.1 Shannon Estuary, notes the strategic development locations (SDL's) identified in the SIFP. The Tarbert / Ballylongford SDL is recognised for its potential as an Energy Hub and for industrial development at a regional and national level. There are 430.6 Hectares of zoned lands available with access to deep water.

Policy KCDP 9-23 supports and promotes the delivery of these SDL's.

Policy KCDP 9-25 promotes and facilitates the sustainable development of the Tarbert-Ballylongford landbank for industry. Proposals for marine related industry, general industrial development, and particularly those industries creating a synergism with existing uses and contributing to the development of a strategic energy hub at this location will also be encouraged.

KCDP 9-29 It is an objective to protect sites of significant historical military importance along the Shannon Estuary, including …… the core area of Fort Shannon at Ardmore point.

9.7.9 Marine Sector

Policy KCDP 9-82 Ensure that proposals for economic development associated with the marine sector are cognisant of the sensitivities of Kerry's coastal locations and that relevant environmental issues are appropriately considered.

Policy KCDP 9-83 Support the sustainable growth and development of the marine sector and marine economy through the implementation of the National Marine Planning Framework and by facilitating marine related development at appropriate locations in the towns, villages, ports and harbours of the county.

Chapter 11 refers to the Environment. Policies KCDP 11-1, 11-2 and 11-3 refer to the protection, maintenance and conservation of designated nature conservation sites.

Policy KCDP 11-47 also refers to the support and implementation of the objectives of the National Marine Planning Framework 2021. Policy KCDP 11-48 seeks to ensure alignment, and consistency between land use and ocean-based planning, and to ensure co-ordination, which supports the protection of the marine environment and the growth of the marine economy.

Chapter 12 Energy

KCDP 12-1 supports and facilitates the sustainable provision of a reliable energy supply, with emphasis on increasing energy supplies from renewable resources.

KCDP 12-3 facilitates the sustainable expansion of the gas network, including the facilitation of a gas importation facility in the Tarbert/Ballylongford Landbank.

KCDP 12-7 supports and facilitates the sustainable development of enhanced electricity and gas supplies, additional electricity generation capacity, and associated networks, to serve the existing and future needs of the County.

KCDP 12-36 facilitates the sustainable development of Battery Storage systems in appropriate locations at or adjacent to existing energy infrastructure.

The area is not subject to any landscape sensitivity designations. There are Protected Views and Prospects eastwards from the L-1004 local road between Carrig Bridge and Carrig Island to the west of the application site.

5.3.4. Listowel Municipal District Local Area Plan 2020 – 2026

Strategic Development Objective OS-08: Support the sustainable development of the land zoned within the Tarbert / Ballylongford area in accordance with the policies and objectives of the SIFP and County Development Plan.

Section 2.3.3 refers to the Development Plan zoning of the Tarbert / Ballylongford Land Bank for industrial uses including large scale marine-related industry and enterprises which require deep water access. The plan notes that previously permitted developments have potential for substantial employment and to act as a catalyst for future industrial development and employment.

The LAP notes that the key objective of the SIFP is an integrated and balanced approach to facilitating economic growth in all areas of opportunity. Strategic sites for

marine related industry in the SIFP area including the Ballylongford Land Bank, are critical to the future development potential of marine and energy related industry.

Kerry Co. Co. recognises the Shannon Estuary as a major shipping artery and the potential of the Tarbert/Ballylongford landbank to be sustainably developed for industry in compliance with the EIA and Habitats Directives.
Objective LS-T-01: Sustainably harness the economic potential from the provision of a secure natural gas energy supply to the region.

In respect of Tarbert, the plan includes the following objectives, as illustrated on the objectives map for the settlement:

TT-OS-02 Provide for the sustainable development of a (backland) public realm space with parking facilities.

TT-I-01 Facilitate the development of the Tarbert Inner Relief Road.

TT-I-02 Seek the provision and improvement of footpaths in the town as required.

TT-I-03 Facilitate the preparation of a Traffic Management Plan for Tarbert. This plan should look at both vehicular movements in the town along with improvements to pedestrian infrastructure and safety.

6.0 Planning Authority Submission

A submission from Kerry County Council pursuant to s.37E(4) and (5) of the Planning and Development Act 2000, as amended, was received on 17/11/2021. The submission contains a cover letter, a planning report and copies of internal technical reports, and draft minutes of a meeting of Kerry County Council in relation to the proposed development.

The planning report notes that the L1010 is currently being upgraded. Section 2.3 describes Kerry / North Kerry, as an energy hub of national importance due to the presence of conventional and renewable energy developments and transmission infrastructure. The assessment section makes the following points:

Principle

- The development conforms with the land use zoning requirements and development plan objectives (a new development plan has since been adopted).

Project need in the context of Electricity Generation, Gas Supply and Climate

- Transitioning to zero-carbon emissions by 2050 requires alternative sources of power generation and continued security of supply.
- Security of supply and system resilience requires conventional gas infrastructure to respond to rapid changes in demand and facilitate renewable generation.
- The 2030 target of 70% renewables requires a significant dispatchable generation capacity to ensure security of supply.
- RPO 96 supports the development in this regard.
- The proposal has a role in eliminating greenhouse gas emissions and is sustainable during the transition period to full decarbonisation.
- A condition limiting the life of a permission could be problematic as it would reduce operational flexibility, within evolving energy and climate policy context.
- The purpose of a finite permission period should be to enable a review of changes in standards and technology and support the transition to renewables and facilitate the repurposing of infrastructure.

Economy and Population

- The gas fired power plant would improve energy security in line with the All Ireland Generation Statement 2020-2029.

- The proposal would attract and retain economic investment, in an area where there is a surplus of energy generation with access to sheltered deep waters.
- The proposal would be of strategic importance to the state.
- The development would represent a sustainable use of the landbank, zoned for industrial development since the 1960's.
- The proposal would create jobs and have a positive long-term direct and indirect effect on population and settlement in an area in need of an economic boost.
- A community benefit fund would assist local communities.

Heritage

- The proposal will form a backdrop to Ralappane House, as the Moneypoint chimney stacks currently do.
- Archaeological issues can be adequately dealt with by way of condition.

Biodiversity

- The substantial number of specialist studies undertaken and scientific data collated increases the scientific certainty of conclusions reached.
- There are no significant populations of SCI bird species in the vicinity of the site.
- Habitats are of low value for forging Hen Harrier and for breeding Curlew.
- Sedimentary cliffs along the shore are not an example of the Annex I habitat.
- Badger activity was recorded and use by otter is expected.
- The biofouling protocols and the seawater intake screen mesh size are noted.
- The likelihood of large-scale hydrocarbon spills is low and pollution mitigation and response protocols are outlined.

Water supply, surface water disposal, wastewater treatment.

- There are adequate public water supplies available. The developer should bear the cost of a new watermain on the L1010, which is a matter for Irish Water.

Roads and Transport

- The capacity of the road network is adequate, particularly in light of upgrade works currently underway on the L1010.
- Recommended conditions include a special development contribution to cover the cost of upgrade works to benefit the development.

- The development would not have a significant impact on traffic safety or infrastructure in the area.

Residential Impact

- Significant residual residential amenity impacts are not likely.

Flood Risk

- The impact in terms of flood risk would be negligible.
- Culverts at watercourse crossings will require OPW Section 50 licences.

Landscape / seascape and visual impact assessment

- The site is not readily visible from the south or east and would only be visible from the estuary or from a distance.
- Scenic routes or views and prospects would not be significantly impacted.
- Large industrial developments are not out of character along the Estuary.
- Notwithstanding that the development platform is higher than the permitted CHP, the highest stack would be 17m lower than previously permitted.
- Notwithstanding the rural character of the site, this would not constitute an incongruous landscape feature and would conform with the zoning objective.

EIAR / NIS Observations:

Site selection and Consideration of Alternatives:

- Careful assessment of climate and energy security issues is essential.
- Certain aspects have not yet been finalized. ABP should be satisfied that the details submitted are adequate to undertake assessment.
- Technology and policy in respect of hydrogen is not sufficiently developed.
- Alternative site selection has been comprehensively addressed.
- It is unclear whether co-location of a biogas facility or similar was considered.

Energy and Planning Policy

- Natural gas is identified as a lower-carbon option to provide security of supply.
- After an operational life of 25.5 years (to 2050), the development may transition to hydrogen-power subject to technology, and feasibility and consents.
- The National Energy and Climate Plan 2021-2030 recognises the key role of natural gas in the energy mix.

- 2030 renewable generation targets require that remaining demand be met predominantly from gas-powered generation.
- Unavoidable operational GHG emissions are assessed as major adverse.
- The development will diversify the source of supply of gas and electricity and does not in itself increase demand for energy.

Climate

- An alternative back up to wind energy is required and the proposal would support renewable energy expansion up to 2050.
- Capacity to transition to hydrogen fuel is an advantage.
- Clarification of the well-to-tank emissions calculation methodology is required.

Land and Soils.

- Clarification of the volumes of excavated materials should be provided.
- Quarry material should only be sourced from an authorised location.

Water

- The proposal should be considered in the context of the Water Framework Directive and water quality objectives, as well as the attainment of protected area status for any water-related protected areas.
- Assessments of potential sediment impacts should consider the West Shannon Ballylongford Designated Shellfish Area.

Biodiversity

- Review the use of sedimentary cliffs by sand martin before works commence.
- Estuary waters are naturally turbid and the required level of abstraction is not significant. A discharge license will be required.
- Additional biodiversity measures include the design of the precast concrete bridge and set-back of the outer perimeter fence from the coast or boundary planting to improve connectivity.
- Otter usage of freshwater outfalls should be considered.
- The scientific interests of pNHAs may be wider than the qualifying interests of Natura 2000 sites.
- The EIAR and NIS could have more clearly explained the likely impact and significance on snipe and curlew.

- The EIA and AA should further assess the potential impact of nitrogen deposition on relevant habitats / sites in the vicinity, in particular active raised bogs.
- The screening out of SAC Bogs in the NIS requires further explanation.
- Do biofouling protocols also refer to ships hulls as opposed to ballast water only?
- The NIS conclusion that the loss of Annex I habitats is negligible and will not give rise to negative impacts to the functioning of the habitat, seems reasonable.

Air Quality, Noise and Human Health

- Some baseline air quality monitoring would be of benefit.
- The noise assessment should address potential low-frequency noise and impact on human beings and the wider environment.

Landscape and Visual Impact

- The height of the FSRU in the photomontages should be clarified as that this will vary depending on tides etc.
- Further information might be sought regarding the visual impacts of plumes.
- Landscaping and planting proposals should take account of the coastal location.

Cultural Heritage

- In the absence of detailed information on archaeological features, it is not accepted that the site is only of local significance. Similar features at Kilpaddoge were later identified as being of regional or national significance.
- Further testing and site investigations should be undertaken in advance of any site works to properly inform any proposed mitigation / resolution measures.
- The buffer zone surrounding the ringfort (Ke003 004) should be measured from the outermost of associated features and should comprise a planted boundary.
- A management plan for the ringfort should be put in place.
- A new foreshore / intertidal and subtidal survey / study should be undertaken to assess the potential for new / previously unrecorded archaeological or cultural heritage material to have been exposed since the initial 2007 study.

Major Accidents and Disasters

- The report of the Fire Authority should be taken into account.

Conclusion

- The Government Policy Statement on the Importation of Fracked Gas is noted.
- Government policy recognises the need to transition to a zero-carbon economy.
- The environmental studies and assessments demonstrate that the development would not have a significant effect on the environment or on residential amenity.
- Roads, water and energy infrastructure is adequate to cater for the development.
- The development accords with National and Regional policy as set out in the NPF and the RSES, and with the objectives contained in Kerry County Development Plan and the Listowel Municipal District LAP.

Matters which An Bord Pleanála are requested to consider in making a decision on the application, include the following:

7.3 Roads and Transportation

(i) Complete the upgrade of the L1010 before development commences.
(ii) A detailed construction traffic management plan should be agreed.
(iv) No gas, whether in liquid or gaseous form, shall leave the site by road tanker, nor, except in emergency, shall there be any re-export from the site by ship.

7.4 Environmental Protection

(ii) A Construction Environmental Management Plan (CEMP) shall be approved.
(iii) In relation to blasting, the vibration and air overpressure Emission Limit Values as set out in the EIAR shall not be exceeded at the nearest sensitive location.
(vii) The developer shall undertake construction noise and vibration monitoring.
(viii) The applicant shall carry out annual noise and vibration monitoring.
(xii) During construction and development, total dust levels at the site boundaries shall not exceed 350 mg/m2/day (averaged over a 30-day period).
(xvii) The developer shall prepare and implement a site-specific water management plan, to include detailed drawings, for each phase of the project.
(xxvi) The development shall be provided with an on-site wastewater treatment system in accordance with the EPA Code of Practice.

7.5 Archaeology

(i) All topsoil within untested areas should be stripped under licence and any identified archaeological features and strata mapped.

(ii) All archaeological / potential archaeological features should be fully excavated.

(iii) The buffer zone (20m) around the recorded monument Ke003 004 should be securely fenced during construction.

(iv) A management plan for the recorded monument Ke003 004 should be compiled.

(v) A new foreshore/intertidal and subtidal survey should be undertaken to assess the potential for new/previously unrecorded archaeological material.

7.6 Visual amenity and lighting related

(ii) A comprehensive lighting scheme shall be prepared and agreed in writing to minimise light pollution from the facility

7.7 Community Contribution Fund

The developer shall prepare an Annual Community Contribution Scheme for the benefit of the local community.

7.8 Development levies

(ii) The developer shall pay to the planning authority a special contribution or contributions under s.48(2)(c) in respect of:

- Upgrading and widening the L1010 required to facilitate the project.
- Upgrading footpaths and the road surface of Bridewell Street, Tarbert and the development of an off-street car park to facilitate proposed traffic management and parking control measures.
- Improvements at the junction of the R551 and L1010 to accommodate the projected traffic volumes travelling along the L1010 Coast Road.

(iii) The developer shall pay to the planning authority a s.48(2)(c) special contribution of €125,000 in respect of the provision of specialist firefighting training and facilities.

7.9 Bond and allied matters

(i) Prior to commencement of the development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company,

- to secure the reinstatement of public roads that may be damaged by the transport of materials and/or used as haul routes for construction.
- to secure the satisfactory reinstatement of the site on cessation of the project.

Copies of internal reports from the following departments accompany the report:

- Roads Transportation and Marine
- Environment
- County Archaeologist
- Environmental Assessment Unit
- Water Services
- Flood Risk Management
- Roads and Transport / Area Engineer
- Chief Fire Officer.

6.1.1. Views of the Elected Members

The minutes of the meeting of Kerry County Council held on 18 October 2021 generally note the following comments:

- General support for the project which is in accordance with local and regional planning policies and objectives.
- The lands have been idle for many years and the development would be an economic driver and stimulate further development in the Shannon Estuary.
- The project could play a vital role nationally and locally and is vital in terms of security of energy supply.
- Ireland's reliance on imported gas will increase with the decline of Corrib gas field.
- A lack of secure energy supplies could impact Foreign Direct Investment (FDI).
- The government target for renewable electricity generation still requires a level of conventional power generation, to be met by gas.
- Gas fired generation will act as back-up and assist in the transition to renewable generation and in combating climate change.
- There is no guarantee that fracked gas will not be imported.
- The development is premature pending the outcome of the review of security of energy supply and Government Policy on the Importation of Fracked Gas.

The Council resolved to accept the report of the Chief Executive's.

A further submission was received from the planning authority submission following the applicant's response to the request for further information noted, which was received by the Board on 10th October 2022. The submission notes that the Kerry County Development Plan 2022 – 2028 has come into effect and identifies a number of relevant provisions of the plan.

7.0 Prescribed Bodies

Submissions were received in respect of the original planning application and the response to the request for further information. These submissions are summarised together below:

7.1. Minister for the Environment, Climate and Communications

- The development is contrary to the provisions of the Programme for Government.
- The *Government Policy Statement on the Importation of Fracked Gas* clearly indicates that LNG terminals should not be permitted pending completion of a review of the security of energy supplies.
- The Dept. has clearly set out to the developers that permitting or developing this project would not be appropriate in the context of current government policy.
- Notwithstanding that there is a need for additional electricity generation capacity, the inclusion of power generation within this project does not alter this context.
- Permitting this development would directly contravene Government Policy.

7.2. Department of Housing, Local Government and Heritage

Archaeology

- A diverse range of archaeological material will be impacted. All identified mitigation measures should be implemented.
- A detailed archaeological mitigation strategy and a management plan for the preservation of the ringfort (KE003-004) should be agreed.
- Monitoring of all topsoil removal shall be undertaken.
- In respect of underwater archaeology previous comments and recommendations in respect of PL08B.PA0002 and PL08.PA00278 should be implemented.

- Investigations have documented a significant, largely prehistoric archaeological landscape, which may provide a context for internationally significant discoveries made in the Upper Shannon estuary.
- The Dept. cannot concur with the EIAR categorisation of identified archaeology as being of local interest and low importance.
- Archaeological remains are likely to extend into intertidal and estuarine deposits / deep muds around the proposed jetty may conceal underwater cultural heritage.
- A condition requiring a fresh Underwater Archaeological Impact Assessment in accordance with a method statement to be agreed, is recommended.

Nature Conservation

Marine ecology – Lower River Shannon SAC:

- There will be a direct loss of Annex I Estuaries and Reefs habitats. The areas lost are very small relative to the size of the European site.
- The construction would not allow for the target for the Qualifying Interest area of Estuaries and Reefs to remain “stable” subject to natural processes.
- Regard should be had to case law and the obligations under Article 6(3).
- Previous judgments of the Court of Justice indicate that, for the integrity of a European site not to be adversely affected, “entails the lasting preservation of the constitutive characteristics of the site concerned that are connected to the presence of a natural habitat type whose preservation was the objective justifying the designation of that site ……”.
- Particular attention should be paid to the conservation objectives framed around the Area, Range, Structure & Function and Future Prospects for each interest.
- The applicant should reconcile the development with the conservation objective of the SAC to maintain the stability of the area of the specified Annex I marine habitats or alter the design to remove potential direct loss.

Marine Mammals:

- With regard to bottlenose dolphins, the NIS is based on sound knowledge. The survey work was sufficient and carried out by competent surveyors.
- Conclusions regarding the absence of long-term effects are reasonable.
- The conservation target for the SAC for this species is that critical areas should be maintained in natural condition.

- The Dept. agrees with the IWDG remark that any degradation in this area will impact on the quality of the estuary for these species. Any development should ensure no significant impact on the dolphin population or its habitats.
- Mitigation recommendations include adherence to 2014 *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* and the scope and coverage of marine mammal observations.
- Despite predicted imperceptible food chain impacts in terms of impingement and lighting on estuarine macrobiota, some monitoring and the adoption of any new best-practice mitigation measures is recommended.

Estuarine Birds – River Shannon and River Fergus Estuaries SPA

- The initial Dept. submission identified concerns regarding potential impacts relating to oil spills, light impacts on wintering birds and blasting and piling noise.
- There appears to be no reason to disagree with the conclusion regarding low risk of LNG spills to the SPA, however, more information was requested.
- The NIS description of terminal and jetty lighting is detailed, however, the height of lighting the extent of spill or reflect onto wetlands used by waders and waterbirds to the east and north is unclear.
- An in-combination assessment of effects on birds with industrial lighting from other facilities occurring in this part of the estuary was recommended.
- Further detail regarding separation between blasting activities and the SAC / SPA was requested.
- Recent studies present a case for using red artificial light at night in coastal installations to reduce exposure to marine habitats. Practical guidance has been produced by the Australian Government.

Recommendations for conditions

In the event of a decision to grant permission, the following conditions are recommended to reduce impacts on fish and macro-invertebrates:

(1) All feasible measures will be undertaken to reduce (a) effects of impingement at FSRU water intake screens, of fish and macro-invertebrates, as well as (b) the effects of artificial lighting on estuarine biota:

(a) A study of all life stages of fish and macroinvertebrates entering the water intake pipes, and impinged on the interior screen, will be carried out on commencement of operation of the FSRU, in order to estimate the composition and quantities of impacted macrobiota. Any changes in guidance will be reviewed and implemented where feasible.

(b) Prior to construction, a baseline survey of light levels will be carried out at selected areas of estuarine habitat in Ballymacrinan Bay, Scattery Island, outer Ballylongford Bay and Clonderlaw Bay. The survey will be carried out by qualified environmental scientists, and will record biologically active spectra at appropriate times of the year. The survey will be repeated after commencement of operation, for three years. Results of this monitoring will be forwarded to the planning authority and the Department of Housing, Local Government and Heritage in each year that it is carried out, accompanied, after the first year of operation, by a summary of the mitigation carried out to reduce lighting impacts by the development.

(c) Lighting design and installation should pay particular attention to avoiding unnecessary effects of LED lights, either by replacement with less impacting light sources (including consideration of red light) or restricting light spill onto the estuary. Lighting will be designed to incorporate relevant best-practice mitigation measures, such as those outlined in the National Light Pollution Guidelines for Wildlife (Australian Government) Department of the Environment and Energy).

7.3. Transport Infrastructure Ireland

- The development should be undertaken in accordance with the recommendations of the TIA in the EIAR.
- Any additional works arising from the TIA should be funded by the developer.
- Any proposed works to the haul route along the national road network should comply with TII guidelines.
- The remedying of any damage to national roads, in accordance with TII standards, shall be agreed with the road authority.
- All proposals agreed with the road authority should be referred to TII.

- Relevant permits for abnormal loads should be obtained. All structures along such routes should be checked for capacity to accommodate abnormal weights.
- No grid connection routing appears to impact on the national road network.

7.4. An Taisce

- The development is not compatible with the provisions of the Climate Action and Low Carbon Development (Amendment) Bill 2021 and emission requirements.
- The application relies upon the 2019 Climate Action Plan.
- The application is premature pending the 2021 Climate Action Plan targeting a 51% emissions reduction by 2030, which is twice the target of the 2019 Plan.
- A 2018 peer review / critique of the Irish Academy of Engineers paper on the role of gas in Irelands energy security, is attached to the submission.
- Increasing reliance on international gas markets will introduce further supply security issues and not address decarbonisation and emission reduction targets, undermining the justification for the proposed development.
- The key to decarbonisation is emissions reduction not renewable penetration.
- Gas usage must decrease rapidly and is not an appropriate transition fuel.
- LNG lifecycle methane emissions offer no benefit over coal or oil and the indirect impacts of the source of LNG should be evaluated.
- NPWS raised concerns regarding the source of fracked gas at consultation stage.
- The High Court judgment in the Glanbia case, did not resolve how remote is *too remote*.
- The degrees of remoteness in this case cannot be determined as no information on the source of LNG is provided or what international laws or agreements apply.
- It is unclear whether any gas would be sourced from within the EU.
- While the impact of sourcing LNG from outside the EU falls outside the EIA Directive, best practice would be to assess impacts on wildlife and climate.
- The assessment of indirect effects from the extraction and processing of LNG in the EIAR is inadequate. The exclusion of Well-to-Tank emissions is questioned.
- The basis for using the GHG Protocol Corporate Standard should be explained.

- Excluding the indirect effect of the end use of gas from assessment is contrary to the requirement under the EIA Directive.
- The calculation of operational emissions over 25.5 years is insufficient, as this period is likely to be exceeded.
- The assessment of a Major Adverse climate impact is not compatible with emission reduction obligations and no meaningful mitigation is proposed.
- The import and use of fracked gas is contrary to government policy statement.
- The proposal is premature pending completion of the energy security review.
- There is insufficient information in relation to projected noise emissions or the disturbance effects on birds.
- The data in relation to visual disturbance to birds is inadequate and should consider the visual sensitivity of specific species.
- There is insufficient data in the NIS to determine beyond reasonable doubt that the SCI communities will not be disturbed.
- The identified loss of Annex 1 habitat refers to the footprint of development and does not consider construction impacts or changes to habitat integrity.
- The specific sensitivities of habitats and impacts on the conservation target for Community Type were not assessed.
- In Case C225/111, a 1% of a protected habitat was found to adversely affect the integrity of the site.
- The test in the Waddensee judgment should be applied. The site and project characteristics should be considered rather than only the spatial overlap.
- NPWS highlighted potential impacts on Whitetailed Eagle. Their exclusion from the NIS as they are not a SCI for any European Site is a gap with regard to the Birds Directive.
- The duration of dolphin surveys is unclear. NPWS recommended two years of survey.
- AA must be undertaken in light of best scientific knowledge and the competent authority must set out the rationale and reasoning for the determination.
- Permission must be refused where there is uncertainty with regard to adverse effects on the integrity of the site.
- The major climate impacts and flawed assessment of energy security and decarbonisation grounds, negate any argument for IROPI.

- The Ralappane Stream has not been assigned WFD status by the EPA. The Gorumna judgment in considering the water quality impacts is relevant.
- Given the lapse of time, previous permissions on the site do not justify this development.
- The current status / validity of the 26km gas pipeline consent should be clarified, in order to determine whether revised EIA and AA assessments are required.
- The application is inconsistent / unclear with regard to the future use of hydrogen and the viability of hydrogen / alternative fuels is unclear.
- The project risks becoming a stranded asset with the transition to renewables.

FI Response

The prescribed body make the following further comments on the applicant's further information response.

1(a) Compliance with National Policy.

- The response has not addressed the implications of the carbon budgets and sectoral emissions ceilings which will impact individual emitters.
- To comply with s.15(1) of the Climate Act 2021, ABP needs to demonstrate that projects align with the Act's objectives around decarbonisation, the net zero goal and the sectoral limits for the electricity sector.
- No evidence is provided in this regard, and it has not been demonstrated how the operational lifetime (25.5 - 50 years) is compatible with carbon budgets.
- As Climate Action Plans are bound by the carbon budgets and sectoral ceilings, per s.15(1), they are also binding on An Bord Pleanála.
- Permissions should be refused once sectoral ceilings have been reached.
- As 2021 emissions have not reduced compared to 2018 levels, the constraints on emissions in the remaining budget years will be significantly higher.
- Participation in the EU ETS does not equate to compliance with obligations and under national carbon budgets and sectoral emissions ceilings which cover both the ETS and non-ETS sectors.

1(b) Review of the Security of Energy Supply

- The recently published expert report has directly ruled out both terrestrial and floating commercial LNG terminals, therefore ruling out the subject proposal.
- The Policy Statement on the Importation of Fracked Gas still applies and precludes a grant of permission at this time.
- The subject proposal should not be conflated with gas storage (particularly emergency storage) as they serve different purposes.
- The geopolitical situation highlights the vulnerability of gas markets to shocks, countering arguments that a commercial LNG terminal improves energy security.
- Given the period before it could become operational, the proposal cannot provide any immediate relief to the energy security situation.
- In a period of gas supply shortage, use of limited imported gas in the adjacent power plant would leave the wider grid less secure overall.
- The Government is not in support of the proposed development.

1(c) Send Out Capacity

- The GNI Network Development Plan and modelling of future gas demand have not yet been tested or validated against the binding sectoral emissions ceilings.
- The volumes of gas imported cannot therefore be compatible with the legal obligations of the Climate Act.

RFI Question 2 Emissions

- Issues raised previously regarding the accuracy of emissions calculations and the assessment methodologies remain outstanding.

RFI Question 4 Aquatic Ecology

4(a) - The extent and duration of construction impact and disturbance

- The scientific basis for sedimentation and compaction conclusions are unclear.
- There does not appear to be an assessment of the additional sedimentation as a result of these works, or how it may impact on the ecology of the area.
- The referenced Natural England report notes that decision makers have never determined the significance of an effect solely on the basis of extent or proportion of a site or qualifying feature. Each case is taken on its own merits.

- The applicant relies solely on the percentage loss of habitat to reach a conclusion of no significant impacts and fails to present any evidence beyond this overlap.
- Assessing the overlap as a proxy for risk is not compliant with EU legislation and jurisprudence.
- While jack-up piles will be temporary the jetty will remain in-situ until the project is decommissioned, which could be 50+ years, which is not transient notwithstanding the stated intent to remediate damage on decommissioning.
- While they have demonstrated that they intend to mitigate for lost habitat as a result of the foundation for those uprights, the loss of habitat for the spatial footprint of the uprights themselves was not assessed.
- The applicant has not assessed the functioning and conservation status of the SAC or the constituent community types, beyond spatial overlap, with no consideration of the ecological impacts on the community type.
- It is unclear how conservation objectives to conserve community types in a natural condition has been considered or how natural condition is defined.
- What scientific evidence is there to determine that conservation condition is not impacted by a certain level of deposition? This requires an assessment of the resilience of the specific community types to depositional pressure.

4(b) - the ecological implications of habitat loss and the ecological importance of the function performed by the affected habitats.

4(c) - Potential impacts on community types affected in terms of their conservation condition and distribution.

- The response is not comprehensive and relies on low spatial overlap as a proxy for risk to conclude that there will be no impact on the community types.
- The impact of disturbance on the community type, and the communities' ability to adjust and absorb the semi-permanent habitat loss has not been addressed.

4. RFI Question 5 Wintering Birds

- The acknowledged errors raise a question over the overall adequacy of the EIAR and NIS.
- No new data or observations are provided with regard to ex-situ impacts as a result of noise and visual disturbance.

- The sensitivity of specific SCI species to visual impacts is not adequately investigated.
- Although there are just small numbers of birds in the vicinity, they include critically endangered birds such as curlew.
- Each species will have different tolerance to disturbance, and general behavioural patterns are not scientifically rigorous enough for the purposes of an Article 6(3) assessment.

5. RFI Question 6 (Lighting)

- The response lacks scientific rigour, with no discussion on lumen levels, comparison with other light sources in the area, or attempt at a cumulative assessment of increased light sources on foraging and behaviour.
- Reliance on a subjective opinion based on a photo montage is unlikely to be sufficiently rigorous to discharge the obligations under Article 6(3).

6. RFI Question 10 Nitrogen Deposition

- No details of the dispersion modelling undertaken are provided.
- There are issues with the current Irish modelling of nitrogen deposition, and reliance on background estimates for SAC risk assessment. Regard should be had to baseline concentration and deposition on neighbouring Natura 2000 sites.
- If a site already exceeds relevant values, any additional contribution could be considered as a significant negative effect to the site's integrity.
- While the development may result in just a marginal increase in nitrogen deposition, the current status of those SAC peatland habitats and capacity to absorb further deposition should be outlined.
- The majority of Irish SACs have a qualifying feature that is sensitive to atmospheric ammonia. 80.7% of sites are likely to exceed this concentration.
- The lack of information will make it challenging to conclude beyond reasonable doubt that there will be no impact on relevant SACs, and that these sites are correctly screened out.

7. Outstanding Issues

The majority of the issues raised in the original submission remain outstanding.

An Taisce recommends that permission for the subject proposal be refused.

7.5. Inland Fisheries Ireland

- No objection in principle.
- The environmental sustainability of the project should be assessed.
- Environmental monitoring will be vital to ensure the adequacy of mitigation and accuracy of modelling predictions.
- A CEMP and monitoring plan should be agreed in advance with IFI.
- Concerns were expressed in the original submission regarding water abstraction and potential entrainment of aquatic life and impacts from emissions.
- IFI recommend that in the first full year of operation an impingement and entrainment study is undertaken to quantify the numbers and species of organisms impacted by the FSRU water-intake system. This may necessitate a baseline study of the fish, crustaceans and planktonic organisms (inc. eggs) in the water column in the area where the FSRU is to be located. This study should allow for seasonal and flow variations.
- IFI also recommend that the best available screening technology be reviewed on an ongoing basis with a view to installation on-site where feasible.
- The clear span bridge design over the Ralappane Stream is welcome.
- Conditions recommended for the construction phase include the management of surface water, spills and management of contaminating materials.

7.6. Health and Safety Authority (HSA)

- The authority can confirm that the development would constitute a new COMAH establishment subject to regulation 24(2)(a) of SI 209 of 2015.
- The siting criteria for new establishments have been met.
- The Authority does not advise against the granting of planning permission in the context of major accident hazards.

7.7. Environmental Protection Agency (EPA)

- The development will require a licence under Class 2.1 of the EPA Act**.** Other classes of activity may also be applicable.
- The Agency has not received a licence application at the time of writing.
- The licence application will be subject to EIA as respects the matters that come within the functions of the Agency and in accordance with Section 83(2A) and Section 87(1G)(a) of the EPA Act.
- All matters to do with emissions to the environment from the proposed activities, the application documentation and EIAR will be assessed by the Agency.
- Where the activities cannot be carried on or effectively regulated under a licence then the Agency cannot grant a licence therefor.
- Any licence granted will ensure that appropriate National and EU standards are applied, and Best Available Techniques (BAT) are used in the activities.
- The Agency cannot issue a proposed determination on a licence application until a planning decision has been made.
- The Agency is satisfied that there is no requirement for a Dumping at Sea (DAS) Permit for any deliberate disposal of material in the maritime area.

7.8. Limerick City and County Council

- Supports the project which will provide security to gas supplies, support the transition to green hydrogen and create jobs in the region.
- Inward investment and energy security are necessary to create and sustain jobs and meet growth targets for the region.
- The inter-jurisdictional SIFP identifies these lands as a Strategic Development Location, supported by the NPF and RSES.
- The project is future proofed to transition to hydrogen, complementary to other hydrogen and wind energy initiatives in the estuary.
- The Review of Energy Security and Supply notes the risk of reliance on a single point of supply from the UK. The development is a realistic means of addressing security of gas supply.
- This is one of the few suitable locations for such development in the country.
- The Irish Academy of Engineers have expressed support for LNG development and gas storage.

- Diversity of gas supplies should be a priority.

7.9. Clare County Council

- Forward planning is vital for energy security.
- Clare Co. Co. recognises the local, regional and national economic benefits of the development and its importance in a changing energy policy context.
- The development of a supply chain to accompany this emerging technology and the ability to capitalise on benefits at this interface with the marine environment is immense.
- The project will assist the transition to hydrogen in the future and can connect off-shore renewables to the electricity system.
- There are synergies with the proposed Moneypoint Green Atlantic project.

8.0 Third Party Submissions

Submissions from 76 no. third parties have been received in respect of the original planning application and the response to the request for further information. While the majority of submissions received were in favour of the proposed development, a substantial number were opposed thereto.

I have broadly summarised the matters raised in all of third party submissions received in terms either of their support for, or opposition to the proposed development:

8.1. Submissions in support of the proposed development:

- The Ballylongford landbank was originally identified for industrial development in the 1960's.
- The location is appropriate due to its zoning, sheltered deep waters, proximity to existing energy infrastructure and alignment with the SIFP.
- The site is strategically located close to Moneypoint and Tarbert power stations, soon to be decommissioned.
- Its development is strongly supported by the County Development Plan and the SIFP, which recognises the potential of the landbank for such development.
- This region already accommodates significant amounts of renewable generation.
- The SIFP underwent SEA and AA, and it objectives have been incorporated into the development plans of the relevant authorities.
- The development will create employment and bring economic benefits to this disadvantaged area, helping to sustain local communities.
- Environmental lobby groups are not representative of the majority of rural dwellers. Regard should be had to human welfare, and the social and economic aspects of the development.
- The area has capacity and community infrastructure for an increased population.
- The project complies with proper planning and there is no reason to refuse permission.
- Eirgrid have advised that there will be a shortfall in electricity generation capacity in coming years, and they are currently sourcing emergency diesel generators.

- The development brings benefits in terms of national energy security, addressing the shortfall in generation capacity and risk of gas supply.
- The 2018 GNI / Eirgrid Long-Term Resilience Study made recommendations to future-proof gas supplies and resilience during periods of disruption.
- Eirgrids Capacity Outlook 2022 highlights the weakness of the electricity sector.
- Disruption to energy supplies would impact on business and on major investment decisions, locally, regionally and nationally.
- There is a need to move away from Russian gas and the risk of gas shortages in the UK this winter may impact on supplies to Ireland.
- Diversified gas supplies are required pending and notwithstanding the transition to renewables.
- It will allow coal and oil-fired power plants to be decommissioned and replaced.
- The government has previously supported development of an LNG terminal.
- The Review of Security of Energy Supply confirms the long-term need for gas and that a FSRU is the only option that fully backs-up UK supply and meets EU - 1 standards for gas supply.
- EU policy supports LNG importation.
- There is a risk of shortages in winter, impacting on supplies to Ireland.
- Planning should not be delayed pending conclusion of the Security review.
- It will bring competition to the energy market increasing supply, reducing costs.
- The requirement for this project overrides any climate concerns and the case for continued PCI status is strong.
- Gas storage and LNG should be considered as in other European countries. The development could provide strategic gas storage, similar to NORA arrangements.
- Gas storage in the FSRU would offset short-run gas shortages, providing significant proportions of average daily demand.
- The storage capacity is significant in context of no gas storage currently.
- The development can act as a landing point and grid connection for future off-shore wind energy development and complement ESB proposals at Moneypoint.
- The proposed development itself can transition to hydrogen gas.
- The project contains a commitment not to use fracked gas.
- Gas imported from the UK includes fracked gas from the UK. The only way to stop fracked gas entering the country is to construct our own LNG terminal.

- Subject to appropriate controls, fracking can provide a viable option and with economic value as part of a transition to renewables.
- Shannon Foynes is one of three core TEN-T ports in Ireland. A national policy framework is required designating core ports as LNG refuelling points.
- Use of LNG can reduce NOX and SOX emissions and lower carbon emissions in the maritime sector.
- The Alternative Fuels Directive defines LNG as an alternative fuel, while the proposed Alternative Fuels Infrastructure Regulations refine the definition, distinguishing LNG as “alternative fossil fuel”.
- The proposed development could help to meet the requirement of Art.6 of the Alternative Fuels Directives for the provision of LNG refuelling points in ports.
- GNI supports measures to diversify gas supplies to its network.
- Wildlife in the estuary co-exists with power stations and associated jetties.
- Any effect of the development will not be permanent and will be reversible, and there is therefore no breach of the conservation objectives for the SAC.
- Significant works were permitted at Foynes Port, which were considered to be negligible and not significant.
- Any grant of permission must ensure that adverse impacts are avoided, or minimised and managed.
- Current upgrading of the L1010 will provide adequate access to the site.
- Construction traffic impacts on Tarbert must be addressed. Carriageway widths restrict two-way movements and the Inner Relief Road should be implemented.

8.2. Submissions opposed to the proposed development

I have summarised the objections to the proposed development under broad, and sometimes overlapping headings, as follows:

Current Policy Context

- Granting permission would be contrary to national policy and international commitments.
- Since the declaration of a climate and biodiversity emergency in 2019 and 2021, Irelands has failed to reduce emissions or meet targets for emission reductions.

- The Climate Change Advisory Council has raised concerns regarding emissions from the import of natural gas and risk of lock-in to fossil fuel and emissions intensive systems.
- The EIAR does not reflect most recent policy statements.
- The Minister for the Environment is opposed to the development.
- The 2019 Climate Action Plan has been superseded and the Climate Action and Low Carbon Development (Amendment) Act 2021 was enacted.
- An 80% target for renewable electricity generation was set in October 2021.
- The 2022 Climate Action Plan will provide comprehensive carbon budgets and a commitment to reduce emissions by 2050.
- The 2022 National Energy Security Framework does not refer to a need for LNG.
- 2022 SEAI Heat Analysis shows gas in the heat sector phased out by 2040.
- The project no longer has PCI status.
- GNI gas demand projections are not in line with government climate policy and sectoral ceilings.
- Achieving 2030 emission targets is in doubt given projected increases in electricity demand.
- Further fossil fuel generation risks a failure to meet 2050 targets, would create a lock-in effect, delaying transition to a zero carbon economy and displacing investment in clean energy.
- The LNG terminal is contrary to the programme for government and the *Policy Statement on the Importation of Fracked Gas*, and to the stated position of the Minister on fracking internationally.
- Ireland is a signatory to the Beyond Oil and Gas Alliance (BOGA).
- The application is premature pending the Review of Security of Energy Supply and publication of the National Climate Action Plan 2021, which will both require SEA, and public participation under the Aarhus convention.
- The Energy Security Review considers a range of supply shock scenarios and does not short-list projects of this nature.
- The CEPA technical report indicates that planned renewable infrastructure would ensure the system was resilient to weather events.
- Alternative energy security options were not considered by the applicants.
- It is not appropriate for the Board to reach a decision on energy security matters.

- The development is contrary to provisions of the Climate Action Low Carbon Development (Amendment) Act 2021 with regard to the risk of carbon leakage.
- As a public body, ABP is obliged to perform its functions consistent with the most recent relevant national policies and plans.
- ABP is subject to the Public Sector Climate Action Mandate
- The Strategy for the Shannon Estuary, included as part of the programme for Government, will also require SEA.
- The project could result in compensation claims by operators for loss of future profits under international trade agreements, due to Irelands withdrawal from the fossil fuel market.
- Subsidisation of fossil fuel infrastructure, such as PCI's, must cease.
- The timeframe for development and operational life is not compatible with Irelands climate targets and it is at risk of becoming a stranded asset.
- Investment in fossil fuels to produce energy in excess of Irelands needs is not justified.
- Payments from the applicants to Kerry Co. Co. prior to lodgement of this application compromises the Kerry County Development Plan.

Energy Supply

- Electricity capacity issues should not be confused with gas supply issues.
- A commercial LNG terminal does not equate to emergency gas storage.
- There are no gas supply issues and a new gas entry point does not address electricity generation issues.
- The 2018 Long-Term Resilience Study was compromised by the involvement of GNI. An independent review is required.
- UCC MAREI analysis for the DECC indicates that 10 months of interrupted gas supply could be sustained without LNG infrastructure and does not identify a need for LNG development.
- The capacity of the terminal is greater than Irelands national gas demand.
- LNG terminals are not required for energy security and energy security risks are outweighed by climate risk.
- Existing UK and EU gas import capacity exceeds demand, and LNG terminals have been operating below capacity.

- Connection to the major gas hub in UK mitigates supply security issues. Unlike commercial operations, State authorities control gas flows from Moffet.
- The CRU has not raised any concerns regarding security of supplies from Moffat.
- GNI have confirmed their expectation that there will be no change to gas market operations as a result of Brexit.
- The twinning of the interconnector to Scotland mitigates the risk of interruption of supply, which can continue to meet all-Ireland demand as stated by GNI in 2020.
- An LNG terminal would not accord with the sectoral emission ceilings and carbon budgets agreed this year, and creates a risk of gas lock-in.
- Increased reliance on volatile international gas markets will not improve energy security, rather it will increase exposure to market volatility in supply and price.
- It cannot address short-term risk of Russian gas supply disruption.
- It is not politically or economically strategic to be dependent on such fossil fuel.
- The risk of a power plant dependent on an LNG terminal should be considered.
- The Energy Security Review does not reach the same conclusions regarding Irelands' energy security as the applicants.
- The effect of other supplies, such as renewable gas, on the economic viability of the project is not addressed.
- Renewable generation with storage is cleaner and cheaper than fossil fuels.
- The Eirgrid All Island Generation Capacity Statement does not consider any new CCGT in the Shannon area.
- No justification for this power plant relative to other proposed plants is provided.
- Eirgrid and CRU have taken measures to address recent electricity system alerts, including extension to the life of older generators.
- It is not clear that account has been taken of CRU tariff regulations.
- European gas consumption must decrease rather than rise.
- Development will commit Ireland to long purchase contracts at high public cost.

Emissions

- The assessment of climate impacts at a local or regional level is inadequate.
- The increased carbon footprint of LNG over piped natural gas and possible use of fracked gas has not been properly considered.
- LNG cannot be a bridge fuel due to the high life-cycle methane emissions.

- Methane is significantly more damaging than CO_2 and current assessments of the CO_2 equivalent underestimate its effects.
- The application fails to account for methane leakage from LNG during extraction, transport and flaring which is higher than previously thought.
- This LNG development should be assessed in the context of EU policy on methane emissions and leakage.
- LNG has no climate benefit over coal or oil. Shale gas LNG would have 44% more GHG emissions than coal.
- The assessment of upstream and downstream emissions is inadequate and the full life-cycle should be considered. Emissions from end use should be assessed.
- The higher emissions from LNG would mean that within the carbon budget other sectors would have to reduce production further, including agriculture.
- Total estimated emissions are 59.7% of Irelands carbon allowance.
- The assessed “major adverse” impact of emissions from the transport, supply and usage of the fuel is not aligned with national climate action obligations.
- The volume of gas to be fed into the national grid annually is not stated.
- Potential future use of biomethane or hydrogen in the power plant does not justify the development and such alternative gas technologies remain unviable.
- The applicants do not have any operational hydrogen projects and do not refer to green hydrogen.
- Gas Networks Ireland Vision 2050 is not low-carbon. It assumes use of 50% abated gas, while mitigation measures have not yet been proven.
- The IPCC warn that mitigation of the effects of gas is not an option.
- While gas is required as a back-up to renewables, the elimination of GHGs from the energy sector is required through diverse energy mix and reduced demand.
- Cumulative / in-combination impacts with surrounding energy infrastructure have not been adequately assessed.
- The effect of allowances under the ETS and the basis for excluding emissions outside the national emissions inventory is not clear.
- Gas powered generation is contrary to the Climate Action Plan.
- The assumed life of the power plant and potential impact of a longer operational life has not been rationalised or assessed.
- Exclusion of data centre energy demand and emissions is not acceptable.

- The development is based on creating a market for the applicant to import and burn its own gas product for the data centre.
- The assessment of climate impact interactions with other factors is inadequate.
- The risk of lock-in to high emission systems should be addressed. The application does not provide clear abatement or mitigation plans therefor.
- Significant traffic impacts will generate further emissions.
- FSRU's have higher operating costs than on-shore facilities and are more susceptible to weather events.
- Such gases impact on public health and crop yields in local areas.

Fracked Gas

- The source of gas has not been addressed and assurances regarding the source of LNG supplies cannot be validated.
- Applicant company statements in the US indicate that the terminal is likely to involve the importation of fracked gas from their own liquefaction facilities.
- The Government Policy Statement notes that most imported fracked gas would be via LNG terminals.
- The precautionary principle requires that the source be assessed, and the Environmental Liability Directive obliges the Board to prevent environmental damage from fracking and fracked gas.
- Direct and indirect effects under the EIA directive are not limited to the national territory.
- The EIAR refers to natural gas rather than fracked gas which has significantly higher methane emissions, and they should not be confused.
- Importing fracked gas would result in carbon leakage as defined in the 2021 Act.
- The draft National Marine Planning Framework does not support the importation of fracked gas.
- The JOC on Climate Action recommended a ban on importation of fracked gas and LNG terminals in 2021, which was informed by legal opinion on its legality.
- The 2020 programme for government withdrew support for the importation of fracked gas and removed this project from the list of PCI's.
- There is political consensus against the importation of fracked gas.
- Since 2008, one third of global methane emissions arose from US fracked gas.

- Cutting methane emissions is the most effective short-term climate mitigation measure and refusing permission would be a climate mitigation action conforming with the EU methane strategy.
- NUIG research has found human rights are adversely impacted by fracking activities and argues for a global ban.
- Shale gas should not be traded internationally as LNG.
- Approval would create demand for fracked gas and subject other communities to its effects, inconsistent with laws banning domestic fracking activities, and EU laws as well as the programme for government.
- Gas extraction is associated with radioactive exposure from the ground.
- Such development will delay and damage moving to a zero-carbon future.
- The development would be contrary to the Global Methane pledge, as it will increase methane emissions here and in the US.
- Importing shale gas could create a precedent for development on this island.

Data Centre

- Increased electricity demand is driven by data centres. A moratorium on further connections would address energy security without fossil fuel development.
- Imported gas will be used mainly to power data centres, which account for a disproportionate amount of the carbon budget.
- The significant increased energy demand from the data centre element should not be a justification for this development.
- The future data centre will impact on operation of the national grid, while increased gas use would increase carbon emissions.
- Network investment should be directed to renewable generation rather than facilitating data centre development.
- The cumulative effect with all other data centre applications should be assessed.
- The application does not address current policy on data centre development.

Ecology

- The impacts of blasting on fauna, birds and dolphins, should be assessed.
- A second summer season bird survey should be undertaken.
- The exclusion zone around LNG tankers may result in changes to the estuary navigation regime and additional ecological disturbance, which wasn't assessed.

- There will be no enhancement or improvement to the habitats or conservation status of dolphins which pass through the site on a regular basis.
- Noise and disturbance during construction and operation may have a displacement and behavioural impacts on dolphins.
- The potential in-combination acoustic effect with ships moored at Moneypoint or transiting the estuary may affect dolphin behaviour.
- The creation of an acoustic barrier across the estuary to a significant proportion of the dolphin population may have short and long-term impacts on the entire inner estuary sub-group.
- There is no comparative analysis of the effects of LNG development elsewhere.
- The EIAR underestimates the level of exposure of animals to risk.
- There is concern regarding the output of the acoustic model, which found the effects to be *not insignificant* but not occurring on a regular or extended basis.
- Strong mitigation will be required during construction, and measures should be shown to reduce acoustic impacts to acceptable levels.
- Cumulative long-term effects are of particular concern.
- An All-Estuary Noise Map should be produced with long-term management and monitoring of noise sources. This will allow mitigation to be updated in real-time.
- Such management will ensure that this and future developments do not have long-term significant negative effects on Shannon dolphins.
- Noise modelling in the current case is not based on a robust baseline dataset, being only two days of local field measurement.
- Trends in the usage of the SAC by dolphins should be identified and assessed.
- While the applicants have tried to address the issues and have set a standard for environmental assessment in the estuary, concerns remain regarding acoustic impacts and cumulative effects.
- Development should not compromise the European Marine Protected Area.
- No SEA on the proposal has been carried out. A full assessment of the change in water temperature in the estuary should be undertaken.
- The indirect climate change impacts of the development on Natura 2000 sites have not been assessed, including changes in water temperature.
- The assessment of biodiversity impacts was inadequate in terms of vegetation removal, impacts of heat generation and water usage / discharge.

- The development will negatively impact on the SAC and SPA.
- If the development is not in the over-riding public interest it should be refused. Such status will be determined by the Energy Security review.

Pipeline

- Planning permission for the 26km gas pipeline has expired.
- A new pipeline has been developed between Foynes and Listowel.
- A revised assessment of the pipeline and of in-combination effects is required.

Health and Safety

- LNG terminals pose an explosion and a safety risk to local communities.
- The contribution to climate change will also present a risk to health and safety.
- The assessment of alternative locations is inadequate given proximity to population centres and conservation sites.
- The EIAR does not consider alternative off-shore options off the Cork coassecurity review
- The QRA only assesses risks from the terminal itself and does not consider risks from tankers moving up the estuary and the risk of collision.
- The use of a FSRU increases the risk from the previous application.
- The remit of the HSA ends at the shoreline and does not assess the marine safety aspects of the development.
- The Commission for Energy Regulation assesses pipeline safety and the terminal and marine aspects are only assessed when a license is required.
- No statutory body has requested a marine LNG risk assessment. The HSA and CER have not been completely informed of the safety issues involved.
- The cumulative public health risks of the power plant should consider other industrial development in the area.
- Other emissions to air, and emissions from the associated data centre, can have health impacts including emissions from diesel generators.
- There are social implications of LNG development both upstream and downstream of the terminal.

Application Status

- The development should not have received Strategic Infrastructure project status.

- The Seventh Schedule of the 2006 Act refers to on-shore terminals associated with an LNG facility. In this case, FSRU is an off-shore facility.
- It is unclear how the development was determined to be a Strategic Infrastructure given the Policy Statement on the Importation of Fracked Gas.
- There is doubt as to whether the development falls within the scope to S.37A(2)(a), (b) and (c).
- Is ABP the competent authority in relation to the FSRU on estuary waters?
- The address of the proposed site is incorrect.
- The status as a Project of Common Interest is under dispute.
- Associated medium and high voltage connections to the national grid, and future data centre, are to be subject to separate application. The application is therefore premature and lacks information on these separate projects.

General

- The cumulative effect with strategic plans for the development of the estuary should be considered. A cohesive plan for the estuary is required.
- The development may undermine future use of this landbank to service off-shore renewable generation, as part of a renewable energy and employment hub.
- The draft Kerry County Development Plan supports the expansion of Foynes port and off-shore wind generation. The proposal could interfere with such projects.
- This landbank could be used to provide better employment opportunities.
- LNG shipping will disrupt and damage the environment of the estuary and will pose a risk and disruption to shipping, businesses and the local population.
- There will be no significant long-term employment generation, while the development may impact on tourism employment in the area.
- Short-term benefits, including employment, do not outweigh long-term impacts.

9.0 First Party Response to Submissions Received

Following the direction of the Board with regard to the holding of an oral hearing, the applicants were requested to respond to submissions received from third parties and certain prescribed bodies in relation to this application. In their response received on 12/06/2023, the applicants make the following points:

- The submission is limited to the principle issues, relating to the Climate Action and Low Carbon Development Act, Carbon budgets, Sectoral ceilings and the pending Security of Supply Review.
- A response to the submissions of the HSA and EPA is also provided.
- Natural gas is a significant source of electricity generation and contributor to electrification of the economy.
- Modelling by the DECC to forecast gas demand in Climate Action Plan 2023 has been published which satisfies the carbon budgets and sectoral ceilings.
- Gas demand in the power sector is forecast to increase to 2025, after which increased renewables should reduce demand.
- Gas will remain the primary heat source in the economy.
- Indirect well-to-tank (WTT) emissions should not be in scope for the EIA.
- Under the Climate Action and Low Carbon Development Act, as amended, emissions outside the state such as WTT emissions from LNG, are not reportable under the carbon budgets and sectoral emissions.
- Carbon budgets are applied at the national level rather than installation level.
- The LNG terminal will not increase demand, which would otherwise be met from UK supplies. The terminal will compete with other gas supplies.
- Supplies from the UK in 2021-2022 contain c.17-26% LNG, such that Ireland already imports LNG.
- The EU Fit for 55 Package notes the role of gas as a transitional fuel.
- In any scenario, a level of dispatchable gas plant will be required and this plant has been chosen for its flexibility and efficiency.
- Notwithstanding statements by An Taisce, the current policy context supports the development and recognises the continued role of gas.
- Policy focuses on lowing emissions through demand side measures rather than on the supply side. The development will not impact on national GHG emissions.

- The Climate Action Plan recognises the need for rapid delivery of up to 2GW of gas fired generation, particularly given the further electrification of the economy.
- There is no state or EU funding required for the terminal and no diversion of funds away from renewable energy.
- The conclusions and policy position of the Review of the Security of Irelands Electricity and Gas Systems remains unknown.
- Irelands *Long-Term Strategy on Greenhouse Gas Emissions Reductions* (April 2023) notes the need for security of energy sources and for conventional generating capacity to facilitate the transition to renewables.
- It identifies gas importation infrastructure is identified as an option.
- Under the Climate Action and Low Carbon Development act, bodies shall perform their functions in a manner consistent with this strategy.
- There is no obligation on the Board to await completion of the Review of Security of Energy Supply in order to make a decision.
- The proposed CCGT plant design meets Eirgrid preferred design requirements.
- The development has been awarded a contract to deliver generation capacity in the most recent capacity auction. It should therefore be seen as part of the state response to the CAP 2023 requirement to deliver 2GW of gas fired generation.

Other Issues:

- A scientific analysis of sedimentation and compaction was provided, while existing turbidity levels in the estuary are extremely high.
- The dynamic estuary environment provides high levels of dilution and dispersion and no significant ecological effects from suspended sediments are likely.
- Expert analysis indicates that the effects of habitat loss are capable of being undone, with no permanent loss of habitats.
- Regard was had to the spatial footprint of piles in considering habitat impacts.
- Effects on marine community types and on the integrity of habitats have been comprehensively addressed.
- At further information stage, additional bird survey information was provided, which demonstrate consistency with previous survey results.
- The further information response in relation to lighting effects was a qualitative but detailed assessment of cumulative effects with other development in the area, undertaken by an experienced ecologist.

- Comprehensive modelling in respect of nitrogen deposition was undertaken.
- Ralapanne Stream has been assigned Moderate Status, however the development is designed to avoid impacts on its environmental status.
- The CEMP contains measures to deal with surface water run-off from the site.
- The Applicant has commenced the IE Licence application process for the development. An EDEN account has been set up and approved.
- Commitments in the EIAR in relation to licencing from the HSA will be followed.

10.0 Assessment

I have examined the application details and all other documentation on file, including the further information response, the submissions from Kerry County Council and the prescribed bodies, and all other submissions received in relation to the application. I have inspected the site and, having regard to relevant local, regional and national policies and guidance, I consider the critical issues in determining the current application before the Board can be considered under the following broad headings:

- Procedural Matters
- Land Use and Development Principle
- Energy and Climate Policy Context
- Scope of the project being assessed
- Greenhouse Gas Emissions
- Water
- Biodiversity / Ecological Impacts
- Air Quality
- Landscape and Visual Impacts
- Roads and Traffic
- Archaeology and Cultural Heritage
- Major Accidents and Disasters
- Other Matters Arising

Environmental Impact Assessment and Appropriate Assessment are considered under separate headings in this report below.

10.1. Procedural Matters:

10.1.1. EPA Licencing

The proposed development would be subject to a licence from the EPA, which is the mechanism for the control of operational emissions. The submission from the EPA confirms this requirement in respect of Class 2.1 of the First Schedule of the EPA Act: Combustion of fuels in installations with a total rated thermal input of 50 MW or

more, as set out in Part IV of that Act, *Integrated Pollution Prevention and Control*. The submission notes that other classes of activity may also be applicable.

I note the provisions of s.37G(4) of Part III of the Planning and Development Act 2000, as amended, which provides that where development is subject to the requirement to obtain a licence from the EPA, the Board shall not, where it decides to grant permission, subject that permission to conditions for the purposes of:

(a) controlling emissions from the operation of the activity, including the prevention, limitation, elimination, abatement or reduction of those emissions, or
(b) controlling emissions related to or following the cessation of the operation or the activity.

Subsection (5) provides that the Board may, however, refuse a grant of permission where it is considered that the development, notwithstanding the licensing of the activity, is unacceptable on environmental grounds.

S.2 of the EPA Act defines emissions as any direct or indirect release of substances, heat or noise from individual or diffuse sources in the activity into the atmosphere, water or land, and includes —

(a) an emission into the atmosphere of a pollutant within the meaning of the Air Pollution Act 1987 ,
(b) the release of a greenhouse gas or a precursor of a greenhouse gas into the atmosphere,
(c) a discharge of polluting matter, sewage effluent or trade effluent within the meaning of the Local Government (Water Pollution) Act 1977 , to waters or sewers within the meaning of that Act, or
(c) waste.

The submission from the EPA confirms that matters to do with emissions to the environment from the proposed activities, the application documentation and the EIAR, will be assessed by the Agency. Where the activities cannot be carried on or effectively regulated under a licence, then the Agency cannot grant a licence. Any licence granted will incorporate conditions to ensure that appropriate National and EU standards are applied. The assessment of the proposed development below has regard to the roles of the Board and the Agency as set out in relevant legislation.

10.1.2. Site address

Certain third-party submissions refer to the citing of an incorrect site address in application documentation. I note that the site address in public notices and application documentation correctly refers to the townlands of Kilcolgan Lower and Ralappane and I do not consider that any issue of validity of the application arises in this regard.

10.1.3. Status as Strategic Infrastructure

Queries have been raised with regard to the status of the development as a Strategic Infrastructure Development, having regard to reference in the Seventh Schedule to the on-shore nature of terminals associated with an LNG facility.

I note the determination of the Board under ref. ABP-304007-19 and the inclusion of a power plant of 600 megawatts within the proposed development. While a review of the previous determination of the Board is outside the scope of this report, I am satisfied that the development meets the criteria for the purposes of sections 37A, in respect of energy infrastructure, as set out in the seventh schedule of the Act.

10.1.4. Development on the Foreshore:

Third parties have queried the jurisdiction of the Board to consider the application. The proposed import terminal includes a jetty which extends approx. 340m from the shore into deeper waters in the estuary. Section 3 of the 2000 Act defines “development” as the carrying out of any works on, in, over or under land or the making of any material change in the use of any structures or other land. “Land” is defined in S.2 as including any structure and any land covered with water (whether inland or coastal). Section 32 requires that planning permission be obtained in respect of any development of land.

Section 225 of the 2000 Act, as amended, provides that planning permission is required in respect of development on the foreshore, where such development would adjoin the functional area of the planning authority. That part of the foreshore shall be deemed to be within the functional area of that planning authority.

S.224 of Part XV of the 2000 Act as amended, defines the “foreshore” as having the meaning assigned to it by the Foreshore Act, 1933, but includes land between the

line of high water of ordinary or medium tides and land within the functional area of the planning authority concerned that adjoins the first-mentioned land.

Section 1 of the 1933 Act defines the foreshore as “the bed and shore, below the line of high water of ordinary or medium tides, of the sea and of every tidal river and tidal estuary and of every channel, creek, and bay of the sea or of any such river or estuary and the outer limit of the foreshore”. The outer limit of the foreshore is defined as the seaward limit of the territorial seas of the State.

The proposed jetty and FSRU location therefore occurs on the foreshore, adjoining the functional area of Kerry County Council. The construction of a jetty and associated development, and the mooring of a vessel for the purpose of unloading, regassification and storage of LNG would fall within the definition of development under s. 3(1) of the Act. I conclude therefore that there is therefore no issue in relation to the jurisdiction of the Board to consider the application before it.

10.1.5. Future Data Centre

Application documentation refers to the potential wider development of these industrially zoned lands for the provision of a data centre development and includes broad masterplan proposals in this regard. These proposals are indicative only and do not comprise part of the planning application which is currently before the Board. I note that the proposed development is subject to EIA and does not have a dependency on such data centre development, which will be subject to EIA / screening for EIA in the event of any future planning application. No question of project splitting therefore arises. While third parties have raised concerns with regard to such development, they do not fall within the scope of this project or this report.

10.2. Land Use and Development Principle

The development comprises a number of elements, described in detail in section 3.0 above, but generally comprising an LNG import terminal and a 600MW power generation plant and energy storage facility, and associated development. The physical characteristics of the site make it an appropriate location for such development on the basis of the depth of water available, the relatively sheltered nature of the estuary waters and the availability of connections to gas and electricity transmission networks. It is understood that these characteristics informed its

identification as a strategic development location in the Shannon Integrated Framework Plan and their zoning for industrial use in the County Development Plan.

The site comprises part of the Tarbert / Ballylongford landbank identified for industrial use in the current Kerry County Development Plan. Objectives KDP9.23, 9.24 and 9.25 support the development of the lands for these purposes, while objective 12.3 refers specifically to the development of an import terminal at this location. In addition, the Listowel LAP supports the development of the lands in this fashion. The provisions of the Regional Spatial and Economic Strategy also support the development of these lands for energy and marine related activities, following on from the provisions of the Shannon Integrated Framework Plan. The proposed development therefore accords with, and is supported by local and regional land use planning policies.

10.3. Energy and Climate Policy Context

10.3.1. General Policy Context

Policy in relation to energy security and supply, and climate change is a complex and evolving area, subject to environmental, economic and geopolitical influences. It is not the role of the Board to set policy and, in this regard I note that under s.143(1) of the 2000 Act, as amended, the Board is required to have regard to:

(a) the policies and objectives of the Government, State authority, Minister, planning authorities and any other body which is a public authority whose functions have, or may have, a bearing on the proper planning and sustainable development of cities, towns or other areas, whether urban or rural,
(b) the national interest and any effect the performance of the Board's functions may have on issues of strategic economic or social importance to the State, and
(c) the National Planning Framework and any regional spatial and economic strategy for the time being in force.

Furthermore, the Climate Action and Low Carbon Development (Amendment) Act 2021 requires that public bodies perform their functions in a manner consistent with, inter alia, the most recent approved climate action plan, national long term climate action strategy and the furtherance of the national climate objective. These matters

are considered in further detail below. It is therefore useful to identify some of the current policy provisions most relevant to this case:

- The National Planning Framework 2018 promotes renewable energy use and generation and identifies the single point of connection to the UK gas network in Scotland and our limited gas storage capacity, as a risk to security of supply.
- The National Development Plan identifies the delivery of c.2GW of new conventional generation capacity to support a predominantly wind/solar electricity system, as a strategic investment priority. The review of the security of energy supply of electricity and natural gas systems will inform Government policy in relation to security of supply and the need for further investment.
- The Programme for Government (2020) states that as Ireland moves towards carbon neutrality, it does not make sense to develop LNG gas import terminals importing fracked gas.
- Targets and actions set out in the Climate Action Plan 2023 include the delivery of c.2 GW of new flexible gas-fired power stations by 2030 and supports the phasing out of hydraulic fracking at an international level.
- The Government Policy Statement on the Importation of Fracked Gas states that it would not be appropriate for LNG terminals to be permitted or proceeded with pending the outcome of the review of the security of energy supply of Ireland's electricity and natural gas systems.
- The National Energy & Climate Action Plan 2021-2030 notes that increased penetration of wind energy will increase reliance on the gas network.
- The National Energy Security Framework 2022 notes that completion of the review of security of energy supply, which will consider LNG import capacity, is a priority.
- The National Marine Planning Framework supports additional natural gas transmission / import infrastructure where it is in keeping with the outcome of the review of the security of energy supply and not involving the importation of fracked gas.
- The Policy Statement on Security of Electricity Supply (November 2021) identifies the development of new conventional as a national priority and should be

permitted and supported to ensure security of supply and support the growth of renewable electricity generation.

- The *Review of the Security of Energy Supply of Ireland's Electricity And Natural Gas Systems* identifies options to mitigate risk of disruption to gas supply and electricity generation, including strategic FSRU and Strategic gas storage capacity. (A public consultation phase has closed and the review is currently being considered by the Dept.)

Energy security is described by the International Energy Agency (IEA) as 'the uninterrupted availability of energy sources at an affordable price'. Security is subject to variation and risk in terms of demand for energy and supply thereof. Key variables on the supply side include physical infrastructure (e.g. terminals, distribution networks) and international supply chains. In considering the proposed development, it is useful to note the distinction between security of gas supplies and security of electricity supply / generation. While there are dependencies between these areas, recent concerns in relation to the capacity of the national grid to meet demand for electricity relate primarily to electricity generation capacity rather than supply of fuel.

At EU level, policy measures aim to provide for integration in the energy market, security of energy supply and a sustainable energy sector. Regulations were introduced in 2010 and 2017 requiring Member States to undertake security of gas supply risk assessments and ensure that adequate preventive action plans and emergency plans are developed to mitigate identified risks. I note that such risks have intensified in the past year. RePower (2022) aims to end reliance of the European market on Russian fossil fuels, including increased deployment of renewables and diversification of gas supplies via pipelines and LNG imports.

The technical report informing the *Review of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems* Consultation Paper (September 2022) notes the interconnected nature of the European gas network and of supplies within the European market. Notwithstanding the EU N1 standard, it would appear that the key gas supply risk for Ireland relates to the risk of disruption to the single point of connection to the UK and wider European gas market.

10.3.2. LNG Terminal:

The proposed terminal facilitates the importation and regassification of LNG and its injection / connection to the national grid. The terminal is not tied to any particular source or form of LNG. The current national policy context does not define any specific role for LNG in Ireland's energy mix, however, government policy in relation to the development of LNG import terminals and the use of fracked gas is clear, pending the conclusions of the Review of the Security of Energy Supply which will inform any change to that policy position.

In addressing the *Government Policy Statement on the Importation of Fracked Gas*, the applicants argue that the development is not dependent upon the use of fracked gas and that they are confident that non-fracked gas can be sourced to meet energy demands and address security of supply. The applicants suggest that policy support for energy security and supply, and for infrastructure that addresses intermittency in wind generation, facilitates this development. It is further argued that the Power Plant and the Terminal are 'future-proofed', having the ability to transition to hydrogen fuel once the technology and public policy are fully developed.

The EIAR, and the first party response to the request for further information, also note that a series of reviews of security of energy supply have previously been undertaken, which all identify the risk of reliance on a single supply source from the UK. I note that the recent National Energy Security Framework (April 2022) acknowledges this risk and in terms of diversifying fossil fuel supplies, identifies the completion of the energy security review as a priority.

Following the withdrawal of the United Kingdom from the EU, Ireland no longer meets the EU supply security standard (N-1) as we can no longer avail of a regional approach with the UK. This may be considered to provide some rationale for the development of LNG import infrastructure, however, it is noted there has been no change to the gas supply arrangements or gas volumes received from the UK in the intervening period, which are subject to separate agreements, and there has been no restrictions on gas supplies resulting in difficulties in terms of electricity generation. The risk associated with this single point of supply and the question of diversity of supply are matters being considered as part of the Government's review of security of supply for Ireland.

In their response to the request for further information, the applicants argue that knowledge of the outcome of the Review of the Security of Energy Supply is not a relevant consideration in relation to a potential decision by the Board, and having regard to relevant case law, that the Board is obliged to "have regard" to the Review rather than being bound by its findings. It is further argued that the Board should not refuse a development for reasons of potential future policy or strategy decisions. In this regard, however, I note that rather than there being a policy vacuum in respect of development of the nature proposed in this case, there is a clear government policy position in respect of LNG terminal development at this time as set out in the Policy Statement on the Importation of Fracked Gas.

Public consultation on the Review of the Security of Energy Supply closed in October 2022. Arising from this consultation process, it is understood that the Minister will bring security of energy supply recommendations to Government for finalisation although there is currently no date for completion of this process. As noted above, the review identified a number of recommended options to address energy security and supply. The operation of a commercial LNG import terminal was considered but not shortlisted by the independent review, for the reasons stated. The conclusion of this review and consultation process will inform the direction of government policy in relation to such development.

In the current policy context and pending completion of the Review of the Security of Energy Supply, I conclude that a decision to grant permission for the proposed LNG terminal would be contrary to government policy. I note the current status of the review and the lack of a clear timeline for its conclusion. A decision to grant permission would have potential medium to long-term implications for the direction of energy policy in the country, which I regard as being more properly a decision of government. Where such policy position is clarified / revised in the intervening period, the Board may reconsider the implications for the proposed LNG terminal.

10.3.3. Terminal Send-Out Capacity

The capacity of the proposed LNG import terminal is calculated as 8.2b Cu.m / annum, based on a maximum daily send out capacity from the FSRU of 22.6m Cu.m, although the EIAR notes that the FSRU would normally be likely to operate at

low to medium throughput rates. Chapter 15 of the EIAR refers to the import of approx. 4m tonnes of LNG per annum (or 5.516B Cu.m./ annum). The NIS and the applicant's further information response identify the typical or average annual send out from the terminal as 14.8m Cu.m. / day, which equates to approx. 5.4B Cu.m. / annum. Having regard to the stated peak level demand of the power plant of up to c. 2.8m Cu.m./day, this provides for a typical send out to the national gas network of c. 12 – 14.8m Cu.m. / day or 4.38 - 5.4B Cu.m. / annum depending on whether the CCGT plant is operational.

In their further information response, the applicants note that the GNI Transmission system is designed to meet historic 1-in-50 peak day system demand, as identified in the 2021 Gas Networks Ireland National Development Plan. It is argued that the proposed LNG terminal would, on its own be able to meet this peak demand, being sized to provide up to c.250 GWh/day (22.6 million standard Cu.m/d) although would typically operate at levels of approximately 14.8 million standard Cu.m/d. This would meet the EU N-1 energy infrastructure standard. Taken in combination with remaining Corrib supply to c.2030 and increasing use of Bio-methane and Hydrogen in the period to 2050, the applicants argue that the proposed send out capacity is optimally sized to meet peak day gas demand into the future.

I note that this level of capacity is broadly in line with the provisions of the 2018 Resilience Study, which considered a send out capacity at an LNG terminal of 233GWh/day. The recently published Review of the Security of Energy Supply short-listed a strategic FRSU option with an export capacity of 12.5bcm annually which was described as sufficient to meet all unserved demand in the modelled scenarios. The proposed terminal will provide an additional source of gas to the interconnected grid, and the analysis contained in the CEPA Security of Supply Technical Report[1], indicates that due to the interconnected nature of the European gas market, in a supply shock scenario, such supply from a strategic FSRU would displace pipeline supplies from the UK, or the wider interconnected European market.

Gas stored at the FSRU will be released to the grid as required and subject to LNGC deliveries being available. Having regard to the foregoing, the capacity of the terminal would be sufficient to meet demand and it is not considered that the

[1] Technical Analysis of the Security of Energy Supply of Ireland's Electricity and Natural Gas Systems - 25c90fdf-b8af-4d7c-95b4-eebd04e0c905.pdf (www.gov.ie)

development would generate additional demand and or that such capacity would be contrary to national policy.

A question has been raised with regard to the long-term viability of LNG terminal facilities in the context of the transition to a renewables based electricity system. While the commercial viability of the proposal is beyond the scope of this report, I note that the 2020 SEAI report “Energy Security in Ireland” identified this as an important consideration for any infrastructural investment decisions and the risk that over-investment in infrastructure could result in stranded assets. As noted in the 2018 Long-Term Resilience Study and in the recently published Energy Security Review, however, a key advantage of a floating LNG terminal is that it carries a far lower stranding risk than a fixed terminal, in that a floating storage and regasification unit can be easily sold / relocated if it is no longer needed in Ireland.

10.3.4. CCGT Power Plant:

In contrast to the proposed LNG import terminal, there is clear national policy support for the development of efficient, flexible conventional / gas-fired electricity generation capacity, as part of the package of measures aimed at reducing emissions in line with the Low Carbon (Amendment) Act 2021, and as set out in the 2023 Climate Action Plan. The proposed development provides such a flexible, high efficiency power generation plant and associated battery storage facility, capable of quickly responding to reduced / fluctuating renewable electricity generation. These conventional plants are required to enable the transition to renewables and the closure of older, less efficient and more polluting generation plants. The requirement for such development has been recently highlighted in the All-Island Generation Capacity Statement 2022.

Shannon LNG Ltd. were recently awarded a generation contract under the most recent electricity capacity auction process (353 MW). The press release from the Minister welcoming the results of the process noted that the results would contribute toward delivery of the gas-fired generation capacity requirements identified in the Climate Action Plan.

I note that the Consultation Paper for the Review of the Security of Energy Supply of Ireland’s Electricity and Natural Gas Systems does not short-list additional

conventional / gas-fired generation capacity as an electricity supply mitigation option due to its exposure to risks related to the unavailability of gas supplies. This is not reflected in current policy, however.

Third parties refer to the carbon budgets and sectoral emissions ceilings which have been set for the overall sector. The 2023 Climate Action Plan acknowledges the need for efficient, conventional generation capacity to act as support or back-up to a renewables based system. The extent of emissions from such plant will be dependent upon the frequency or degree to which it is dispatched by the TSO, where priority is given to renewable generators. I do not therefore consider that the proposed power generation development would be contrary to the provisions of the Climate Action Plan or the sectoral ceiling limits.

Policy provision for the development of additional conventional generation capacity does not contradict the overall objective to reduce emissions as such capacity provision is aimed at providing increased power security and will not necessarily lead to increased demand / usage. In this regard I note that the operation of the energy market is based on the use of capacity payments to maintain available generation capacity in these conventional power plants and separates such payments out from actual energy supply / generation payments. This falls within the remit of the CRU. The TSO / Eirgrid will be responsible for the dispatch of power plants where required, prioritising the use of renewable generation and more efficient conventional generation. In this context, notwithstanding a requirement for increased investment in generation infrastructure, overall emissions from power generation are still projected to fall. I conclude therefore that development of the proposed CCGT power plant is aligned with national energy and climate policy, as described in section 5.0 above.

While observers have raised the risk of compensation claims by operators arising from reducing energy demand as part of the transition to renewables, I consider this to be a policy and contract question rather than a planning matter for determination by the Board. I do note in this regard, however, that the capacity contracts are time bound, either for one-year or ten-year periods, rather than being linked to the operational lifespan of a particular plant.

Notwithstanding the request for further information, the applicants have not specifically addressed the degree of interdependence between the LNG terminal and the proposed CCGT power plant. In this regard, however, I note that section 2.4.1 of the EIAR confirms that the proposed power plant can be powered from the national gas grid via reverse flow through the AGI. In addition, section 2.4.2.3 confirms that where required, the AGI will be able to supply the LNG Terminal and / or Power Plant with gas. Based on these statements it is understood to be technically feasible for the two components of the development to operate separately, where considered appropriate in the light of the policy conclusions above.

Where the Board concur with the above conclusions, it would be open to them to consider a grant of permission for the proposed power generation plant and battery energy storage facility, in the absence of the proposed LNG terminal.

10.4. Scope of the project being assessed

Third parties argue that the assessment of the impacts of the project should consider the source of LNG fuel to the facility as well as upstream and downstream emissions associated with the extraction, production, transport and end use / combustion of the fuel. In this regard, I note that the EIA Directive requires that EIA should be carried out in respect of the project for which planning permission is sought, which is defined by reference to the development which is the subject matter of the application for planning permission. The term “project” is itself defined by Article 1(2)(a) as:

- the execution of construction works or of other installations or schemes,
- other interventions in the natural surroundings and landscape, including those involving the extraction of mineral resources.

The Directive acknowledges the implications of climate change and notes that it is appropriate to assess the impact of projects on climate (for example greenhouse gas emissions) and their vulnerability to climate change. Article 5(1) requires the developer to provide the information specified in Annex IV. Paragraph 1(d) thereof provides that this must include an estimate of the level of emissions which will be produced during the construction and operational phases. Under Paragraph 5(f) the description of the likely significant effects of the project on the environment should include “the impact

on climate (for example, the nature and magnitude of greenhouse gas emissions)". The description should cover, inter alia, the direct and indirect effects of the project.

In this regard, it is considered that the indirect significant effects to be assessed are those which are intrinsic to the construction and operation of the project and the scope of the Directive should not be further extended to consider broader policy or legislative matters. The wider indirect environmental consequences of gas-fired power generation must be considered at a national programme level. In this regard, I note the provisions of s.5 of the Climate Action and Low Carbon Development (Amendment) Act 2021, and the 2023 Climate Action Plan which provides for the introduction of additional gas-fired generation capacity as part of the overall reduction in emissions and transition to zero carbon economy. Furthermore, sectoral emission limits have been agreed, including limits for the energy sector. If permitted, the CCGT will also be required to operate in line with BAT and under the conditions of the sites IE and ETS Licences.

LNG markets are global in nature with various countries producing and exporting liquified natural gas, while carbon emissions from LNG will vary depending on the source and the method of extraction and processing. In this case, the supply of LNG is not linked to any specific source or location, and the operation of the proposed facility would not therefore be associated with identifiable or specific environmental effects. Having regard to their remove from the project, the upstream supply of LNG is not capable of site-specific assessment and would not be considered as part of the project for the purposes of EIA or AA. I consider therefore that the source of imported gas is beyond the remit of this report[2].

Third party submissions raise concerns regarding the potential for the importation of fracked gas through the terminal and refer to statements from the applicant parent company, New Fortress Energy, and their own gas sourcing and liquefaction operations in the US. Notwithstanding such submissions, I note that LNG and fracked gas are not necessarily the same thing. While natural gas sourced from fracking does comprise part of global LNG resources, not all LNG is sourced from fracking activities. Fracking activities do not comprise part of the project in respect of

[2] I note reference in third party submissions to High Court case [2021] IEHC 254 and the subsequent supreme court judgment in An Táisce – The National Trust for Ireland V An Bord Pleanála & ors, ABP [2022] IESC 8

which permission is sought. While environmental concerns with the extraction of fracked gas are well documented and do not require elaboration within this report, I note that the proposed development has no direct connection to or dependency on gas sourced from fracking. The terminal facilitates the importation of natural gas in the form of LNG, which may or may not comprise fracked gas, and the power generation plant is designed to operate with natural gas, and this report is focused on this characteristic of the development.

Third parties have also argued that the Environmental Liability Directive requires that damage from fracking and fracked gas be prevented. I note that this directive is based on the polluter-pays principle, to prevent and remedy environmental damage. The fundamental principle is that an operator who has caused environmental damage or the imminent threat of such damage is held to be financially liable. A causal link between identifiable environmental damage and the activity of an operator must be established and the primary obligation to prevent damage lies with the operator. I do not consider that this brings such activity within the scope of this project.

In terms of downstream emissions, I note that this development is proposed on the basis of improving security and diversity of gas supply. As noted, there does not appear to be any current constraint on gas supplies via the UK, and the proposed development will not itself result in increased gas consumption by end users. The interconnected nature of the European gas market is such that new or expanded supply sources would likely displace demand for gas sourced elsewhere in the market rather than increasing demand. Emissions from the downstream use of gas on the national grid are not regarded as downstream effects under the EIA Directive which could be properly regarded as effects of the project or development on the environment. On the other hand, the EIAR in this case correctly assesses the effect of the operation of the proposed power generation plant.

Observers also submit that the data centre which is to comprise part of a future application on adjoining lands to the west should be assessed as part of this application. Such development does not comprise part of the current application and any future application will be subject to its own EIA process and planning assessment. It does not fall within the scope of this project.

Third parties argue that regard should be had to the carbon leakage provisions of the Climate Action and Low Carbon Development Act. I consider, however, that the requirements of the Act in this regard fall on the Minister and Government in determining measures to pursue national climate objectives, rather than on the Board in the performance of its functions.

10.5. Greenhouse Gas Emissions:

Third party submissions raise concerns with regard to emissions from gas imported through the terminal and the operation of the power generation plant.

The proposed terminal development will provide an additional point of supply to the national gas network. There is no evidence that such supply would result in any increased demand for the use of gas. In this regard and as referenced by the first party, I note submissions by the CRU to the Joint Oireachtas Committee on Climate Action and the Environment in March 2022 indicating that this would not be likely to arise[3]. There have been no reported restrictions on supplies of gas via the UK interconnector, while any additional supply from the proposed terminal is likely to displace other sources of gas. The key driver for the proposed terminal development therefore is a need to diversify supply points, to obviate risk of a failure in the Moffat interconnector, rather than increase the volume of gas available. Reducing overall gas demand is a matter for government policy instruments and measures under the Climate Action Plan. I note also measures and legislative proposals at the EU level which aim to reduce greenhouse gas emissions including the EU Methane Strategy (October 2020) which is part of the European Green Deal and the 'Fit for 55' package, and RePower (2022).

The EIAR considers operational greenhouse gas emissions from the power generation plant, based on the plant operating 24 / 7, which is regarded as a conservative approach given its likely role and deployment in the energy system. The EIAR acknowledges the higher upstream emissions of LNG relative to piped natural gas. Emissions from direct combustion and from the upstream extraction, processing and transport of LNG to the power plant are included (WTT emissions) in the operational assessment. The assessment of emissions also provides an estimate

[3] Joint Committee on Environment and Climate Action debate - Tuesday, 29 Mar 2022 (oireachtas.ie)

of downstream residual emissions from gas supplied to the national grid in Table 15-2, although it argues that emissions from use of such gas are beyond the scope of the EIA process, as discussed above.

Third parties argue that no mitigation for the climate impacts of emissions from the proposed power generation unit have been identified. In this regard, I am of the view that the proposed power plant should be considered in the context of national climate policy and its role in replacing existing conventional generation capacity and supporting a renewable based energy system. National policy provides for such development within existing emissions targets and the National Development Plan notes that the required c.2GW of additional conventional generation capacity will spend much of its time in reserve until it is needed. While there will be significant investment in new generation capacity, the proportion of electricity generated by natural gas is expected to decrease from circa 50% to circa 30% by 2030.

The Climate Action Plan and other policy statements provide for the development of such conventional (gas-fired) power generation capacity to facilitate the transition, and act as back-up to, a renewable based system. Current shortfalls in generation capacity are resulting in the life of older, less efficient fossil fuel plants being extended, along with the short-term deployment of emergency fossil-fuel based generation capacity, pending the commissioning of modern, efficient plant of the nature proposed in this case. The proposed development would facilitate the closure of such older and less efficient plant and overall improvements in emissions and plant availability. In this regard, the EIAR compares emissions from the proposed CCGT with that of a less efficient open cycle gas turbine (OCGT), powered on piped natural gas, which would be displaced / dispatched by the TSO later than the proposed unit. Notwithstanding the higher emissions of LNG, the assessment identifies that the proposed plant would have reduced carbon relative to an OCGT. I note also that the CCGT has the capability to run on piped natural gas from the national gas network, as confirmed in Chapter 2 of the EIAR, which would further reduce emissions.

The plant is not expected to operate on a continuous basis and the generation / dispatch of power from the facility will be the responsibility of the TSO (Eirgrid). The efficient and flexible nature and design of the plant and its ability to be rapidly deployed, facilitating increased renewable generation capacity, is the primary

inherent mitigation to the identified potential “major adverse” effects of emissions from the plant. I note also that the development will be subject to an IE licence from the EPA and the emissions limits to be imposed on the sector.

10.6. Water

The dominant water feature in this area is the Shannon Estuary to which all other water features drain. There are some minor field drains across the site, however, the primary freshwater feature is Ralapanne Stream on the western side of the site, which flows northwest to the estuary. The proposed development access road traverses this stream at the southern end of the site.

The estuary is identified by the EPA as a Transitional body, with unpolluted water quality, of good WFD status. Ralapanne Stream is assigned a River Waterbody WFD Status (2016-2021) of Moderate. The site overlies a locally important aquifer, moderately productive in local zones, of high or extreme vulnerability and of good status. A flood risk assessment undertaken by the applicants indicates that apart from where the access road crosses Ralapanne Stream, the lands are not at risk of flooding. The crossing of the Ralapanne Stream is designed to address such flood risk.

The extensive works proposed on the site have the potential to give rise to impacts on the surface and groundwater environment, including waters in the estuary. These primarily comprise emissions of sediment or other contaminants to waterbodies and the potential impact of spillages or discharges during construction activities, and are considered in the EIAR and NIS.

Subject to the identified construction and surface water management and mitigation measures and proposed design of the crossing of the Ralapanne Stream, it is not considered that the development would negatively impact on the quality or status of waterbodies. Identified mitigation includes adherence to published guidance, including CIRIA guidelines and IFI guidelines of protection of fisheries. I note the submissions from prescribed bodies in this regard.

At operational stage, potential impacts from process effluent and surface water will be controlled, prior to discharge to the estuary via a new outfall and discharge will be subject to continuous monitoring. A separate stormwater drainage network will

incorporate hydrocarbon interceptors and all drainage discharge will be subject to the terms of the IE licence for the facility. Identified process effluent streams will be collected and removed off-site for treatment. Wastewater will be subject to on-site treatment prior to discharge to the sump.

The information provided in the EIAR in terms of the management and treatment of waters discharging to the estuary does not suggest that significant impacts on water quality are likely. In this regard, I note the proposed drainage design and the significant levels of assimilative capacity in the receiving waters. I note the procedures for the management of spillages to the estuary set out in the application and in the response to the request for FI. Subject to the implementation of such mitigation, a significant risk of impacts on water quality is not considered arise. Operational emissions will be subject to the requirements an IE licence from the EPA.

Ballylongford Bay to the west of the site is a designated Shellfish Water. Modelling of operational emissions to the estuary waters indicate that little or no interaction with shellfish production sites in inner Ballylongford Bay will arise, with rapid dispersion of sediment and pollutants following discharge. Modelling of the dispersion and deposition of sediment from construction activity indicates the levels of deposition in this area would not be significant. These activities will be limited in duration and significant impacts on the environment of these waters are not anticipated.

The ecological impacts of the development are considered further below and in Section 12.0, Appropriate Assessment.

10.7. Biodiversity / Ecological Impacts

In line with the approach of the EIAR, the marine and terrestrial & freshwater ecological aspects of the development are considered separately below:

10.7.1. Marine Ecology:

The site directly adjoins and overlaps with the Lower River Shannon Estuary, which comprises part of the Lower River Shannon cSAC and River Shannon and River Fergus SPA. There are direct impacts from the development on the estuary and pathways for the discharge of waters from the development site to the estuary.

Ballylongford Bay pNHA is hydrologically connected to the site, while Tarbert Bay pNHA lies further to the east. Both sites are important for the numbers of waterfowl which they host. The application identifies a range of potential impact mechanisms as follows:

1. Release of pollutants during construction.
2. Release of spoil during piling.
3. Underwater noise during construction and operations.
4. Seabed habitat loss during construction.
5. Vessel physical disturbance and collision injury during operations.
6. Discharge of treated cooled seawater during operations.
7. Entrainment and impingement of fauna by the FSRU seawater system during operations.
8. Wastewater discharge and Power Plant Process Heated Water Effluent during operations.
9. Introduction of invasive species during operations.
10. Accidental large-scale oil or LNG spill during operations.

These mechanisms are considered to adequately reflect the potential for effects on marine habitats and ecology.

The primary impacts of concern during construction activity include noise and disturbance to marine mammals and aquatic species due to piling and on-shore blasting, potential sediment discharge to waters and direct habitat loss within the estuary and cSAC. I refer also to the detailed assessment of impacts on the designated site under the Appropriate Assessment heading of this report.

In respect of noise and vibration impacts and disturbance effects on marine mammals and aquatic species, I refer to the detailed discussion under section 12.0 Appropriate Assessment. This concludes that having regard to the nature and duration of activities, and subject to the identified mitigation measures adverse effects on marine mammals and otter or on diving birds are not likely.

I consider that the mitigation measures identified for the control and management of surface waters during construction, which are generally standard in nature, are satisfactory to ensure that no significant impacts on the quality of waters in the estuary would arise. Modelling has been undertaken in respect of sediment

generation which indicates that the dynamic nature of the estuary environment and the volume of water therein are such that no significant levels of deposition will occur. The model predicts that deposition rates would be generally <0.01mm and up to 0.2mm on the east side of Ballylongford Bay. The applicants refer to guidance from the OSPAR Commission (2008, 2009) which notes that benthic fauna can survive rapid sediment deposition up to depths of 100mm and that negative impacts to marine life are only expected when sediment deposition depths exceed 150 mm. It is not expected therefore that the proposed development would have negative impacts on habitats or benthic fauna in this regard. Sediment release is not likely to significantly alter the already turbid nature of waters in the estuary so as to impact on fish or marine mammals, or prey availabilty.

Potential in-combination effects could arise if the sediment plumes associated with the Cross Shannon 400 kV Cable Project overlap plumes generated due to the installation of piles. Modelling indicates, however, that the combined sediment deposition depths would not exceed the threshold identified in OSPAR (2008, 2009) for impacts to habitats and associated faunal communities; consequently it is predicted that significant negative in-combination effect will not occur.

The extension of development into the estuary, through the construction of the proposed jetty terminal and outfall, will result in the direct loss of habitats identified as qualifying interest of the Lower River Shannon cSAC. The application Planning Report, refers to the provisions of Article 6 of the 'Habitats' Directive 92/43/EC (2000), which defines 'integrity' as the 'coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and / or population of species for which the site is or will be classified', and concludes that the construction and operation of the proposed project will have no adverse effect on the SPA or cSAC.

I refer to section 12.0 below Appropriate Assessment, wherein it is concluded that the proposed development will not have an adverse effect on the integrity of the Lower River Shannon Estuary cSAC as the loss of this very small amount of benthic habitat from the Estuary would not adversely impact on the ecological structure or function of the site or of the habitats and community complexes therein, and that the minor loss of habitat will not affect the overall site integrity of the SPA due to the very

small area affected and the low-quality habitat for SPA birds at this location, which is reflected in the low numbers of birds recorded utilising this area of the estuary.

I refer also to the discussion under the Appropriate Assessment heading below in respect of impacts on the qualifying interests of the River Shannon and River Fergus Estuaries SPA and Lower Shannon Estuary SAC. The conclusions of the Appropriate Assessment are relevant to other marine species and habitats, not identified as qualifying interests of European Sites. Modelling indicates that construction and operational discharge to the estuary will be subject to rapid dispersion, with no significant effects on water quality. The impacts of the development are otherwise considered to be localised and no significant impacts on marine ecology are considered to arise. I note also the requirement for operations to adhere to the requirements of the IE licence.

10.7.2. Terrestrial & Freshwater Ecology

Habitats

The proposed development will result in the change of these currently agricultural lands to industrial / utility uses, with the loss of existing habitats. The main development area comprises agricultural lands, primarily under grazing with mature field boundaries. Surveys have identified no rare plant species within the site and habitats are described in the EIAR as being generally of local importance only. There will be direct impact on a section of sedimentary sea cliffs along shoreline, however, this habitat is not identified as a qualifying habitat of the SAC. The extent of this habitat within the site is relatively low and largely unvegetated and is not identified as being of high ecological value.

The removal / modification of existing terrestrial habitats will have a minor negative impact at a local level, however, these are not regarded as habitats of particular ecological or conservation interest and I note the long-term zoning of these lands for industrial purposes.

Mammals

Surveys within and around the development site recorded badger, otter, mink, fox, Irish hare, and bat species (common pipistrelle, soprano pipistrelle and Leisler’s).

These findings are supported by previous surveys of the site undertaken in 2006 / 2007 and 2011 / 2012.

Two badger setts were recorded, one on the western part of the site (proposed laydown area) and one on the eastern site boundary. These are described as outlier setts, associated with main setts which are located outside and to the southwest and east of the site respectively. The main setts will not be impacted by the proposed development, however, the exclusion of badgers from the outlier setts will be required to facilitate the development. Detailed mitigation measures and methodologies, in line with NRA guidance are identified, including compliance with any licence requirement. I note that the submission of the DAU raised no objection to the development in this regard. Subject to such mitigation measures I do not consider that the development will have unacceptable impacts on badger populations.

The development will also result in a reduction in foraging habitat for badger groups within the area, with potential impacts on group size. Having regard to the extent of remaining lands available in the surrounding area, however, such impact is not regarded as unacceptable.

Bat foraging / commuting activity was recorded across the site, however, surveys did not identify any bat roost sites in trees or hedgerow. While the disused farm buildings within the site are described as supporting summer roosts, no such use was recorded in 2021. Other structures / buildings are described as being of low roost potential. Bat emerging and feeding activity was recorded in the farm complex located to the southwest, and outside of, the proposed development site. Overall, the site is described as being of Local importance (Higher value) for bats.

Internal hedgerows and scrub are described as being moderately suitable for commuting and foraging bats under the guidelines, and the development will result in some loss of foraging habitat. Pre-construction surveys of all structures and trees to be removed should be undertaken in line with best practise, while the removal of any identified roost site would be subject to a derogation license from the Department. It is indicated that the development will adhere to NRA ‘Guidelines for the Treatment of Bats during the Construction of National Road Schemes’ NRA (2005c) and 'Bat Mitigation Guidelines for Ireland: Irish Wildlife Manuals (NPWS). Detailed method

statements are to be agreed with NPWS prior to commencement of works. Lighting design will follow Bat Conservation Ireland Guidelines (2010).

Otter activity has been recorded along the Ralappane Stream and the shoreline in the vicinity of the site but not within the site and no signs of Otter or Otter holts were noted within 150m of the site. There will be some loss of potential foraging habitat for otter, primarily along the watercourse and the shoreline although the works area is c. 1km from areas of recorded otter activity. Mitigation of potential impacts includes the design of lighting at the jetty and around the site, and adherence to NRA guidelines. Pre-construction surveys for otter holts within 150m of the development site will be undertaken and, where exclusion from resting or breeding sites is required, a derogation licence will be obtained. Otter are largely nocturnal and have the ability to habituate to disturbance and operational lighting. They have been known to make use of manmade structures, which can also create additional habitat for marine species, e.g. artificial reef habitat created by the jetty. Short-term displacement during construction is unlikely to significantly impact on otter due to their ability to move away from or adapt to short-term disturbance. Operational mitigation measures will ensure that noise levels at known areas for otter are less than 36 dB(A), minimising potential disturbance effects.

The site includes aquatic habitats in the form of drainage ditches and the Ralapanne Stream. Pre-construction surveys will be undertaken for frogs on wet grassland and drainage ditches to be removed. Having regard to the range of this species, the impacts of the development are regarded as acceptable. The EIAR notes that small numbers of fish use the stream. While no Annex II species were recorded, European eel which is critically endangered, was recorded within the stream. The stream is of Local importance (Higher value) for fish species and of Local importance (Lower value) for invertebrate species. Construction activity has the potential to result in the release of pollutants / sediment to waterbodies. Subject to the identified construction and surface water management measures and the proposed design of the crossing of the Ralapanne Stream, however, significant impacts in this regard are not anticipated. Identified mitigation includes adherence to published guidance, including CIRIA guidelines and IFI guidelines for the protection of fisheries and Bat Conservation Ireland guidance on lighting. I note also the submission of Inland Fisheries Ireland in this regard.

Birds

The site and adjoining land and shore have been the subject of bird surveys over a number of years including breeding and wintering bird surveys. Breeding bird surveys recorded one non-SCI Annex I species, Little Egret, within the salt marsh habitat located outside and to the west of the site boundary. A number of red-listed species were recorded within the site, however, no signs of breeding activity are reported. Eleven Amber List species were recorded and the site is described as being of Local Importance (Higher value) for birds of conservation concern and for other breeding birds. While Sandwich Tern, an Annex I species was recorded foraging within intertidal waters to the west of the site, there are no breeding tern colonies in the vicinity of the site.

The site has been classified as being of Local importance (Lower value) for White-tailed Sea Eagle given the foraging range of this species and pre-application correspondence from NPWS is reported to have raised potential impacts on this species related to potential powerline collision and electrocution. Applicant surveys did not report sightings of this species and terrestrial habitats are described as not suitable foraging habitat therefor. No sightings were recorded in this area in the independent surveys of the estuary undertaken by MKO in 2017/2018[4]. I note that the proposed development does not include any overhead powerline and that future medium and high voltage connections from the site to the national grid are anticipated to be in the form of underground cables, which would satisfactorily address risks in this regard.

Potential impacts on estuarine birds and on the River Shannon and River Fergus Estuaries SPA, and SCI birds using waters in the vicinity of the site, are considered in more detail in section 12.0 below, Appropriate Assessment. It is noted, however, that the detailed surveys undertaken did not record nationally or internationally important numbers of birds in this area. The site and adjoining shoreline provide limited intertidal foraging habitat of value and subsequently very low numbers of birds were recorded. Overall, the site is described as being of county importance for Annex I species, Local importance (Higher value) for SCI species and Local importance (Higher value) for non-SCI wintering / estuarine birds. The applicants

[4] MKO, (2019). Waterfowl numbers, usage and distribution on the River Shannon and River Fergus Estuaries - Final Survey Report. 170160 – F – Final Survey Report – 2019.01.30.

conclusions with regard to the relatively low number of birds occurring on the site or within the adjacent estuary are supported by the findings of the detailed MKO surveys, which were conducted over a calendar year across the entire estuary.

Inconsistencies between the EIAR and NIS were the subject of the request for further information, in relation to the presence of foraging Snipe and Curlew on wet grassland within and adjoining the site. The response confirms that no terrestrial waders were recorded within the development site. Curlew and Snipe have been recorded on lands to the west and terrestrial habitats of interest for these species are stated to be outside the site boundary. Some small numbers of curlew were recorded along the northern shoreline of the site.

The most significant effects on breeding birds will arise from habitat loss, fragmentation, and modification. Construction works are likely to overlap with two breeding bird seasons. Disturbance impacts are described as local moderate, however, given the availability of alternative habitats, the mobile nature of the species and fall-off in noise levels with distance. The loss of nesting and foraging habitat of red listed bird species will have negative, moderate and long-term impacts at a local level in the absence of mitigation. There will be some short-term construction disturbance of birds of conservation interest which forage within but breed outside the site, however, the numbers of such birds are not significant and impacts at the population level are not anticipated.

Potential impacts on estuarine birds during construction include habitat loss, noise and visual disturbance (including lighting), underwater noise and changes in prey availability and water quality. The adjacent intertidal area is of low value for waterbirds. It is indicated that given the low numbers of birds using site, the availability of alternative foraging habitat in the immediate vicinity and the foraging range of diving birds within the estuary, significant impacts are not likely. The development will not result in the loss of critical foraging habitat and I conclude that significant impacts on the overall numbers of birds within the estuary are not likely.

Given the temporary duration of works and rapid dispersion of sediment or other pollutants within the dynamic estuarine waters, impacts on foraging activity and prey availability are unlikely. I refer to the discussion of disturbance effects set out in section 12.0 of this report, Appropriate Assessment. Noise disturbance will be limited

to a relatively small area and given the small numbers of birds recorded around the site and their mobile nature, significant disturbance impacts are not anticipated. Blasting activity on land will be limited in duration and extent and subject to daily limits, such that impacts will be confined to a small area of subtidal waters and shoreline. Similarly, the extent of visual disturbance is not expected to have significant effects. Overall slight negative construction impacts are predicted.

Operational impacts in term of noise and visual disturbance are not considered likely to be significant, due largely to the nature of emissions and the relatively small numbers of estuarine birds frequenting this location. The application notes that existing jetty structures along the estuary do not appear to pose any current collision risk to birds and that there are no observed commuting routes for heavy wing loading birds along this stretch of coastline. Mitigation measures include pre-development surveys of buildings for nesting birds and the timing of vegetation clearance, and erection of nesting boxes. Landscaping plans include the provision of native woodland, scrub and grassland.

While the DAU did not raise an objection in principle in relation to potential impacts on estuarine birds, the potential disturbance effect of lighting was raised in the request for further information. The applicant's response includes additional night-time photomontages and confirms the findings of the EIAR and NIS that, subject to the identified mitigation measures, no significant impacts are likely. The EIAR refers to design measures to minimise the height of lighting columns and review light temperatures to minimise the content of blue light. The response of the DAU, recommends a condition relating to the design of lighting on the site, including the avoidance of unnecessary effects of LED lights, either by replacement with less impacting light sources, or restricting light spill onto the estuary. I consider that such conditions, allied to the mitigation and design measures identified in the EIAR would satisfactorily address potential impacts in this regard.

Observers have raised a concern with regard to possible impacts on birds within the estuary due to the displacement of existing shipping movements closer to bird roost / foraging sites, in order to avoid LNGC exclusion zones. In this regard I note that shipping is currently restricted to the deeper waters of the navigation channel which is c.650m wide between Scattery and Carraig Islands and approx. one nautical mile / 1852m between Moneypoint and the proposed terminal. All shipping movements are

subject to the control of the SFPC. The levels of shipping recorded within 150m of the proposed jetty site in 2019 were low while the proposed development will not give rise to significant additional volumes of shipping. Having regard to the width of the channel, and the limited extent of the control zone, it is not considered that any material deviation of vessels will be required and in this regard, it is not considered that significant impacts on birds due to displacement of shipping within the navigation channel are likely.

10.8. Air Quality

Impacts on air quality during construction are likely to be short-term in nature and will be subject to identified mitigation measures, and on-going monitoring as proposed. In the majority of cases fugitive construction dust is deposited within 50m of the source. Residential receptors in this case are located at a remove from the main works area and the immediately adjacent habitats are not sensitive to the effects of dust deposition. Significant environmental impacts are not expected in this regard. Modelling of construction phase traffic emissions indicates that there will be no exceedance of air quality standards or of Environmental Assessment Levels at the worst affected residential receptors, or ecological receptors within 200m of haul routes.

Operations at the site will potentially give rise to impacts on air quality due to the burning of fossil fuels and release of emissions, including NOx emissions. The combustion of gas for energy generation is acknowledged in national policy as a necessary component of the fuel mix in order to support increased renewable penetration. The intent is that while sufficient conventional generation capacity will be required, it will operate less, spending much of its time in reserve for when needed, during times of high demand and low wind / solar generation. The proposed power plant will therefore not operate on a constant basis.

SI 180 (Air Quality Standard Regulations) of 2011 is the primary piece of air pollution legislation in Ireland, which transposes the EU CAFE Directive and daughter directives into Irish law under. Table 8-1 of the EIAR identifies the relevant national and EU air quality standards, and relevant Environmental Assessment Levels and averaging periods for other pollutants as referred to within EPA guidance (2020).

The proposed CCGT Power Plant will fall within the remit of the Industrial Emissions Directive (2010/75/EU) and will be required to obtain an IE licence from the EPA.

In respect of sensitive habitats, the air quality assessment in the EIAR sources values for Critical Loads (CL) from the UK Air Pollution Information System (APIS) and Table 8.9 identifies the appropriate Environmental Assessment Levels (EALs) for nitrogen and acid deposition for relevant sensitive habitats.

The emissions characteristics of the proposed development are set out Table 8-3 of the EIAR, along with any assumptions made. Air dispersion modelling was undertaken in respect of the proposed development, which predicts the contribution of pollutants at selected human and ecological receptors. This contribution is added to the background (or ambient) pollutant concentrations representative of those locations to report total pollutant concentrations that can be compared to the relevant Air Quality Standards and Environmental Assessment. While operational traffic emissions alone do not have the potential to cause a significant effect, in line with industry guidance, its contribution is quantified to allow for the combined reporting of operational site and road traffic emissions. The assessment of cumulative emissions includes emission sources at Moneypoint and Tarbert power stations.

The EIAR assessment of operational emissions from the CCGT power plant considers a number of scenarios, including the envisaged normal operational scenario which conservatively provides for continuous operation of the Power Plant (CCGT) throughout the year (24x7x365). Emissions are modelled for identified human and ecological receptors.

The assessment concludes that for the assessed scenarios, the majority of pollutants and averaging periods at human health and nature conservation receptors reported in the normal operating scenario can be considered insignificant. There will be no exceedances of Air Quality Standards and no significant effects are likely. For a limited number of receptors, where ‘Imperceptible’ to ‘Slight’ effects and ‘Moderate’ effects are predicted, further analysis of the Process Contribution and Predicted Environmental Concentrations has been undertaken for those pollutants and averaging periods

While hourly mean NO_2 PC and PEC at the worst affected human health sensitive receptor (R19) could not be screened as insignificant the Proposed Development

does not give rise to any risk of exceedance of the hourly mean NO2 Air Quality Standard in the Normal Operational Scenario, nor is it likely to constrain any future development of the area.

In considering acid deposition, the EIAR notes that there is an absence of baseline data for this area and therefore uses a proxy value from the UK, and identifies critical load data. The annual average acid deposition rate impact (PC) and total deposition rate (PEC) at the worst affected ecological receptor site (receptor E12 - perennial vegetation on stony banks habitat) could not be screened as insignificant, however, the impact (PC) accounts for just 1.8% of the Air Quality Standard, and the elevated total deposition rate (PEC) is primarily due to the assumed ambient background levels. The EIAR also notes that background acid deposition rates in the study area are likely to fall in the near future with the cessation of the burning of coal and Heavy Fuel Oil at Moneypoint and Tarbert Power Stations respectively. In light of the above, it is determined that the operation of the Proposed Development will not give rise to an exceedance of the Air Quality Standards for annual mean acid deposition rates and that the impact will not cause a significant effect.

It is therefore determined that in the normal scenario the development will not give rise to an exceedance of the Air Quality Standard and that the proposed development will not give rise to any significant effect. Similarly, the alternative scenarios assessed did not give rise to any significant additional effects. In the worst-case modelled scenario (no. 3), pollutant concentrations remain well below the relevant AQS and EAL. The addition of the contribution from road traffic emissions to the impact (PC) from the site emissions alone makes little to no difference to the assessment nor potential significance of effects.

The assessment of cumulative effects notes the contribution of nearby sources including Moneypoint and Tarbert Power Stations, which are due to close 2023-2025. The proposed power generation plant will create additional capacity in the system to facilitate the closure of such older plant. With the cumulative operation contribution to total pollutant concentrations the proposed development does not give rise to any exceedance of Air Quality Standard in the Normal Operational Scenario, nor is it noted as likely to constrain any future development of the area. In respect of Perennial vegetation on stony banks habitat of the SCA/ SPA the cumulative contribution to the AQ standards for annual mean acid deposition rate is

95%, however, this arises primarily form the high assumed background concentration, which is already elevated close to the Critical Load.

At further information stage, the potential effect of nitrogen deposition on European sites containing active raised bogs was queried. The analysis provided indicated that the main constraint on these sites (Moanveanlagh Bog SAC or Tullaher Lough and Bog cSAC) arises from the existing background concentrations which exceed the conservation objective target values and that the contribution of the proposed development to such levels, either on its own or in combination with other sources in the area is not significant. The potential effect of nitrogen deposition on European sites in the wider area is considered further in section 12.0 Appropriate Assessment, below.

In addition, it is noted that approval was recently granted for a temporary (5-year) 150MW emergency electricity generation development at Tarbert Power Station, which will be fuelled by distillate fuel oil. That application undertook an assessment of cumulative air quality impacts, including the operation of the proposed Shannon LNG Plant. In respect of key ecological receptors, the conclusion in that case was that the baseline concentration of pollutants was already well in excess of the relevant EALs and that the cumulative contribution to these baseline concentrations was not significant.

I note the requirements in respect of EPA licencing and that there is no evidence that the proposed development cannot be operated appropriately in accordance with such licence or would otherwise be unacceptable on in terms of air quality.

In terms of cumulative construction impacts, works for the upgrading of the Coast Road (L1010) from Tarbert may overlap with the site development works. The main development site is located approximately 750 m from the L1010, such that that significant cumulative dust impacts impacting on the same receptor are unlikely. Potential for track-out of mud from vehicles leaving site can be adequately managed. Development traffic on the public road at this phase will be subject to a construction traffic management plan which will be co-ordinated with the road upgrade works. Cumulative construction dust emissions are not considered likely to have a significant effect and I note the proposals for dust monitoring set out in the EIAR.

Cumulative construction impacts are also possible where development coincides with the construction of the 220 kV connection, medium voltage (10/ 20 kV) connection, Shannon Pipeline or potential data centre projects. Due to the distance to the limited number of potential receptors, and identified mitigation measures, the potential effect of construction activity on dust and air quality is not considered to be significant.

I note reference in the Kerry County Council submission to inconsistencies in the EIAR in relation to the volumes of material to be excavated. I consider, however, that this comment is based on a misreading of the references in chapter 8 to the volumes of excavated materials. The reference therein is based on the categorisation of the significance of the works proposed, being *high* where >100,000 cu.m. of material is to be excavated, rather than a quantification of the works proposed in that section. This approach is explained in Appendix A8-1 of the EIAR.

10.9. Landscape and Visual Impacts:

I note the land use zoning objectives and the landscape designations for these lands in the Kerry County Development Plan. I note also that the northern shores of the estuary in County Clare, including the area opposite the subject site, are identified as a working landscape and the extent of scenic routes / protected views in this area under the Clare County Development Plan is limited.

The EIAR is accompanied by a series of visual images / photomontages describing views to the constructed development from 15 no. viewpoints on both sides of the estuary and from the Killimer – Tarbert ferry crossing. The photomontages also attempt to describe the night-time / lighting effects of the development from two of these viewpoints along or across the estuary. These were supplemented with additional night-time photomontages at further information stage. I consider that the selected viewpoints are representative of views from the surrounding area and provide a reasonable basis for assessing the impacts of the development.

The proposed development would comprise a significant intervention in the landscape. The landscape of this area is already characterised by significant and dominating pieces of energy infrastructure, however, including in particular

Moneypoint and Tarbert Power Stations, high voltage power lines, as well as more recent renewable, wind energy developments within Counties Clare and Kerry.

The proposed power generation plant is the most significant on-shore element of the development. The sloping topography of the site will be modified to provide a level platform for the main infrastructure elements at 18mOD. The proposed turbine halls rise to 30.145m with an associated stack height of 35m over platform level. Air cooled condensers to the north of the turbine halls comprise prominent features at 32.065m. Water storage tanks to the east of the turbine halls rise to a maximum of 24m over ground.

The proposed power generation plant will be visible from the local road network and residential properties to the south of the site, somewhat mitigated by the low ridge to the south of the main development area. I note the existing industrial / energy context in this part of the estuary and the zoning of these lands for industrial development for a considerable period. There is also a history of previously permitted, although not constructed, energy infrastructure development on these lands. In this regard, while I acknowledge that the development will have impacts on local visual amenities, I do not consider that such impacts would be unacceptable. I note that this has not been raised as a concern in third party submissions on this case.

There are Protected Views and Prospects in the direction of the site from Carrig Bridge to Carraig Island along the L-1004 local road to the west of the application site. Having regard to the separation distance, the scope and the limited level of intrusion into such views, I do not regard such impacts as significant or unacceptable. The development will be visible from the northern shore of the estuary in Co. Clare, however, I note that such views are most readily available in the vicinity of the existing Moneypoint power station, and that the impact is mitigated by the distance from the site.

The deployment of the FSRU in lieu of an on-shore storage and processing facility reduces the extent of on-shore development required. I do not consider that the long-term mooring of the FSRU and visiting LNGC's at this location within the estuary would appear incongruous in the context of existing shipping and energy activities. I

do not consider that the overall development would be out of character with or have unacceptable impacts on the marine environment or visual amenities of the estuary.

Ralapanne House is identified as a protected structure in the Kerry County Development Plan (RPS-KY-0888). This is an 18th C two-storey farmhouse, which sits on the low ridge between the main development area and the L1010. The property is bounded by agricultural structures / barn of varying condition and a stand of mature trees to the west. The proposed power station will extend above the ridge into views to the house from the L1010, however, having regard to the existing adjoining farm structures, the zoning of the lands and the limited degree of intrusion, I do not consider that unacceptable impacts on the character or setting of this structure will arise.

10.10. Roads and Traffic

The site is served by the L-1010, a rural road, which primarily serves local residential and farm properties and provides a secondary route between Ballylongford and Tarbert. Sections of this road are currently subject to constraints in terms of width and alignment, between the site and Tarbert / R551 (approx. 4.5km).

The most significant transport impact from the proposed development will arise during the construction phase, which is described as comprising a 32-month construction period with a 3-month peak period. Construction traffic will be directed along the L1010 from the N67 / N69 via Tarbert to the east. Predicted AM peak hour traffic is 286 no. staff vehicles between 6.30am – 07.30am. Predicted PM peak hour traffic is 296 no. staff vehicles between 16.45 – 17.30. Construction deliveries are predicted to comprise 73 no. LGV's and 37 HGV's per day, to be scheduled outside of peak hours. In the context of existing traffic on the local road network, this would represent a significant increase in traffic volumes during construction. Operational traffic volumes are not predicted to be significant, having regard to the projected employment numbers on the site.

With regard to construction traffic impacts on Tarbert to the east, regard is had to the large secondary school on the western approach to the town. Mitigation measures include the scheduling of construction traffic to avoid school drop-off / collection times, while traffic movements are otherwise spread over the day. The national road

network is generally of a good standard and adequate to accommodate the movements predicted, although Tarbert Main Street would constitute a constraint on HGV traffic. A traffic management plan will be implemented to mitigate the shore-term construction impacts of the development, which should be agreed with Kerry Co. Co. I note also the comments and requirements of TII in respect of abnormal loads, which are amenable to condition.

The Outline Construction Traffic Management Plan (Appendix 11-1 of the EIAR) describes upgrade works to the L-1010 by KCC to facilitate the proposed development as follows:

> *"……. the L1010 will be upgraded by KCC as part of planned works for to facilitate main construction works.*
> *The upgrade would consist of removing / straightening out 2 existing bends and widening the whole road between the site entrance and Tarbert Comprehensive School to a width of 8m – 2 No. 3.5m lanes and a 0.5m hard shoulder either side".*

Work have been undertaken to date on sections of the L-1010, comprising road widening and realignment for approx. 500m in the vicinity of Piermount Cross and a further 500m on the approach to the secondary school. These do not comprise the full extent of the works identified in figure 2.2.3 of the OCTMP.

The L-1010 is identified as a Tourist Route in the County Development Plan. Objective RD-24 seeks to sustainably upgrade and improve the major tourist routes within the County, however, this does not reflect the works required in this case. The upgrading of the L-1010 is not listed in the 2017 Kerry County Development Contribution Scheme, which remains the relevant scheme for the county.

The planning authority have recommended that a condition under S.48(2)(c) be attached to any decision to grant permission, in respect of the following:

(a) Upgrading and widening of the L1010 required to facilitate the project.
(b) Upgrading footpaths and the road surface of Bridewell Street, Tarbert and the development of an off-street car park to facilitate proposed traffic management and parking control measures.
(c) Improvements at the junction of the R551 and L1010 to accommodate the projected traffic volumes travelling along the L1010 Coast Road.

The identified works are not costed by the planning authority; however, the recommendation reflects condition no. 36 of PA08B.PA0002, granted permission in

2007. I note that the first party have not appealed or otherwise raised a question in relation to this condition.

The Development Management Guidelines, para 7.12, advise that:

> *Conditions requiring a special contribution must be amenable to implementation under Section 48(12), requiring that the basis of the contribution be fully explained in the decision. It will be necessary to identify the nature / scope of works, expenditure involved and the basis of the calculation, including the apportionment to the particular development. Circumstances which might warrant the attachment of a special contribution condition would include, where the costs are incurred directly as a result of, or in order to facilitate, the development in question and are properly attributable to it. Where the benefit deriving from the particular infrastructure or facility is more widespread (e.g. extends to other lands in the vicinity) consideration should be given to adopting a revised development contribution scheme or, as provided for in the Planning Act, adopting a separate development contribution scheme for the relevant geographical area.*

S.48(12)(a) requires that where payment of a special development contribution is required in accordance with subsection (2) (c), the condition shall specify the particular works to which the contribution relates. In this regard, I consider that:

(a) The upgrading and widening of the L1010 required to facilitate the project can be understood to reflect the works identified in the OCTMP (figure 2.2.3), accompanying the application.

I note that the works undertaken to date on the L1010 were carried out at a time when there was no extant permission for development on the subject lands. It is difficult therefore to argue that they are exceptional costs required to facilitate this proposed development. With regard to the remainder of outstanding works along the L-1010, having regard to the scale of the proposed development and the planning history relating to the lands, it is accepted that the works will facilitate the development of these lands and may therefore be considered under s.48(2)(c).

(b) Improvements at the junction of the R551 and L1010 to accommodate the projected traffic volumes travelling along the L1010 Coast Road can be regarded as sufficiently specific in terms of location and function, in facilitating this development.

(c) In respect of the upgrading of footpaths and the road surface of Bridewell Street, and development of an off-street car park to facilitate traffic management and parking control measures, I note that in 2008 condition no. 27 of PA0028 provided for a special development contribution in respect of parking restrictions along Bridewell Street in the vicinity of the junction with the N67 (Ferry Port Road) and N69 (Listowel to Tarbert Road).

The location of proposed off-street car parking and the size and extent of same is not identified in planning authority documentation, nor do the planning authority describe the parking and traffic management works. The provision of such a car park appears to reflect a specific objective of the Listowel Municipal District LAP for Tarbert, wherein a town centre car park on a backland site south of the junction with the N67 is identified, off a proposed new Inner Relief Road (TT-OS-02 and TT-I-01.), which is zoned N1.6 “Indicative Car Park”. Objective TT-I-02 also seek the provision and improvement of footpaths in the town.

The LAP notes that Tarbert’s location on the national road network and the presence of the ferry service results in high levels of through traffic, a significant proportion of which consists of commercial vehicles. It is not clear that the requirement for this off-street car park and footpath facilities are required for, or and are properly attributable to the proposed development. It would appear that the costs of same, identified as specific objectives of the Local Area Plan, would be appropriate for apportionment under a development contribution scheme. In this regard it is not clear to me that this is a specific exceptional cost appropriate for apportionment under s.48(2)(c).

Having regard to the foregoing, I recommend that in the event of a decision to grant permission, a condition under s.48(2)(c) be attached in respect of the following works:

- Upgrading and widening of the L1010 required to facilitate the project.
- Improvements at the junction of the R551 and L1010 to accommodate the projected traffic volumes travelling along the L1010 Coast Road.

10.11. Archaeology and Cultural Heritage

The site has been subject to extensive archaeological investigations during the course of this and previous applications. While there is one recorded monument (rath) within / adjoining the application site, investigations have revealed a relatively significant level of human activity on these lands. I note the contribution that the investigation of this site could make to understanding the wider archaeological landscape in the Shannon estuary area and the submission of the DAU in this regard, including the recommended conditions. I note in particular, the recommendation to undertake a further underwater archaeological impact assessment. Subject to the identified conditions and the mitigation measures set out in the EIAR, I do not consider that significant or unacceptable impacts on the archaeological heritage of the area are likely.

Ralapanne House is located on a local ridgeline to the south of the main development area, is a protected structure, although it is not listed in the NIAH. I have already commented above on the potential impacts on the character and setting of this property and do not regard such as unacceptable. The routing of any pipeline or electricity cables through adjacent lands should be subject to separate assessment under future planning applications, however, such impacts are likely to be temporary and not significant in nature.

The site includes part of the site of Fort Shannon, a WWII defence installation constructed in 1941/42 and abandoned in 1946. This is not a fort in the traditional meaning of the term but rather comprises a number of separate structures within an undefined site on the southern slopes of the estuary. Structures include two no. gun emplacements in the centre of the site which are the main features of the fort, a pair of searchlight enclosures near the shore and three pillboxes, and associated buildings. These structures are not generally accessible to the public and the disparate and overgrown nature of the site has reduced its coherence. Development Plan objective KCDP 9-29 seeks *to protect the core area of Fort Shannon at Ardmore point*.

One pillbox / emplacement is located within a field boundary in the northeastern part of the site, which will be removed to facilitate the proposed development. This is described in the EIAR as CHS7:

A detached single bay, single-storey hexagonal pillbox, built c.1942, now derelict. Flat concrete roof. Concrete walls with rubble limestone camouflage covering. Square-headed chamfered openings. Square-headed door opening. Built within a field boundary. A typical WWII era pillbox, of functional design. It remains in good condition due to its simple design.

This pillbox structure is described as being of local interest and low importance and the impact of the development is identified as significant, negative and permanent. The EIAR notes that a searchlight structure located immediately adjacent to the eastern boundary of the subject site will not be impacted by the development.

These structures are not protected structures or national monuments and are not identified in the NIAH. I note that their retention was not raised in any submissions from prescribed bodies on the application. The proposed development occurs on zoned lands and while it will result in the removal of one pillbox structure, the core of the site, including the gun emplacements and magazine, will not be directly impacted by the proposed development. While the fort is of some historical interest, I do not consider that the development would materially contravene KCDP9-29 of the County Development Plan in this regard, or that the impacts on the character of the complex would themselves warrant a refusal of permission in this instance.

10.12. Major Accidents and Disasters

The proposed development would comprise an establishment for the purposes of the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I.209 of 2015) in respect of which the HSA is the competent authority. The HSA have confirmed that they do not advise against the proposed development, and accordingly is understood to have no objection in principle to the siting of the facility at this location.

The development will be subject to detailed assessment by the competent authority under the 2015 regulations, and the operators will be required to carry out various tasks in compliance with the Regulations, including a Notification to the HSA, the development of a Major Accident Prevention Policy (MAPP) and Safety Management

System (SMS) for operating the site, a Safety Report and the development of an Internal Emergency Plan for the site.

The *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* (August 2018), notes that:

> "*The EIA must include the expected effects arising from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project. Where appropriate, the description of expected significant effects should include details of the preparedness for and proposed response to such emergencies.*
>
> *There are two key considerations, namely:*
>
> - *The potential of the project to cause accidents and/or disasters, including implications for human health, cultural heritage, and the environment;*
> - *The vulnerability of the project to potential disasters/accidents, including the risk to the project of both natural disasters (e.g. flooding) and man-made disasters (e.g. technological disasters).*
>
> *These considerations are separate to any assessment of the project required under the Seveso III Directive, which is likely to include a detailed risk assessment*."

Chapter 14 of the EIAR considers the risk of Major Accidents and Disasters and notes that it is a preliminary review of (the then) current engineering design, drawings and documentation. It is indicated that further detailed hazard and risk analysis will be undertaken throughout the project lifecycle. The application was also accompanied by the following supporting documents:

- A Quantitative Risk Assessment.
- A Preliminary MATTE Assessment.
- A Marine Navigation Risk Assessment.
- An Oil and Hazardous and Noxious Substances Spill Plan.

The EIAR identifies flash fires and jet fires as credible scenarios for accidental releases of LNG / natural gas, while risks of explosive overpressures are described as negligible given the open nature of the site. Odorant storage tanks are noted to

give rise to a risk of a BLEVE (explosive) event, while diesel leakage creates a risk of a pool fire. There is a risk to the environment from leakage of pollutants or firewater from the site. Table 14-1 of the EIAR sets out the screening for dangerous substances and major accident hazard scenarios. Tables 14-2 and 14-3 identify prevention / mitigation measures in respect of each potential major accident hazard (HAH) / major accident to the environment (MATTE) scenario and natural disaster scenarios.

Section 14.11 summarises the key preventative and mitigating measures to prevent major accidents and disasters as follows:

- No LNG storage tanks will be installed onshore, minimising the inventory of LNG.
- Natural gas pipelines will have integral isolation valves which can be closed quickly in an emergency to isolate inventory and reduce the consequences of an accident, in accordance with International Standards.
- The FSRU can be safely disconnected from the jetty in the event of adverse weather conditions such as storms and moved to a safe mooring location.
- Fires are the most significant hazards associated with natural gas and therefore the flammable onshore inventory has been minimised. Electrical and mechanical equipment will be designed in consideration of the ATEX Directives.
- Design will take account of climate change effects including ambient temperatures and frequency of storms.
- Appropriate segregation distances will be provided onshore between the natural gas systems and other operators, including the power plant to reduce the potential for a ‘domino effect’.
- In the event of a release of LNG, rapid vaporisation and dispersion will result in very limited potential for this material to enter environmental receptors.

The EIAR acknowledges the potential for residual effects following implementation of identified mitigation measures, however, hazardous events are described as extremely unlikely will be subject to the final QRA study report.

The Quantitative Risk Assessment (QRA) accompanying the application concludes, having regard to 2010 HSA Land-use Planning guidance, that:

- There are no incompatible land uses in any of the three LUP zones.

- The highest individual risk contour onshore is 1 x 10^{-5}/y around the main site area and AGI.
- The highest individual risk contour offshore is 1 x 10^{-4}/y around sections of the LNGC, FSRU and Jetty.
- Individual risk at the nearest residential property is 7.3 x 10^{-9}/y during daytime and 1.8 x 10^{-9}/y, during night time, well below the criterion value of 1 x 10^{-6}/y.
- The Societal Risk (FN) curve is well within the 'Broadly Acceptable" Region.
- The Expectation Value for off-site areas is well below the HSA EV Criteria, above which an ALARP demonstration is required.

The Preliminary Major Accidents to the Environment (MATTE) assessment provides a qualitative assessment of possible scenarios for accidental releases, and indicates that large quantities of the following materials have the potential to cause a MATTE:

- Odorant.
- Transformer Oil.
- Firefighting Water.

All of the identified MATTE events are described as low risk, as the initiating event for a release would be a significant fire or explosion on the LNG Terminal or Power Plant and measures for prevention of discharge to the estuary are present within the plant design and operating philosophy. It concludes that a quantitative assessment of MATTE should be undertaken at detailed design stage.

Having regard to the scale of development and the specialised nature of the topic, the Board engaged external consultants, Byrne Ó'Cléirigh, to review the documentation and advise the Board from the perspective of Major Accidents and Disasters in the context of EIA. The report of the external consultant is included as Appendix 1 to this report.

The report reviews and comments on the submitted documentation. In respect of the Quantitative Risk Assessment (QRA), the external consultant's report concludes that the finding of the QRA that the risks associated with the facility are in accordance with the HSA criteria, is valid. Notwithstanding this conclusion, the report identifies a

number of items of clarification on the approach and methodology used in the QRA, which might be pursued in order to validate these findings. In this regard, however, I note that the EIAR describes this as a preliminary review, which will be subject to a final QRA study report. I note the requirements arising under the 2015 regulations and the role of the HSA as the competent authority under COMAH. It is not intended that the Board should replicate the role of the HSA, who have advised that they do not advise against the development.

In respect of the risks of escalation identified in the external consultant's report, the EIAR notes that facilities will be designed to incorporate separation distances to prevent major accidents such as fires and explosions originating in one area from spreading to another area or escalating via domino effects, based on established engineering guidance for industrial site layout. It further states that the development will be partitioned into fire zones, where equipment is grouped by nature and / or homogeneous level of risk. The consequences of a fire, flammable gas leak or an explosion corresponding to the credible event likely to occur in one fire zone shall not impact other fire zones.

In this regard I note that the BESS does not fall under the COMAH regulations and will be subject to separate fire safety regulatory controls. The report of the CFO is relevant in this regard. I note also the siting of the proposed odorant tanks and the limited extent of the modelled contour plots for a BLEVE event. Any risks of escalation arising from such facilities are more likely to influence the probability than the severity of events, and it is considered that the assessment of such would lie more properly with the HSA as the competent authority.

The odorant storage tank is associated with the injection of LNG from the terminal into the national grid at the AGI facility. Following from earlier discussions, where the terminal is determined to be contrary to national policy and is subject to a recommendation to refuse permission, this aspect of the development would no longer be required.

As referenced in the EIAR, the QRA notes that the on-shore plant layout is relatively open and the degree of congestion is low, such that the potential for a vapour cloud explosion (VCE) is judged to be insignificant. On the basis of this conclusion, the findings of the QRA appear to be reasonable. While the identified clarification item

relates to the basis for this conclusion. I note that there is guidance available on the definition of such areas and this is considered to be a matter for determination by the HSA in their role as the competent authority.

Moneypoint is identified as a potential ignition source in section 8 of the QRA as part of a review of the baseline scenario and as an input to the model. The assessment of the potential extent of releases in Ch. 10 Consequence Modelling, appears to indicate that consequences do not extend to Moneypoint, and this matter would be subject to the final QRA to be submitted to the HSA.

Clarification is sought regarding the frequencies assigned to certain weather conditions in the risk assessment for D5 and F2 conditions in line with HSA guidance. I note that the 2017 UK Health and Safety Executive (HSE) report “Review of Vapour Cloud Explosion Incidents” (RR1113) notes that in practice the provision of gas detection and remotely operated shut–off valves at LNG export sites provides important protection against the release scenario of low / nil wind conditions. Subject to such measures and mitigation in line with industry standards, I consider that this matter would be most appropriately addressed by the HSA under the requirements of the 2015 COMAH regulations.

A Navigation Risk Assessment by Marico Marine of marine operations at the proposed development was commissioned by SFPC and submitted with the application. I note that the Board’s external consultant has not assessed the Marine Navigation Risk Assessment in detail but has reviewed its conclusions and the implications for major accidents associated with marine events. This is regarded as reasonable. The transport of materials, including the transport of LNG by LNGC’s within the estuary, falls outside the remit of the HSA under the 2015 COMAH regulations. Notwithstanding this, where marine activities have COMAH implications, the risks identified in the marine risk assessment are also considered in the QRA. Within the QRA, these scenarios are therefore assessed against the HSA assessment criteria and I do not therefore consider that further clarification on the risk assessment approach set out in the NRA is required at this time.

The Shannon Estuary is one of three Core Ports in the republic, and is the largest bulk port in the country. It is noted that the Shannon Foynes Port Company (SFPC) has statutory jurisdiction over all marine activities on the Shannon Estuary, stretching

from Kerry Head / Loop Head to Limerick City and is responsible for the safety of navigation within the port limits. As part of its role, the Company has developed a Major Emergency Response Plan and the Shannon Estuary Marine Emergency Plan. Pilotage is compulsory for all large vessels and International Rules for the Prevention of Collisions at Sea apply to all vessels.

The Navigation Risk Assessment reports that approx. 2,000 tanker and dry cargo vessels transited past the site in 2019. Only 8 no. cargo vessel transits and one chemical tanker transit were recorded within 150m of the proposed FRSU location in 2019. A further 9 no. transits by smaller craft were recorded.

A key control measure in respect of the proposed development is the planned introduction of a moving ‘control zone’ around LGNC’s within the estuary, eliminating any potential close quarter situations. In effect, this control zone will result in all other vessel movements being deferred/delayed until an LNGC has completed her transit to or from the proposed terminal. During transit, the exclusion / control zone is 1 nautical mile (n/m) fore and 0.5n/m aft, and 150m abeam. For vessels at berth at the terminal the static exclusion zone is 150m around the vessels. This control zone would be applied and enforced by the Port Company.

Having regard to such control zone, the Navigation Risk Assessment (NRA) concludes that the project is safe to operate in a navigational sense. The highest risk scenario identified is contact between a project vessel and project infrastructure, although such risk is described as falling within the lower end of the ALARP ranges (“As Low As Reasonably Practicable”). Ships used for the transport of liquified gases, including LNG, are subject to specific design standards which typically include double hull construction, while any potential spill / pollution events would be subject to the measures set out in the Oil Spill Development Framework.

I note that many of the navigation risks identified in the NRA are typical of traffic risks in operational ports and are not exclusive to traffic associated with this development. The management of navigation within the estuary by SFPC, and in particular the application of static and dynamic control zones, is considered to adequately mitigate the risks arising in this regard.

I note that following from earlier discussions, where the terminal is determined to be contrary to national policy and is subject to a decision to refuse permission, the transport of LNG in the estuary would no longer arise.

Vulnerability

In terms of the vulnerability of the project to potential disasters/accidents, including both natural and man-made disasters I note that the application is accompanied by a flood risk assessment, which concludes that with the exception of crossings of Ralapanne Stream by the access road, there is no development proposed within either Flood Zones A or B. The proposed watercourse crossings have been sized to have a minimal impact on the hydraulic regime in the area and provide an adequate freeboard for a 1% AEP fluvial event. The site is also remote from other major accident sites and would not be at risk from events at such sites. I note the advice of the HSA in this case, who do not advise against the development.

The potential impact of storm events is identified and assessed in the NRA and addressed in the design of the jetty to facilitate the FSRU remaining alongside in all but the most extreme storm events, and where necessary, procedures to facilitate the disconnection and movement of the FSRU and LNGC to safe mooring locations in the event of a storm.

Conclusion

The EIAR and supporting documentation identify and assess the potential for major accidents and hazards and the likely significant effects arising therefrom. Based on the information contained in such documentation, the conclusions appear to be reasonable and the HSA have not advised against the development. While the report of the external consultant has identified a number of areas of clarification in respect of the methodology adopted in the QRA, it is considered that these matters would be most properly resolved as part of the HSA role as the competent authority under the 2015 regulations. It is considered that the requirements under the EIA Directive have been met in the submitted documentation.

10.13. Other Matters Arising:

I note that the planning authority have recommended the establishment of a community development fund and an Annual Community Contribution Scheme, administered by the planning authority in conjunction with the Community Liaison Committee, for the benefit of the local community. This recommendation generally reflects conditions no. 37 and 38 of PA0002, which required an annual contribution of €200,000, in accordance with the provisions of section 37g(7) of the Act. The community liaison committee was to include elected members and officials of Kerry County Council, members of the local community and representatives of the developer. The subsequent decision to grant permission for the proposed CHP plant on the site under ref. PA0028, did not include such a community contribution condition.

I do not regard such a condition as unreasonable and, as noted, it would be in accordance with the previous decision of the Board in this regard.

11.0 Environmental Impact Assessment (EIA)

11.1. Statutory Provisions

This application was submitted to the Board after the commencement of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 which transpose the requirements of Directive 2014/52/EU into Irish law. The application was accompanied by an Environmental Impact Assessment Report (EIAR), which is mandatory for the development in accordance with s.37E(1) of the Planning and Development Act, as amended, and Schedule 5, Part 1 para 2(a) of the 2001 regulations, as amended.

The EIAR accompanying the application contains four volumes. Volume 1 comprises a Non-Technical Summary, Volume 2 is the Main Text, Volume 3 contains Figures while Volume 4 contains Appendices.

Chapters 1 & 2 of Volume II set out an introduction to the EIAR including the methodology used, and a description of the proposed development and works. Chapter 3 considers the need for the project, site selection and consideration of alternatives. Chapter 4 describes relevant Energy and Planning Policy.

The likely significant direct and indirect effects of the proposed development are considered in the remaining chapters of Volume II, which address the following headings, in accordance with Article 3 of the EIA Directive 2014/52/EU:

Chapter 5 Land and Soils
Chapter 6 Water
Chapter 7A Marine Ecology
Chapter 7B Terrestrial Ecology
Chapter 8 Air Quality
Chapter 9 Airborne Noise and Groundborne Vibration
Chapter 10 Landscape and Visual
Chapter 11 Traffic and Transport
Chapter 12 Cultural Heritage
Chapter 13 Population and Human Health
Chapter 14 Major Accidents and Disasters
Chapter 15 Climate
Chapter 16 Waste
Chapter 17 Material Assets
Chapter 18 Interactions
Chapter 19 Summary of Mitigation and Monitoring Measure

In terms of cumulative impacts, the EIAR states that the 220kv electricity transmission connection, the proposed future data centre campus and the medium voltage (10/20 kv) electricity connection have been considered as part of the cumulative impact assessment within each chapter. In addition, I note that various chapters consider potential cumulative effects with other projects in the area including the associated LNG pipeline, the Cross Shannon 400kV cable project and various energy infrastructure projects in the area.

The 2018 Guidelines on carrying out Environmental Impact Assessment state that the EIAR must include the expected effects arising from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project.

Chapter 14 considers the risk of major accidents and disasters, while the application is also accompanied by a Quantitative Risk Assessment, a Preliminary MATTE Assessment, a Spill Plan and a Marine Navigation Risk Assessment. Section 9.12 of

this report considers with the issue of major accidents and disasters in detail. Chapter 6 of the EIAR, Water, considers the risk of flooding and a detailed flood risk assessment is contained in Appendix 6-3.

Chapter 1 identifies the EIAR contributors and sets out their relevant qualifications and experience. This is supplemented by additional information under the relevant chapter headings. 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 developer, adequately identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment, and complies with article 94 of the Planning and Development Regulations 2000, as amended.

In carrying out this EIA, I have examined the information presented by the applicant, including the EIAR, and the submissions made by the planning authority, prescribed bodies and observers during the course of the application. I have also had regard to relevant legislation and guidance including, Guidelines on the information to be contained in Environmental Impact Assessment Reports (EIAR) (EPA 2022).

Alternatives

Article 5(1)(d) of the 2014 EIA Directive identifies the requirement to describe the reasonable alternatives studied by the developer, which are relevant to the development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, taking into account the effects of the development on the environment.

Chapter 3.0 of the submitted EIAR deals with Project Need, Site Selection and Consideration of Alternatives, under the following headings:

- Need for the Proposed Development and alternative gas supply sources.
- Alternative locations – assessed against a number of criteria.
- Alternative designs – the three main types of LNG terminals were considered in terms of environmental impact, construction time and potential transition to alternative fuels.

- Alternative layouts – the development is compared with the previously permitted development on this site and concluded to have a reduced environmental impact.
- Alternative processes/ technologies – alternative technologies and processes were considered, in terms of efficiency and emissions. The discharge of wastewater to ground was considered in terms of the suitability of ground conditions.

Having regard to the national, regional and local planning policy and zoning objectives for the area and the planning history relating to the site, it is considered that the requirements with regard to the consideration of alternatives has been adequately addressed in the application documentation.

11.2. Assessment of Likely Significant Direct and Indirect Effects

Land & Soils (ch. 5)

Impact	Effect / Magnitude	Mitigation and Monitoring	Residual Effect
Construction Stage			
Changes to Topography - Excavation and Infilling. Excavation and reuse of soil and rock. Vibration from blasting and rockbreaking. Use of Natural Resources	Likely, permanent, direct, negative effect and temporary negative effect during construction works	Adherence to the provisions of the OCEMP relating to the excavation and management of excavated material. Surface water management and soil and stockpile management, including separation from waterbodies and areas liable to flooding. Geotechnical design, including foundation design and excavation methodologies Adherence to noise and vibration emission limit values and best practise guidance for activities. Application of blasting charge limits, and only single blasts in each event, with monitoring in place. Reuse of surplus material on-site with no importation of soil material, and import of clean, locally sourced aggregate. Management of groundwater flows.	Not significant
Accidental spills and leakage of oils and fuels.	Spillages unlikely but confined to one-off releases. Temporary direct negative impact on underlying soils.	Hazardous materials will be managed / controlled via the OCEMP and stored to prevent / minimise potential impact on soil. Refuelling of construction vehicles and the addition of hydraulic oils or lubricants within designated areas with appropriate facilities or via a mobile double skinned tank with lockable fittings and onboard spill kit.	Imperceptible

Use of Concrete and Lime	Highly alkaline materials can impact soil quality. Temporary, direct negative impact.	Hazardous materials will be managed and controlled via the OCEMP and stored in bunded areas. Minimise use of cast in-situ concrete. Complete a risk assessment for wet concreting to include measures to prevent discharge of wet concrete, grout, alkaline wastewaters or contaminated storm water to underlying subsoil or to the marine environment. Washout of concrete-transporting vehicles off site, or in managed on-site wash out areas.	Not significant
Operational Stage			
Change from agricultural use or loss of agricultural land.	Permanent, direct, small negative effect.	Location within a large landbank zoned for industrial use. Having regard to the extent of surrounding agricultural lands, the quality of the lands and current low intensity of use, this impact is regarded as being of low magnitude.	Not significant
Spillages of fuel, oil, wastewater or other hazardous substances	Spillages unlikely but confined to one-off releases. Potential adverse impact on underlying soils or adjoining waterbodies. Direct negative small effect of temporary duration	Preparation of an operational Environmental Management Plan to include management and control of hazardous materials and storage stored in bunded areas. Secondary containment and spill kits available for other hazardous materials / chemicals. Bunding of diesel fuel tanks for fire water pumps and direct drainage to an oil/ water interceptor prior to discharge to the storm water drainage system. Provide a shut off valve from the generator yard to the external surface water drainage network.	Imperceptible

		Design and separation of drainage systems and adherence to the requirements of EPA licence.	
Cumulative Effects			
Gas Pipeline	Previously subject to EIA	If works occur concurrent with the proposed development, there is potential for cumulative impacts and effects on land and soils.	
Future Data Centre	Will be the subject of a separate application and EIAR / screening for EIA	Taking account of mitigation measures associated with the proposed development, including implementation of best practice standard construction environmental measures and the OCEMP the no significant cumulative construction or operational impacts on land and soils will arise.	
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications. Envisaged as a cable connection under the public road.		
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	No significant cumulative effects on lands or soils likely.	
Conclusion	I have considered all of the submissions and I am satisfied that impacts that are predicted to arise in relation to Land and Soils would be avoided managed and mitigated by the measures which form part of the proposed scheme and the proposed mitigation measures. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Lands and Soils.		

Impact	Effect / Magnitude	Mitigation and Monitoring	Residual Effect
Construction Stage			
Dewatering - Excavation leading to groundwater seepage requiring localised dewatering within 10-50m of cut faces.	Permanent, direct, negative effect.	Localised dewatering will not lead to a net change to the quantities of groundwater discharging to the estuary. The control and monitoring of groundwater seepage in accordance with the CEMP.	Imperceptible
Sedimentation / run-off of suspended solids from site works and material stockpiles could adversely impact on surface water and marine environments.	Temporary negative impact on a high sensitivity surface water environment.	Standard construction control measures including adherence to CIRIA guidelines, and implementation of the CEMP. Installation of the drainage system, settlement ponds and surface water outfall prior to the commencement of major works. Runoff from working areas not allowed to discharge to local watercourses. Management of excavated materials. Locate spoil and temporary stockpiles away from waterbodies and areas liable to flooding. Divert runoff from spoil heaps through settlement ponds. Use of clean aggregate fill. Design of bridge and works at Ralapanne Stream in accordance with IFI guidelines. Dynamic estuarine environment will ensure rapid dispersion of sediments.	Not significant

Accidental spills and leaks from use and storage of liquid chemicals, oils and fuels.	Direct temporary negative impact on fish, aquatic flora and invertebrate communities.	Adherence to OCEMP and procedures for management of spills. Use of designated bunded storage areas and handling procedures for all oils, solvents and paints during construction. Availability of spill kits. Refuelling and maintenance of construction vehicles, in appropriate designated area or refuelling outside of designated areas via a mobile double skinned tank with lockable fittings and an onboard spill kit.	Imperceptible
Use of Concrete and Lime PH effects from the use of concrete.	High alkalinity lime and concrete can impact surface water quality. Direct negative small temporary, effect.	Hazardous materials will be controlled and stored in accordance with the CEMP. Maximise the use of pre-cast concrete structures in the marine environment. A risk assessment for wet concreting prior to carrying out works, including measures to prevent discharge of alkaline wastewaters or contaminated storm water to subsoil or marine environment. Washout of concrete-transporting vehicles at an appropriate facility offsite where possible. Where washout takes place onsite, it will be carried out in carefully-managed areas.	Not significant
Piling for offshore construction - Mobilisation of sediment,	Temporary negative impact on an extremely high sensitivity environment.	Use reverse circulation drilling for piles to minimise loss of spoil and generation of sediment in the marine environment. The extensive and dynamic estuarine environment will ensure rapid dispersion of sediments.	Not significant
Operational stage			

Storage of materials potentially hazardous to the aquatic environment. Accidental spills and leaks of hazardous or water-polluting materials discharging to ground or the surface water environment.	Temporary direct negative impact on an extremely high sensitivity surface water environment.	Handling and storage in accordance with IE licence requirements Secondary containment and spill kits for other hazardous materials to be stored onsite. Separate and attenuate drainage from paved / impermeable areas from other stormwater drainage. Discharge via silt traps and Class 1 interceptor with control valves; Store diesel fuel within bunded areas. Direct drainage to an oil / water interceptor prior to discharge to the storm water drainage system. There will be a shut off valve from the generator yard to the external surface water drainage network.	Imperceptible
Flooding risk and drainage discharges to the water environment consisting of • Stormwater runoff; • Groundwater discharge from cut faces; • Wastewater; and • Process effluent streams.	Direct negative impact on an extremely high sensitivity environment	Siting of development outside flood zones A and B. The sizing of watercourse crossings to have minimal impact on the hydraulic regime and negligible impact on the flood regime. Operate and monitor drainage systems in compliance IE licence requirements. Separation of drainage from paved and other impermeable areas from other stormwater drainage. Drainage systems designed to handle anticipated volumes and incorporate treatment facilities and monitoring equipment (including silt trap, Class 1 hydrocarbon interceptor, a firewater retention facility, waste water treatment plant and pH adjustment).	Not significant

		Modelling indicates that treated effluent will be rapidly diluted and dispersed within a short distance of the outfall, and will not compromise water quality at Ballylongford Bay aquaculture site. Removal of identified effluent streams off-site for treatment.	
FSRU intake and discharge to marine waters. The intake and discharge of cooled seawater from the regassification process, electro-chlorination and freshwater generators. Potential entrainment and impingement impacts on marine biota.	Slight, localised negative impact on an extremely high sensitivity environment.	Design in line with (BAT) guidance, Best Practice and legislation. Low intake velocity relative to current speeds in the estuary and alignment of the intake. Monitoring - an impingement and entrainment study of organisms impacted by the FSRU water-intake system. Modelling indicates that discharges are rapidly diluted and dispersed within a short distance of the discharge. The impact on the estuary has been assessed as imperceptible. Operate and monitor the FSRU in compliance with IE licence requirements.	Imperceptible
Discharge of wastewater and Power Plant Process Heated Water Effluent during operations – Water quality	Slight long-term, negative impact.	Adherence to IE licence requirements. Monitoring and PH dosing prior to discharge, as required. Dispersion effects in the estuary within short distance of discharge point.	Not significant
Cumulative Effects			
Gas Pipeline	Previously subject to EIA	Modelling indicates that following mitigation, natural dispersion in the estuary will ensure that cumulative sediment deposits do not result in significant effects. Taking account of mitigation measures associated with the proposed development, it is not considered that the cumulative construction and operational	
Future Data Centre	Will be the subject of a separate application and EIAR / Screening for EIA		

220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications. This is envisaged to be via a cable connection under the public road. This will involve one existing road crossing of the Ralapanne Stream upstream of the subject site.	impacts of all schemes will have significant effects on the water environment. No significant cumulative effects on water quality are likely
400kV cross Shannon Cable project	Previously approved.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	
I refer to the assessment of effects on Marine Ecology below. I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to Water would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Water.		

Ecology

Marine Ecology Ch. 7A

Effect / Magnitude	Effect / Magnitude	Mitigation and Monitoring	Residual Effect
Potential effect on marine habitats, marine mammals and fish populations due to release of sediments or pollutants during construction or during piling / drilling.	Small, localised negative impact on an extremely high sensitivity environment.	Implementation of the OCEMP, including standard construction best practice mitigation measures for the management of surface waters. Use reverse circulation drilling for piles to minimise loss of spoil and generation of sediment in the marine environment. Adherence to CIRIA Guidance and IFI Guidance Natural turbidity levels in the estuary and the natural abilities of species to navigate turbid waters. Naturally hydrodynamically active nature of the estuary, giving rise to rapid dispersion and low levels of deposition. Short-term duration of activities.	Not Significant.
Underwater noise during construction and operation, potentially impacting on marine Mammals (including Bottlenose dolphin), fish and diving birds.	Temporary direct negative construction impact, particularly on marine mammals. More localised effects on fish and diving birds.	Adherence to DAHG Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources, including observation periods and timing of activities. Additional seasonal bottlenose dolphin observations. No simultaneous impact piling. Limited duration of construction activities. Relatively infrequent shipping movements and marginal increase in vessel activity in the estuary.	Not significant - Slight significance

Seabed habitat loss during construction and Operation - Annex I habitats 1130 Estuaries and 1170 Reefs of the Lower River Shannon cSAC	Long-term / permanent direct, negative impact on habitats.	The extent of loss is extremely limited relative to the extent of habitats within the estuary. Community types occurring within the habitats are not rare and occur widely. Subtidal species recorded are not rare, protected or unusual. Natural deposition of sediments and natural recolonisation of hard benthic surfaces by flora and fauna.	Slight significance
Disturbance by vessels and collision injury during construction and Operation - Marine Mammals	Slight negative direct impact.	Marginal increase in vessel activity in the estuary. Low vessel speeds.	Not significant
Operational discharge of cooled seawater containing sodium hypochlorite on Habitats, Marine Mammals and fish of estuary and cSAC.	Long-term slight negative but localised operational impact.	Adherence to IE licence requirements. Low levels of residual chlorine in discharge Rapid mixing and dispersion of cooled waters.	Not significant
Entrainment of fauna and impingement by the FSRU seawater system during Operations	Long-term slight negative but localised operational impact.	Design in line with Best Available Techniques (BAT) guidance, Best Practice and legislation. Low intake velocity relative to current speeds in the estuary and alignment of the intake. Monitoring - an impingement and entrainment study of organisms impacted by the FSRU water-intake system.	Not significant

Discharge of wastewater and Power Plant Process Heated Water Effluent during operations – Habitats, Marine Mammals, birds and fish populations of estuary, cSAC, and SPA.	Slight long-term, negative impact on water quality and prey species.	Adherence to IE licence requirements. Monitoring and pH dosing at effluent sump. Dispersion effects within short distance of discharge point.	Not significant
Introduction of invasive species during construction and operations	Potential long-term negative impact on a sensitive environment.	Pre-development invasive species site survey. Cleaning of equipment before and after use. ECoW to implement biosecurity measures. All water used in cleansing, testing or disinfection of structures or machinery shall be rendered safe prior to discharge. Adherence to established international, national and local (SFPC) protocols and regulations for ballast water management.	Imperceptible
Accidental large-scale oil or LNG spill during operations - Habitats, Marine Mammals, Fish and crustacean species of the estuary and cSAC, birds of the SPA.	Unlikely but potential direct, negative impact on a highly sensitive environment.	Adherence to an Environmental Management Plan and to the requirements of EPA IE license and the HSA. Established protocols to manage the risk of accidental spill and potential environmental impact, including the provisions of the Oil and Hazardous and Noxious Substances (HNS) Spill Plan Development Framework and membership of the Shannon Estuary Anti-Pollution Team (SEAPT).	Not significant

Potential release of firewater following a major fire event	Unlikely, significant negative impact on a highly sensitive environment.	Firewater retention and drainage design in accordance with EPA guidance to obviate release to the environment. Adherence to HSA / COMAH requirements.	Not significant
Cumulative Effects			
Gas Pipeline	Previously subject to EIA	If works occur concurrent with the proposed development, there is potential for cumulative impacts and effects on marine biodiversity features. Construction activities will be planned and phased and implementation of best practice standard construction environmental measures and the OCEMP will ensure no significant cumulative effects on biodiversity arise. Modelling indicates that if the sediment plumes associated with the Cross Shannon 400 kV Cable Project overlap with plumes generated during pile installation, the combined sediment deposition depths would not exceed the identified OSPAR threshold (2008, 2009) for impacts on habitats and associated faunal communities; consequently it is predicted that no significant negative in-combination effects will occur. Adherence to 2014 DAHG Guidelines will address potential cumulative effects on Marine Mammals. No long-term cumulative impact on marine ecology or water quality will occur.	
Future Data Centre	Will be the subject of a separate application and EIAR / screening for EIA		
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications. Envisaged as a cable connection under the public road. This will involve one existing road crossing of the Ralapanne Stream upstream of the subject site.		
Cross Shannon 400 kV Cable Project	Previously approved.		

Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process..	Taking account of the mitigation measures associated with the proposed development, it is not considered that cumulative construction and operational impacts will have significant effects on the environment.
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts that are predicted to arise in relation to Marine Ecology, would be avoided managed and mitigated by the measures which form part of the proposed scheme. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of Marine Ecology.		

Chapter 7B Terrestrial Ecology

Impact	**Effect magnitude**	**Mitigation**	**Significance following mitigation**
Construction			
General disturbance and displacement due to construction activity and lighting	Short-term, local negative impact.	Implementation of CEMP and appointment of an ECOW. Adherence to published guidance, including – CIRIA guidance on water pollution and – IFI guidelines of protection of fisheries and – Bat Conservation Ireland guidance on lighting design. – NRA Guidance for treatment of badgers, bats and otters. Timing of works and pre-development survey of the site. Adherence to licensing requirements.	Not significant

Bridge and culvert construction with potential impacts on water quality, habitat loss and severance, and flow.	Potential negative impacts on local watercourses and dependent species.	Implementation of CEMP and appointment of an ECOW. Surface water management measures. No in-stream works in the Ralapanne Stream and design and adherence to IFI guidelines. Timing of works and pre-construction surveys. Short-term nature of construction and appropriate planting of disturbed ground. Adherence to any licence requirements.	Not significant
Loss or removal of foraging or breeding habitats.	Long term adverse effect on local habitats and dependent species.	Implementation of CEMP and appointment of an ECOW. Timing of vegetation clearance and pre-development surveys. Adherence to any licence requirements. A detailed method statement in respect of disturbance to cliff habitat from vehicular access. Reinstatement of disturbed areas using native species and site landscaping. Provision of planted / ecological corridor along northern / estuary boundary (by condition). Clear delineation and fencing off of habitat conservation areas and retained trees / vegetation. Relative low sensitivity of terrestrial habitats and availability of lands in the wider area.	Not significant

Badger - removal of two outlier setts / mortality / injury, disturbance and displacement.	Significant, long-term negative effect at a local level.	Implementation of CEMP and appointment of an ECOW. Adherence to NRA "*Guidelines for the Treatment of Badgers Prior to the Construction of National Road Schemes*". A methodology for the exclusion of Badgers from affected setts and displacement of Badgers to artificial setts will be agreed with the NPWS as part of a licence application. Timing of works. Monitoring of Badger setts during construction and a five-year post-construction monitoring programme.	Moderate local significance.
Bats - Disturbance / displacement, loss of foraging habitat and potential roost sites. Loss of roost sites of low potential.	Negative, long-term impacts at a local level.	Implementation of CEMP and appointment of an ECOW. Adherence to NRA '*Guidelines for the Treatment of Bats during the Construction of National Road Schemes*, and *Bat Mitigation Guidelines for Ireland: Irish Wildlife Manuals* (updated 2022). The low roost potential of trees and structures to be removed and pre-development surveys to be undertaken. Timing and management of tree removal works. Adherence to any derogation licence requirements. Construction and operational lighting design in line with Bat Conservation Ireland guidance. Erection of bat boxes.	Not significant

Otter - Disturbance/ displacement, loss of foraging habitat.	Potential negative and long-term at a local level.	Implementation of CEMP and appointment of an ECOW. Pre-construction surveys for otter holts. Design of works, including timing to avoid potential impacts. Adherence to any derogation licence requirements. Adherence to NRA publication, "*Guidelines for the Treatment of Otter prior to the Construction of National Road Schemes*". Species ability to habituate to disturbance.	Not significant
Common Frog - Habitat loss/ mortality/ injury	Potential negative, not significant and long-term at a local level.	Pre-development surveys and removal to alternative wet grassland habitat under licence. Implementation of CEMP and appointment of an ECOW.	Not significant
Birds - Habitat loss, mortality / injury, Disturbance/ displacement Direct loss of breeding / foraging habitat. Potential impacts include habitat loss, water quality impacts, noise and visual disturbance, and potential collision risk of jetty. Potential reduction in prey availability.	Negative, slight to moderate and long-term impacts.	Low numbers of estuarine birds recorded at the site. Limited value and extent of intertidal foraging habitat and the limited foraging potential of the site. Implementation of CEMP and appointment of an ECOW. Pre-development survey of buildings for nesting birds. Timing of works, including site clearance. Erection of nesting boxes. Underwater noise during piling works would be significantly below the threshold for mortality or injury in diving birds. Surface water management regime. No observed commuting routes for heavy wing loading birds along this stretch of coastline or within 1 km of the site.	Not significant

		Lighting design. A finalised method statement to be agreed specifying the timing of blasting operations and the need, if any, for ecological supervision. The design and management of piling works. Also, measures identified above in respect of Ch. 6 Water and Ch. 7a Marine Ecology	
Biodiversity and landscaping - Habitat loss	Long-term slight negative, local impact.	The limited sensitivity and importance of habitats on the site. Implement the landscaping plan including native planting and a more diverse native wildflower / grass mix. Biodiversity and landscaping management regime. Insect nesting boxes.	Not significant
Invasive species	Long-term slight negative, local impact	Appointment of an ECoW. Pre-construction invasive species survey and development of an Invasive Species Management Plan, if required. Implement bio-security measures during construction. Reuse of excavated materials on site and introduction of clean aggregate only.	Not significant
Operation			
General - Displacement / disturbance	Long-term, local negative impacts.	Adherence to IE licence requirements. Development and implementation of an environmental management plan, to include management of potentially contaminating materials.	Not significant

		Drainage design (see ch. 6 water). Lighting design in accordance with identified guidance. Control of noise and vibration as detailed in Ch. 9 – Noise and Vibration	
Cumulative Impacts			
Gas Pipeline	Previously subject to EIA. No rare habitats or valuable habitats for rare species were recorded along the route	If works occur concurrent with the proposed development, there is potential for cumulative impacts and effects on ecological features. Taking account of the mitigation measures associated with the proposed development, including implementation of best practice standard construction environmental measures and the OCEMP, it is not considered that significant cumulative effects will arise.	
Future Data Centre	Will be the subject of a separate application and EIAR / EIA screening		
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Subject to separate planning applications and envisaged to be via a cable connection under the public road involving one crossing of the Ralapanne Stream upstream of the site.		
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and		

	environmental assessment process.	
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to terrestrial ecology would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of terrestrial ecology.		

Chapter 8: Air Quality

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
Construction			
Dust and particulate emissions during construction activity and from construction phase traffic	Temporary negative local impacts on air quality.	Separation of site works from human receptors and habitats which are sensitive to air quality impacts. Short-term nature of activities. Implementation of the OCEMP, incorporating IAQM recommendations. Standard best practice dust mitigation measures and production and adherence to a site-specific dust minimisation control plan (Dust Management Plan), Dust monitoring and adherence to TA Luft Guidelines.	Not significant
Operations			

Combustion emissions associated with generation of heat and power.	Long-term slight negative impact on air quality.	Adherence to IE license limit values. Modelling indicates no exceedance of air quality standard values or significant contribution to N deposition. See also Climate Ch. 15, Emission release heights to encourage good dispersion Separation between the main continuous sources of emissions and sensitive receptors; Non-continuous nature of operations of the power plant; Use of natural gas as the primary fuel. Use of low and ultra-low sulphur liquid fuel only for start-up, maintenance and emergency purposes.	Not significant
Site and traffic emissions	Negligible to moderate	Low levels of operational traffic predicted.	Not significant
Potential odour emissions	Unlikely, short-term negative, local impact	Separation from sensitive receptors. Adherence to IE licence requirements. Systems for monitoring and control of odorant operations at the AGI.	Not significant
Cumulative Effects			
Operational emissions with other power plants in the area	Moneypoint and Tarbert Power plants currently operate using coal and Heavy Fuel Oil.	Development of modern, efficient plant of the nature proposed will facilitate the closure or older coal and oil burning plant. Moneypoint and Tarbert are scheduled to cease burning fossil fuels (2023-2025) such that significant cumulative air quality effects are not considered likely and no significant long-term impact on pollutant concentrations are anticipated. The development does not give rise to any risk of exceedance of Air Quality Standard in the	
L-1010 upgrade	Works could occur concurrently with site		

	preparation works at the subject site	Normal Operational Scenario. Modelling indicates that cumulative operation with the temporary emergency development at Tarbert will not result in any exceedance of air quality standards. If construction works occur concurrently with the proposed development, there is potential for cumulative impacts and effects on air quality. With the exception of the proposed site access road, the main construction works area is approximately 750 m away from the L1010. Public road works will implement standard mitigation measures, such that no significant cumulative effects are likely. Taking account of the mitigation measures associated with the proposed development it is not considered that significant cumulative construction effects will arise. No operational emissions associated with the 220 kV connection, medium voltage (10/ 20 kV) connection and Shannon Pipeline are likely.
Gas Pipeline	Previously subject to EIA.	
Future Data Centre	Will be the subject of a separate application and EIAR / EIA Screening	
220 / 110kV and 20kV connection to Kilpaddoge and on-site.	Will be subject to separate planning applications. This is envisaged to be via a cable connection under the public road.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	
Conclusion: I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to air quality would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of air quality.		

Ch. 9 Airborne Noise and Groundborne Vibration

Impacts of noise and vibration on ecological receptors are considered under Chapter 07A & B – Marine and Terrestrial Ecology.

Impact	Effect magnitude	Mitigation and monitoring measures	Significance following mitigation
Construction			
Construction Noise from site clearance and excavation works, development works, including piling activity and vibration.	Short-term negative local impacts.	Implementation of OECMP Scheduling / timing of works and separation from residential receptors. Locate plant and activities away from sensitive receptors. Adherence to DAGH guidance for management of risk to marine mammals. Application of standard noise mitigation measures for construction sites. Long-term noise monitoring stations and vibration monitors on the construction site boundary. Protocol for community relations and management of noise complaints.	Slight
Construction Traffic Noise including disturbance between Tarbert and the site.	Temporary, localised, negative impacts.	Temporary nature of construction activity. Agreement of a CTMP, to include the scheduling of traffic movements. Coordinate construction traffic from this and concurrent development to minimise noise impacts.	Slight - Not Significant

		Best practice on-site measures, including avoiding vehicle idling and adhering to speed limits on internal roads.	
Blasting Induced Noise / Air Overpressure & Vibration	Temporary, local negative impacts.	Adherence to BS5607:2017 CoP and BS6472-2:2008 CoP. Process management and a dedicated Public Liaison Officer. Protocol for community relations including prior warning of blasting and management of complaints. Application of blasting charge limits. Only single blasts in each event, with monitoring in place.	Slight
Operation			
Operational Noise	Long-term local slight negative impact.	Separation from human receptors. Application of standards forms of mitigation (inc. silencers, plant selection, relocation, barriers enclosures). Compliance with the conditions of the Industrial Emissions licence, including application of BAT. Long-term and short-term monitoring.	Not Significant
Operational Traffic Noise	Negligible – minor negative	Best practice measures including speed limits on internal roads. Low volumes of operational traffic.	Imperceptible
Cumulative Effects			
L-1010 upgrade	Works could be concurrent with site preparation at the subject site	If works occur concurrent with the proposed development, there is potential for cumulative impacts and effects in respect of Noise and Vibration. With the exception of the site access road, the main works area is approx. 750 m from the L1010. Public road works will implement standard mitigation measures.	

Gas Pipeline	Previously subject to EIA. No significant effects identified.	Construction activities will be planned and phased with associated developments. Implementation of best practice standard construction environmental measures and the OCEMP for the proposed development will ensure no significant cumulative effects will result. Adherence to the 2014 DAHG Guidance for marine mammals will address potential construction effects with other developments in the estuary. No operational emissions associated with the 220 kV connection, medium voltage (10/ 20 kV) connection and Shannon Pipeline are likely. No significant cumulative effects in respect of noise and vibration are expected
Future Data Centre	Will be the subject of a separate application and EIAR / EIA Screening	
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications - envisaged as a cable connection under the public road.	
Cross Shannon 400 kV Cable Project	Previously approved.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	

Conclusion

I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to noise and vibration would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of noise and vibration.

Chapter 10 Landscape and Visual

Impact	Effect magnitude	Mitigation and monitoring measures	Significance following mitigation
Changes to the baseline landscape and views.	Long-term, moderate negative local impacts.	Existing industrial / energy infrastructure characterising this landscape and the zoning of the lands for industry. Landscape screening of lower sections of proposed buildings and the proposed access road. Façade colour scheme and lighting design. Measures for the protection of existing trees.	Moderate - Significant
Cumulative effects			
Future Data Centre	Will be the subject of a separate application and EIAR / EIA screening	Development on adjoining lands will be subject to separate assessment and cumulative effects will be assessed as part of that application. Potential significant landscape and visual impact.	
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications. This is envisaged to be via a cable connection under the public road.	If works occur concurrent with the proposed development, there is potential for cumulative construction impacts and effects. Proposed gas pipeline or routing of UGC along public roads should not resulting additional operational landscape or visual effects. On-site substation and associated infrastructure will have additional effects however, in the context of the proposed development such infrastructure would not be significant in scale or contribute significantly to landscape and visual effects.	
L-1010 upgrade	Works could be concurrently with site		

	preparation at the subject site	Road upgrade works may have cumulative landscape impacts due to loss of vegetation, however, such impacts are not likely to be significant long-term in nature and will be generally at a remove from the main development site.
Gas Pipeline	Previously subject to EIA. No significant effects identified.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	No significant in-combination effects likely
Conclusion I have considered all of the application documentation and submissions received. I am satisfied that the impact on the landscape and visual amenities of the area would be satisfactorily managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions and would not be unacceptable. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of landscape and visual amenity.		

Chapter 11 Traffic and Transport

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
Increased construction traffic flows on the road network resulting in a reduction in junction capacity and increased queuing.	Negative, short-term local impact.	Existing low traffic volumes on local road network. Upgrade of L1010 prior to the construction phase. Implementation of an agreed CTMP including the routing and timing / scheduling of traffic movements.	Slight

Potential congestion in Tarbert.		Coordinate construction traffic from this and concurrent development to minimise traffic and noise impacts. Appointment of a logistic manager. Short duration of peak construction traffic.	
Operational			
Increased traffic on the network reducing junction capacity.	Neutral	Existing low traffic volumes on road network and relatively low operational traffic volumes. Junction Analysis demonstrates that the existing network has adequate capacity. Preparation of a MMP.	Imperceptible
Cumulative effects			
L-1010 Upgrade	Due for completion prior to commencement of main development. Potential beneficial effect.	If works occur concurrent with the proposed development, there is potential for cumulative construction impacts and effects on traffic and transport / flows. Construction activity unlikely to overlap significantly with temporary emergency development at Tarbert Power Station. Construction activities will be planned and phased with associated developments. Subject to implementation of identified mitigation measures including implementation of an agreed CTMP and measures identified in the OCEMP, significant cumulative effects are not considered likely. There are potential beneficial effects arising from the upgrade of the L-1010. No significant cumulative operational effects are likely.	
Gas Pipeline	Previously subject to EIA. No significant effects identified.		
Future Data Centre	Will be the subject of a separate application and EIAR / EIA Screening		

220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications. This is envisaged to be via a cable connection under the public road.	
Temporary Emergency power generation at Tarbert.(315838)	Approved under separate consent and environmental assessment process.	
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to traffic and transport would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of traffic and transport.		

Chapter 12 Cultural Heritage

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
General Construction Impacts – Excavation and removal of features of interest.	Potential permanent negative impacts on features of significance.	Adherence to the provisions of the OCEMP. Compliance with DAU requirements / conditions including further underwater surveys.	Moderate significance.

Compaction or rutting of deposits. Vibration and change in air quality. Changes in groundwater levels / hydrology and chemical alteration, or changes in silt deposition regimes; Effects on the setting of heritage assets. Severance		Full resolution of all archaeological sites and areas identified during archaeological testing at the pre-construction phase. A Method Statement for Archaeological Works will be agreed with the NMS in compliance with the National Monuments Acts and Policy and Guidelines. Archaeological fieldwork and monitoring of ground works by a suitably qualified and licensed Archaeological contractor. Recording and survey of identified features. Dismantling under supervision where appropriate. Embedded mitigation comprising a buffer zone around CHS10 Ringfort (KE003-004), defined by permanent fencing. 50m buffer zone during construction around anomaly identified during marine geophysical survey. The existing setting of Protected Structure - Ralappane House – and proposed landscaping. Excavations may contribute to wider understanding of the area.	
Cumulative effects			
Future Data Centre	Will be the subject of a separate application and EIAR / EIA Screening.	Other developments will involve excavation with potential cumulative effects on cultural heritage. Construction activities will be planned and phased and implementation of best practice standard and DAU requirements and the	

220 / 110kV and 20kV connection to Kilpaddoge and on-site substation	Subject to separate planning applications. Excavations could impact on cultural heritage.	OCEMP for the development will ensure no significant cumulative effects will result. Development on adjacent lands will be subject to separate assessment and cumulative effects will be assessed as part of that application Works associated with on-site substation and associated infrastructure will have possible additional effects on Ralapanne House, which will be subject to archaeological resolution as part of that project. Excavations and investigations may contribute to wider understanding of the area.
L-1010 upgrade	Additional excavations could have further impacts on cultural heritage.	
Gas pipeline	Previously subject to EIA. Additional excavations could have further impacts on cultural heritage.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	
Conclusion While the development will result in the removal / excavation of number of archaeological features, I note the submission of the DAU on the proposals. I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to cultural heritage would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by		

appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of cultural heritage.

Chapter 13 Population and Human Health

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
Impacts due to loss / change of use of agricultural land and on views from Wild Atlantic Way.	Long-term, slight local negative impact	Zoning of lands for industrial use and low intensity of existing uses on the lands. Existing industrial / energy infrastructure characterising this landscape. Mitigation and monitoring measures detailed in Chapter 10 – Landscape and Visual Impacts. Separation from tourist routes and protected views.	Slight
Severance	Negligible short-term adverse impact.	Implementation of the Construction Traffic Management Plan, including the routing of construction traffic.	Imperceptible
Population and employment and economic activity – potential increase in employment during construction and operation & contribution to retained population.	Long-term, moderate positive local effects.	None required	Moderate

Human Health – impacts from dust, construction traffic, noise and vibration from blasting and rock breaking.	Short-term, slight negative local effect.	Separation of mains works area from human receptors. Mitigation and monitoring measures detailed in Chapter 8 Air Quality and Chapter 09 –Noise and Vibration Adherence to a Construction Traffic Management Plan.	Not significant
Human Health – generation of GHGs leading to climate change. (Refer to Ch. 15 below Climate)	Negative, long-term slight impacts.	Compliance with IE licence requirements. Operation of the power plant in accordance with TSO rules to support greater renewal penetration. Embedded mitigation measures are set out in Chapter 15 – Climate.	Slight negative
Potential risk to public health from a major accident or disaster	Significant adverse effects	Compliance with HSA requirements under the COMAH regulations 2015, and on-going regulation / monitoring. Design adherence to industry best practise. Separation distances from public / residential receptors.	Not significant
Cumulative effects			
Future Data Centre	Will be the subject of a separate application and EIAR / EIA screening.	If works occur concurrent with the proposed development, there is potential for cumulative construction impacts and effects on traffic and transport and air quality. Construction activities will be planned and phased, and subject to implementation of best practice standard construction environmental measures and the OCEMP for the Proposed Development, no significant cumulative effects will result. There are potential beneficial cumulative effects with the upgrade of the L-1010.	
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation.	Will be subject to separate planning applications.		
L-1010 upgrade	To be undertaken by KCC.		

Gas pipeline	Previously subject to planning consent and subject to EIA. No significant effects identified.	There is potential for increased employment creation and economic activity during construction and operational stages, with potential to attract / retain population. Modelling indicate that cumulative operation with the existing operations at Moneypoint and Tarbert and with temporary emergency generation development at Tarbert will not result in any exceedance of air quality standards.
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process.	
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to population and human health would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of population and human health.		

Chapter 14 Major Accidents and Disasters

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
Accidental release of LNG or natural gas to atmosphere, with potential for fire / explosion.	Unlikely but potentially high adverse effect.	Design and operation in line with industry standards and adherence to HSA requirements. Fire control systems and firewater management design.	Not significant

Potential lightning strike or aircraft strike as an ignition source. Potential risk of asphyxiation.		Separation from habitation / human receptors. Gas pipelines to have integral isolation valves to isolate the inventory and reduce the consequences of an accident. Jetty design, including ability to disconnect the FSRU in the event of adverse weather conditions. No onshore LNG storage tanks, minimising stored inventory. Appropriate separation between uses on-site. Design having regard to ATEX Directives (2014, 1999) and relevant industrial standards. Rapid vaporisation and dispersion of LNG in the event of release results in limited potential to enter environmental receptors. Design takes account of climate change impacts and potential sea level rise Location away from national and international flight paths. FSRU and LNGC design to shipping industry standards. Adherence to SFPC navigation requirements and measures identified in the Navigation Risk Assessment. On-site training and emergency plans. Appropriate security measures.	

		Ecological effects limited due to the low numbers of estuarine birds, and limited intertidal foraging habitat, adjoining the site.	
Loss / spillage of other contaminants. Potential for release of contaminants in firewater.	Unlikely but potential adverse effect	Adherence to HSA requirements for design and management. Stormwater design and management. Fuel systems designed to appropriate maritime engineering standards, including leak detection. Procedures to prevent and respond to loss of containment having regard to the National Maritime Oil & Hazardous Noxious Substance (HNS) Spill Contingency Plan. Adherence to EPA Guidance on Firewater Retention and for the Storage and Transfer of Materials for Scheduled activities. Emergency plans and firefighting strategy developed in consultation with the emergency services.	Not significant
Loss of containment of Odorant with/ or without fire/ explosion.	Unlikely but potential adverse effect	The design, operation and maintenance to industry codes and standards and requirements of the HSA. Limited stored volumes. Separation from sensitive receptors. Emergency plans and firefighting strategy, developed in consultation with the emergency services.	Not significant.

Maritime Navigation Risk. Damage to vessels resulting in release of LNG / other contaminants and harm to persons.	Unlikely but potential significant negative effect	Terminal design and operation in line with industry standards and adherence to HSA requirements. Application of mitigation measures identified in the NRA. Adherence to international, national and local maritime navigation requirements, including SPFC navigation requirements. Procedures to prevent and respond to loss of containment having regard to the National Maritime Oil & Hazardous Noxious Substance (HNS) Spill Contingency Plan.	Not significant
Flood risk / climate impacts	No significant risk	Location outside flood zones A and B. Design of jetty and procedures for disconnection and safe mooring of FSRU and LNGC. Design taking account of potential temperature variation	Not significant
Earthquake/ Seismic event.	Unlikely	No significant risk	Not significant
Terrorism threats	Unlikely.	Design of security to prevent unauthorised access	Not significant
Cumulative Effects			
Future Data Centre	Will be the subject of a separate application and EIAR / EIA screening.	Significant cumulative effects are unlikely subject to the design and operation of the developments in accordance with industry standards and HSA requirements.	
Gas pipeline	Previously subject to planning consent and subject to EIA. No		

	significant effects identified.	
Existing COMAH sites at Moneypoint and Tarbert, incl NORA storage site		Given separation, no significant in-combination effects are likely.
Temporary Emergency power generation at Tarbert. (315838)	Approved under separate consent and environmental assessment process.	
Conclusion I refer also to section 9.12 of this report and the report of Byrne O'Cléirigh (Appendix 1). I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to major accidents and disasters would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of major accidents and disasters.		

Chapter 15 Climate:

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**
GHG Emissions from site activity and construction.	Highly likely short term, slight negative impact.	Efficient site design and layout. Implementation of the OCEMP including measures to reduce emissions, including transport and waste management.	Not significant.

		Existing tree protection measures.	
GHG Emissions from operation of proposed CCGT.	Long-term, significant negative impacts.	Flexible and efficient power plant and availability of battery storage facilitating the transition of the national grid to renewable generation. Design efficiency and ability to operate at low minimum generation capacity facilitating dispatch before less efficient plant, subject to TSO requirements. The Power Plant will not operate at 100% capacity 24/7. The CCGT will facilitate displacement of existing older, more carbon intensive power generators; Diesel Pumps and Generator would not run during normal operations. Auxiliary Boiler only operated when all CTG/ HRSG Trains are not operational. Adherence to IE Licence and GHG Permit requirements and operation in the EU ETS scheme; Flexible design facilitates future transition to alternative low carbon fuels. Regassification using sea water rather than heated water.	Significant
In-combination Climate Impacts - including air quality impacts due to reduced seasonal rainfall, potential invasive species translocation, increased intensity	Long-term, local negative impacts.	Avoidance of areas at risk of flooding. Implementation of the OCEMP, detailing measures to reduce impacts to sensitive receptors, including design of drainage and surface water management systems to handle anticipated volumes.	Not Significance

of rainfall increasing risk of water quality impacts. Flood and storm impacts.		Storage of topsoil and other materials to protect against rainfall and flooding events, or sea level rise. Suitable storage and bunding of pollutants to protect from high rainfall events or sea level rise. Monitoring of dust deposition. An emergency response plan and procedure. Use of permeable surfaces to laydown and welfare areas. Adherence to all legal, regulatory and licence conditions. Underground electrical connections insulated against overheating during heatwaves	
Cumulative effects			
Operational emissions with other power plants in the area, including proposed temporary emergency electricity generation plant at Tarbert (315838).	Current use of coal and Heavy Fuel Oil at Moneypoint and Tarbert Power plants is expected to cease. Emergency electricity generation at Tarbert was approved under separate consent and environmental assessment process.	The development will result in direct emissions from the combustion of fossil fuel, however, policy recognises the requirement for such generation capacity to facilitate the transition to higher renewable generation capacity. Development of modern, efficient plant of the nature proposed will facilitate the closure or older coal and oil burning plant. Moneypoint and Tarbert are scheduled to cease burning fossil fuels such that significant cumulative air quality effects are not considered likely and no significant long-term impact on pollutant concentrations are anticipated. The development does not give rise to any risk of exceedance of Air Quality Standard in the Normal Operational Scenario. The proposed temporary emergency plant will cease operations in	

Future data centre	Subject to separate future planning application and EIAR / EIA Screening.	5 years and will operate only as a back-up generator. No significant cumulative effect from operational emissions is likely. If development works occur concurrent with the proposed development, there is potential for cumulative construction impacts and traffic and transport emissions. Excavation activities have the potential to result in cumulative carbon emissions. Construction activities will be planned and phased and implementation of best practice standard construction environmental measures and the OCEMP to minimise emissions and ensure no significant cumulative effects arise.
L-1010 upgrade	To be undertaken by KCC	
220 / 110kV and 20kV connection to Kilpaddoge and on-site substation	Will be subject to separate planning applications and assessments.	
Gas pipeline	Already consented development subject to EIA. No significant effects were identified.	
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to climate would be satisfactorily avoided, managed or mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of climate.		

Chapter 16 and 17: Material Assets

Impact	**Effect magnitude**	**Mitigation and monitoring measures**	**Significance following mitigation**

Land Use – loss / change of use of agricultural lands.	Long-term, slight negative local impact.	Location within a large landbank zoned for industrial use. Having regard to the extent of surrounding agricultural lands, the quality of the lands and current low intensity of use, this impact is regarded as being of low magnitude.	Not significant.
Construction waste	Short-term local negative impact.	Implementation of the OCEMP. Reuse of excavated materials. Waste classification, segregation, containment, storage, transportation and disposal in compliance with IE license requirements and waste licence requirements. Monitoring procedures for the CDW recovery rate. Best practice including a Site Waste Management Plan (SWMP) following the waste hierarchy, including statutory requirements and corporate requirements. Adherence to MARPOL Annex V waste requirements. A comprehensive docketing for waste from the site. Adherence to the IMO ballast water management convention.	Not Significant
Process water / wastewater	slight local, negative impact		
Operational waste	Slight local negative impact,		
Operational Ballast Water discharged to the estuary	Slight local negative impact.		
Impact on existing water and gas supply infrastructure due to diversion / connection works and operational demands.	Negative, local temporary impacts during construction.	Measures to ensure no interruptions to existing services during construction unless planned and agreed with the relevant service provider and local authority. Prior notice to residents of any service suspensions. Adherence to relevant guidance documents, including that of GNI, the ESB and the HSA.	Not significant

		Any temporary connections agreed in advance with the relevant service provider. Periodic water quality monitoring at point of supply.	
Export to existing Electricity and Gas supply networks	Long-term, positive and high	None required	Significant
Cumulative effects			
Gas Pipeline	Previously subject to EIA. No rare habitats or valuable habitats for rare species were recorded on the route	If works occur concurrent with the proposed development, there is potential for cumulative construction impacts and effects, including increased demands, on utilities and services. Construction activities will be planned and phased with associated developments. The implementation of standard best practice construction environmental measures and the OCEMP for the Proposed Development will ensure no significant cumulative effects will result. The developments will have a positive cumulative effect in terms of facilitating renewable generation capacity.	
Future Data Centre	Will be the subject of a separate application and EIAR / EIA Screening.		
220 / 110kV connection to Kilpaddoge and 20kV substation and line.	Subject to separate planning applications. Envisaged as a cable connection under the public road. This will involve one existing road crossing of the		

	Ralapanne Stream upstream of the site.	
Renewable generation projects in the wider area	Further proposed projects subject to planning permission and screening for EIA.	
Temporary Emergency power generation at Tarbert (315838)	Approved under separate consent and environmental assessment process	
Conclusion I have considered all of the application documentation and submissions received, and I am satisfied that impacts in relation to material assets would be satisfactorily avoided, managed and mitigated by the measures which form part of the proposed scheme and by appropriate conditions. I am satisfied that the proposed development would not have any unacceptable direct, indirect or cumulative impacts in terms of material assets.		

Significant Interactions:

Land and soil interactions	
Water	Potential release of silt or other contaminants to water bodies during the construction phase. Changes in levels impacting on groundwater flow.
Biodiversity	Habitat loss or reduction.
Air quality	Dust mobilisation during works.
Noise and vibration	Emissions from excavation and site clearance works / blasting.
Landscape and Visual	Site clearance will impact on views.
Cultural Heritage	Site clearance removing features of interest.
Population & Human Health	Air quality, noise and vibration and amenity impacts during works
Climate	Site clearance reducing carbon sink. Site clearance affecting drainage / flood risk profile.

Water interactions	
Land and soils	Changes in ground levels impacting on groundwater flow. Potential release of silt or other contaminants to water bodies during works
Biodiversity	Mobilisation of suspended solids and contaminants impacting on water quality and habitats. Disturbance during works within the marine environment. Reduced feedings areas in Ralapanne stream.
Cultural Heritage	Changes to water table potentially impacting on sub-surface features
Material Assets	Increased demand for water and utilities,

Biodiversity interactions	
Land and soils	Habitat loss or reduction.
Water	Disturbance / displacement impacts and potential injury to marine mammals and aquatic fauna from construction activity. Mobilisation of suspended solids and contaminants impacting on water quality. Reduced feedings areas in Ralapanne stream.

	Discharge of process wastewater and from FSRU impacting on water quality.
Air Quality	Dust mobilisation and deposit on sensitive receptors Deposition from operational emissions on sensitive habitats
Noise and Vibration	Impacts on marine mammals and aquatic fauna from construction and operational activity in terms of disturbance / avoidance and potential injury. Reduced foraging habitat due to disturbance effects.
Landscape and Visual	Loss of existing vegetation will impact on views.
Traffic and transport	Spill or leakage of oil or fuels can impact on receptors. Increased traffic may result in disturbance.
Major accidents and disasters	A release of gas or pollutants e.g., from loss of containment of MFO, LNG and/ or contaminated firewater, may result in harm to the environment from contamination, fire or explosion.
Climate	Climate change impacts such as flooding, heat waves could impact on biodiversity. Will facilitate overall transition to renewables.
Material Assets	Spill or leakage of oil or fuels can impact on receptors. Utility works may result in habitat loss or disturbance.

Population and Human Health interactions	
Land and soils	Air quality, noise and amenity impacts during site works. Loss of / change in the use of agricultural lands.
Air Quality	Dust mobilisation and deposition during construction. Potential odour release during operations / accident event.
Noise and Vibration	Construction noise and vibration impacts. Operational and construction traffic noise and disturbance
Landscape and Visual	Impact on views across the estuary and from adjoining residential properties.
Traffic and transport	Air quality and noise impacts from vehicle emissions. Impacts on road safety and convenience from increased traffic volumes.
Cultural Heritage	Loss of features of interest. Contribution to the understanding of the archaeology of the area through investigation and excavation.

Major accidents and disasters	A major incident could result in release of pollutants to air and risks to public safety.
Climate	GHG emissions from operations and traffic movements and contribution to climate impacts. Facilitate the transition to renewable generation.
Material Assets	Increased demands on local water supply. Potential litter and vermin nuisance.

Cultural Heritage interactions	
Land and soils	Excavation / removal of features of interest
Water	Changes to ground water regime impacting on retained features of interest
Noise and Vibration	Vibration impacts on integrity of retained features
Landscape and Visual	Impact on setting of adjoining / retained features of interest
Traffic and transport	Potential construction traffic impacts on sub-ground features.
Population and Human Health	Contribution to the understanding of the archaeology of the area through investigation and excavation.

Air Quality interactions	
Biodiversity	Dust mobilisation and deposit on sensitive receptors Deposition from operational emissions on sensitive habitats.
Population and Human Health	Dust mobilisation and deposition during construction Operational impacts on air quality. Potential odour release during operations.
Climate	GHG emissions due to use of materials, energy, fuel.
Traffic and Transport	Emissions from construction and operational traffic.

Noise and Vibration interactions	
Biodiversity	Impacts on marine mammals and aquatic fauna vibration / noise during construction (piling, blasting) and operations in terms of disturbance / avoidance and potential injury. Reduction in foraging habitat due to disturbance / loss.
Cultural Heritage	Vibration impacts on retained features of interest.
Population and Human Health	Construction noise and vibration impacts on sensitive receptors. Traffic noise and disturbance

Traffic and Transport	Emissions from construction and operational traffic.

Landscape and Visual interactions	
Biodiversity	Site clearance reducing habitats.
Population and Human Health	Impact on views, particularly south across the estuary and from adjoining residential properties.
Climate	Excavation will reduce carbon sink. Landscaping and planting will provide some replacement habitats.

Traffic and Transport interactions	
Land and soils	Import of materials and aggregate will generate traffic movements. Spill or leakage of oil or fuels can impact on soils.
Water	Spill or leakage of oil or fuels can impact on water.
Biodiversity	Increased traffic may result in collision or disturbance impacts. Spill or leakage of oil or fuels can impact on habitats.
Air quality	Dust mobilisation from construction traffic. Emissions from construction and operational traffic.
Noise and vibration	Emissions and disturbance from construction and operational traffic.
Landscape and Visual	Increased traffic may impact on scenic / tourist routes.
Cultural Heritage	Potential impact on sub-surface features of interest from construction traffic movements on-site.
Population and Human Health	Air quality and noise impacts from vehicle emissions. Impacts on road safety and convenience from increased traffic.
Climate	Vehicle traffic emissions

Major Accidents and Disaster interactions	
Land and soils, Water, Biodiversity	A release of pollutants e.g., from loss of containment of MFO, LNG and/ or contaminated firewater or a fire or explosion event, may result in harm to the environment.
Air quality / Population and Human Health	A major incident could result in release of pollutants to air and risk to public safety.

Climate interactions

Water	Extreme weather events and increased flood risk.
Biodiversity	Climate impacts such as flooding, heat waves could impact on biodiversity.
Landscape and Visual	Impact on planting / landscaping proposals
Population and Human Health	Contribution of emissions to climate impacts. Will assist transition to renewables .
Major Accidents and Disasters	Extreme weather initiating a major accident event.

Material Assets Interactions	
Water	Increased demand on local water supply.
Biodiversity	Utility works impacting on habitats and water quality.
Noise and Vibration / Air Quality	Dust and noise emissions from utility works and associated traffic.
Landscape and Visual	Utilities infrastructure impacting on views / landscape.
Traffic and transport	Increased traffic during construction and operation.
Cultural Heritage	Utility infrastructure provision may impact on previously unknown features of cultural interest.
Land and soils	Change of use / loss of agricultural lands. Some aggregate import required.

Reasoned Conclusion on the Significant Effects

Having regard to the examination of environmental information contained above, and in particular to the EIAR and other information provided by the developer, and the submissions from the planning authority, prescribed bodies and observers during the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

1. The development could give rise to impacts on surface and groundwaters as a result of run-off of sediments, accidental spillages of chemicals, hydrocarbons or other contaminants entering waterbodies during construction. These impacts would be adequately mitigated by:

- the implementation of the CEMP, and standard, best practise guidance and measures, including measures for the control of soils, materials and pollutants, and drainage design and the management of surface waters.
- Soil and stockpile management, including separation from waterbodies and from areas subject to flooding.
- Minimise use of cast in-situ concrete and measures to prevent discharge of contaminants to the underlying subsoil or to the marine environment.

2. Construction activity will give rise to noise and vibration emissions, particularly during terrestrial blasting and rockbreaking activities. The impacts from such activities would be adequately mitigated by:

    - Adherence to identified emission limit values and guidelines for such activities, BS5607:2017 CoP and BS6472-2:2008.
    - The short-term nature of the activities and limits on daily blasting activities.
    - Separation from the shoreline and sensitive receptors.
    - Process management and a dedicated Public Liaison Officer and protocols for community relations.
    - On-going monitoring.

3. Construction activities, particularly piling activity, will give rise to underwater noise and vibration potentially impacting on marine mammals in particular. The impacts from such activities would be adequately mitigated by:

    - Adherence to DAHG Guidance to *Manage the Risk to Marine Mammals from Man-Made Sound Sources*, including provisions relating to the observation periods and timing of activities.
    - Additional seasonal bottlenose dolphin observations.
    - Limits on daily activities.
    - No simultaneous impact piling.
    - On-going monitoring.

4. Sediment deposition from drilling and construction activity in the marine environment will give rise to potential for sediment release and deposition in the estuary. The impacts from such activities would be adequately mitigated by:
    - The short-term nature of the activities.
    - Implementation of the CEMP, including standard construction best practice mitigation measures, including the use of reverse circulation drilling to minimise loss of spoil and generation of sediment.
    - The extent and hydrodynamically active nature of the estuary.
    - Maximising the use of precast concrete elements. Any in-situ concrete work would be staged to prevent concrete entering the water.

5. Operational discharges to the marine environment, including wastewater, accidental spillages and process discharge, have the potential to impact on water quality and dependent species and habitats. The impacts from such activities would be adequately mitigated by:
    - Design, operation and monitoring of drainage systems in compliance IE licence requirements.
    - Attenuation of stormwater runoff from paved / impermeable areas.
    - Drainage systems capable of handling anticipated volumes, incorporating treatment facilities and monitoring equipment appropriate to each effluent stream (including silt trap, Class 1 hydrocarbon interceptor, a firewater retention facility, package wastewater treatment plant and pH adjustment).
    - Measures for the control and management of hazardous materials and removal of identified effluent streams off-site for treatment.
    - Adherence to EPA guidance for Firewater Retention and the Storage and Transfer of Materials for Scheduled activities.
    - Availability of secondary containment and spill kits for other hazardous materials.
    - Dispersion effects within a short distance of the discharge point, given the extent and dynamic nature of waters in the estuary.
    - Protocols to manage the risk of accidental spills and potential environmental impact, and membership of the Shannon Estuary Anti-Pollution Team (SEAPT).

6. Construction of the development will result in the direct loss of marine environment habitats. The impacts from such activities would be adequately mitigated by:

    - The limited spatial extent of loss, where the affected habitats and community types are not uncommon or rare and where natural recolonisation can occur.

7. Development of the site will result in terrestrial habitat removal and disturbance and displacement of species occurring on or around the site. The impacts from such activities would be adequately mitigated by:

    - Implementation of CEMP and appointment of an ECOW.
    - Adherence to published guidance including CIRIA guidance on water pollution and IFI guidelines of protection of fisheries, Bat Conservation Ireland guidance on lighting design, and NRA Guidelines for the treatment of Badgers, Bats and Otters.
    - Monitoring of Badger setts during post-construction.
    - No in-stream works in Ralapanne Stream.
    - A detailed method statement in respect of disturbance to cliff habitat from vehicular access.
    - Planting and landscaping works using native species.
    - Clear delineation and fencing off of habitat conservation areas and retained trees / vegetation.
    - Timing and management of tree / vegetation and structure removal works, with pre-development surveys of features to be removed.
    - Erection of bat boxes and bird nesting boxes.
    - A method statement specifying the timing of blasting operations and the need for ecological supervision.

8. Operation of the proposed power plant would give rise to an increase in operational greenhouse gas emissions with resulting impacts on the achievement of EU and National climate change and carbon emission reduction targets. The impacts from such activities would be adequately mitigated by:

- The role of the CCGT in the overall energy generation sector and in facilitating renewable generation capacity and the transition to a low carbon system.
- Displacement of potentially more carbon intensive power generation.
- Operation in the EU ETS scheme.
- Embedded design mitigation, including high efficiency and ability to operate at a low minimum generation capacity means that it will be dispatched before less efficient plants;
- Availability of battery storage.
- The Power Plant will not operate at 100% capacity all year round.
- Stated ability to transition to alternative low carbon fuels / hydrogen.
- Regassification using sea water.

9. Traffic generated during construction will give rise to potential disturbance and congestion on the local road network. These impacts would be adequately mitigated by:

    - Existing low traffic volumes on road network
    - Upgrade of the L1010 prior to the main construction phase.
    - Shore-term nature of activities.
    - Implementation of a Construction Traffic Management Plan including the routing and scheduling of construction traffic to avoid coinciding with peak school times.
    - Appointment of a logistic manager.

10. Excavation and redevelopment of the site will give rise to direct impact on features of archaeological interest and previously unrecorded features. There will also be impacts on the setting of recorded monuments. The impacts would be adequately mitigated by:

    - Full resolution of all archaeological sites and areas identified during archaeological testing and underwater surveys.
    - Compliance with the National Monuments Acts and the CEMP.

- A Method Statement for Archaeological Works will be agreed with the National Monuments Service, with fieldwork and monitoring by a suitably qualified and licensed archaeological contractor.
- Completion of archaeological works prior to commencing enabling works.
- Designated buffer around recorded monument.

11. Having regard to the nature and volume of materials to be stored and processed at the facility, the development gives rise to the potential for major accident or disaster or Major Accident to the Environment. The impacts from such activities would be adequately mitigated by:

    - Design and operation in accordance with industry standards and operator requirements under the COMAH Regulations 2015.
    - Integral isolation valves in pipelines to isolate the inventory and reduce the consequences of an accident.
    - Design and installation in accordance with EPA guidance for firewater retention and for the Storage and Transfer of Materials for Scheduled Activities
    - The FSRU can be safely disconnected from the jetty in the event of adverse weather conditions such as storms.
    - Separation of uses within the site.
    - LNGC and FSRU navigation / movements will be managed by SFPC and subject to marine bye-laws.
    - Application of the specific measures identified in the Marine Navigation Risk Assessment.
    - The spill management framework, and the management of vessel movements in the estuary by the SFPC.

Cumulative Impacts and Impacts from interactions

It is considered that effects as a result of interactions, indirect and cumulative effects can be avoided, managed or mitigated by the measures which form part of the proposed development, the proposed mitigations measures detailed in the Environmental Impact Assessment Report, and the additional documentation

furnished and with suitable conditions. There is, therefore, nothing to prevent the approval of the development on the grounds of significant environmental effects as a result of cumulative impacts or impacts arising from interactions between environmental factors.

Conclusion

The submitted EIAR has been considered with regard to the guidance provided in the *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, Department of Housing, Planning, Community and Local Government (2018), *Guidelines on the Information to be contained in Environmental Impact Assessment Reports*, EPA 2022, and (Draft*) Advice Notes for Preparing Environmental Impact Statements* Environmental Protection Agency 2015.

The assessments provided in the individual EIAR chapters and supplementary documentation, are generally considered to be satisfactory, with the exception of the areas of clarification in relation to major accidents and disasters. The likely significant environmental effects arising as a consequence of the proposed development have otherwise been satisfactorily identified, described and assessed. They would not require or justify refusing permission for the proposed development or require significant amendments to it.

Notwithstanding this conclusion, the potential impacts and associated mitigation measures identified above are related to the overall development. Any requirement for the amendment or omission of certain elements of the proposed development for policy or other reasons, will modify the scope of potential impacts and mitigation measures required.

12.0 Appropriate Assessment

12.1. Introduction

This section comprises an assessment of all aspects of the proposed development, that could affect the conservation objectives of European sites and presents precise and definitive conclusions as to the implications for the overall integrity of those sites.

Article 6(3) of the Habitats Directive requires that any plan or project not directly connected with or necessary to the management of a European site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

The proposed development is not directly connected with or necessary to the management of any European site. The requirements of Article 6(3) as related to appropriate assessment of a project considered under Part XAB of the Planning and Development Act 2000, as amended, are considered fully in this section.

12.2. Proposed Development

The proposed development, as described in section 3.0 of this report and in Section 2 of the *Screening Statement for Appropriate Assessment and Natura Impact Statement*, generally comprises the construction of a new LNG terminal and jetty, a new 600MW power station and associated development.

The site is bounded by, and partially overlaps, the Lower River Shannon candidate Special Area of Conservation (cSAC) (Site code 002165) and the River Shannon and River Fergus Estuaries Special Protection Area (SPA) (Site code 004077). The AA Screening Statement and NIS identify the key activities proposed for the construction and operational phases relevant to conservation features.

12.2.1. Documentation

The application is accompanied by an AA Screening Statement and a Natura Impact Statement (NIS, August 2021) which scientifically examine potential impacts on

European Sites in the area. NIS identifies and assesses possible adverse effects of the development, alone or in combination with other plans and projects on these European sites in view of their conservation objectives and identifies mitigation measures to avoid and/or reduce such adverse effects.

Supporting documents / appendices to the NIS include:

- Site Synopsis Reports
- EIAR - Marine Ecology and Terrestrial Ecology Chapters (Ch. 7A and 7B)
- Hydrodynamic and Dispersion Modelling of proposed development process and effluent discharges
- Underwater Noise from STEP Prediction of Underwater Noise
- Effects of Shannon LNG Construction and Operation Activities on Marine Mammals and Fish
- Marine Mammal Monitoring Reports
- Outline Construction Environmental Management Plan
- Datasheet - Reverse Circulation Drilling Rig
- Photomontages
- Lighting drawings

In addition, the applicant's response to a request for further information by the Board, received on 18th August 2022, includes additional information on potential impacts on European Sites in the area. It is considered that these documents were prepared by suitably qualified and experienced professionals.

12.2.2. Consultations and Observations

The NIS indicates that pre-application consultations were undertaken with the following bodies.

- An Bord Pleanála.
- Commission for Regulation of Utilities
- Eirgrid
- Environmental Protection Agency
- Gas Networks Ireland (GNI)
- Health and Safety Authority

- Inland Fisheries Ireland (IFI)
- Irish Whale and Dolphin Group (IWDG)
- Kerry County Council (KCC)
- National Monuments Service's Underwater Archaeology Unit
- National Parks & Wildlife Service (NPWS) Development Applications Unit
- Shannon Foynes Port Company

A large number of submissions and observations on the application have been received from prescribed bodies and third parties, which are detailed in section 7.0 of this report above.

12.3. Stage I - Screening the Need for Appropriate Assessment:

The screening stage aims to establish if the proposed development is likely to result in significant effects on a European site(s). If the possibility of significant effects cannot be excluded on the basis of objective information, without extensive investigation or the application of mitigation, a plan or project should be considered to have a likely significant effect, and Appropriate Assessment carried out.

12.3.1. Impact Mechanisms

The submitted AA Screening Statement identifies the following sources / mechanisms for potential impacts on European Sites:

Impact Mechanisms		Phase	Description
1.	Release of pollutants during construction	Construction Phase	Accidental release of chemical pollutants or other waste material / pollutants to nearby habitats, watercourses and waterbodies. Possible pollutants include fuels, oils, greases, hydraulic fluids or construction materials including concrete. Runoff from excavated material may result in the release of sediment, impacting on habitat and water quality.

2.	Land-based construction noise and vibration disturbance	Construction Phase	Initial site preparation / clearance works and construction activities will result in noise, vibration and light disturbance, potentially displacing fauna. Rock blasting, which will generate noise and vibration disturbance. Mobile conservation feature species (e.g. birds, otter) may occur in the area and be affected.
3.	Release of spoil during piling	Construction Phase	Jetty piling operations will result in the generation and release of spoil and sediment potentially affecting local water quality (e.g. turbidity) and result in sediment plumes beyond the immediate works area, which may extend a significant distance. Increased turbidity could reduce light in the water column. Spoil may be deposited on benthic habitats, with smothering effects.
4	Underwater noise	Construction Phase and Operation Phase	Piling operations will result in underwater noise, potentially causing disturbance, physical injury and behavioural changes in fauna. Operational vessel activity will generate noise potentially resulting in disturbance to fauna. Controlled rock blasting on land may generate underwater noise disturbance.
5.	Seabed habitat loss	Construction and Operation Phase	Jetty piling and construction of a trenched water outfall across the shoreline into the Estuary will result in the direct loss of habitats and associated fauna.
6.	Vessel physical disturbance and collision injury	Construction and Operation Phase	Additional vessel activity increase the potential for disturbance and collision injury to fauna.

			Mobile conservation feature species (e.g. marine mammals, bird species) may occur in the area and thereby be affected.
7.	Discharge of treated cooled seawater	Operation Phase	Cooled seawater discharged to the estuary will contain sodium hypochlorite, potentially affecting local water conditions.
8.	Entrainment / impingement of fauna by the FSRU seawater system	Operation Phase	Potential that abstracting and pumping of seawater will result in fish and macrocrustaceans being entrained and / or impinged on the intake filter screens.
9.	Discharge of Wastewater and Power Plant Process Heated Water Effluent	Operation Phase	Potential environmental impact associated with the disposal of secondary treated wastewater. Discharge of heated water to the estuary via the storm water outfall point, may affect local water conditions. Given local currents, the plume of discharge waters may extend over a large area.
10.	Introduction of invasive species	Operational Phase	Potential increase in the risk of invasive organisms being imported in ballast water and as ship hull fouling.
11.	Accidental large-scale oil or LNG spill	Operational phase	Potential habitat loss, impact on water quality and bird mortality from oil spill and / or fire associated oil / LNG spill.
12.	Collision Risk with site infrastructure	Construction and Operation Phase	Potential bird collision risk with plant and jetty on the shoreline.
13.	Barrier to connectivity	Construction Phase and Operation Phase	Increased noise and visual disturbance (including lighting) during construction may create a barrier to connectivity. Risk that the presence of the jetty could prevent movement of fauna along the shoreline.

14.	Loss of prey biomass (for SCI birds and otter).	Construction Phase and Operation Phase	Potential release of pollutants, the underwater noise and sediment plumes during piling works could lead to fish mortality. Removal of wet grassland could lead to a reduction in common frog and prey biomass. Discharge of treated cooled seawater, wastewater, entrainment and impingement during operation could lead to fish mortality.

In addition to the identified mechanisms for potential impacts on Natura Sites within the zone of influence of the development, there is also potential for impacts arising from operational airborne pollution.

12.3.2. Preliminary Screening

The applicant's Preliminary Screening Assessment identifies the following European Sites within the surrounding area:

Lower River Shannon cSAC (002165)	Adjacent
River Shannon and River Fergus Estuaries SPA (004077).	Adjacent
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)	10km+ southeast.
Moanveanlagh Bog cSAC (002351)	13km south
Tullaher Lough and Bog cSAC (002343).	14.0km northwest

The assessment concludes that, given the spatial extent of the zone of influence of the impact mechanisms, the only conservation features that have potential pathways for significant impact are QIs and SCIs for which the

- Lower River Shannon cSAC
- River Shannon and River Fergus Estuaries SPA
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA;

are designated. These sites were therefore brought forward to the screening exercise.

It concludes that there are no potential pathways for significant impacts on conservation features of other European sites. Potential significant effects on the conservation features of Moanveanlagh Bog cSAC and the Tullaher Lough and Bog cSAC and these sites were therefore excluded by the applicants at preliminary stage. By way of a further information request, the applicants were requested to elaborate on the basis for screening European sites out of Stage II Appropriate Assessment, having regard to specific conservation objectives for total N deposition for priority habitats, and the likelihood of significant effects thereon.

12.3.3. Screening

The applicant's screening statement considers the conservation features for the three European site screened in at preliminary stage, against the identified impact mechanisms to determine the likelihood of significant effects on the conservation objectives of the sites. The conclusions in respect of Lower River Shannon cSAC and River Shannon and River Fergus Estuaries SPA are considered to be generally reasonable and are summarised below.

Lower River Shannon cSAC		**Potential Impact mechanism**	**Likely significant effects (Y/N)**
Interest	**Conservation Objective**		
1029 Freshwater Pearl Mussel	Restore the favourable conservation condition	NA	N
1095 Sea Lamprey	Restore the favourable conservation condition	1, 3, 4, 7, 8, 9, 11	Y
1096 Brook Lamprey	Maintain the favourable conservation condition		
1099 River Lamprey	Maintain the favourable conservation condition		

1106 Atlantic Salmon (fresh water)	Restore the favourable conservation condition		Y
1110 Sandbanks slightly covered by seawater all the time	Maintain the favourable conservation condition	11	Y
1130 Estuaries	Maintain the favourable conservation condition	1, 3, 5, 7, 9, 11	Y
1140 Mudflats and sandflats not covered by seawater at low tide	Maintain the favourable conservation condition	1, 3, 7, 9, 11	Y
1150 *Coastal lagoons	Restore the favourable conservation condition	1, 3, 7, 9, 11	Y
1160 Large shallow inlets and bays	Maintain the favourable conservation condition	1, 3, 7, 9, 11	Y
1170 Reefs	Maintain the favourable conservation condition	1, 3, 5, 7, 9, 11	Y
1220 Perennial vegetation of stony banks	Maintain the favourable conservation condition	1, 3, 7, 9, 11	Y
1230 Vegetated sea cliffs of Atlantic and Baltic coasts	Maintain the favourable conservation condition	NA	Y
1310 Salicornia and annuals colonising mud & sand	Maintain the favourable conservation condition	1, 3, 7, 9, 11	Y
1330 Atlantic salt meadows	Restore the favourable conservation condition	1, 3, 7, 9, 11	Y
1410 Mediterranean salt meadows	Restore the favourable conservation condition	1, 3, 7, 9, 11	Y

3260 Water courses of plain to montane levels	Maintain the favourable conservation condition	NA	N
6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soil	Maintain the favourable conservation condition	NA	N
91E0 *Alluvial forests	Maintain the favourable conservation condition	NA	N
1349 Bottlenose Dolphin	Maintain the favourable conservation condition	1, 3, 4, 6, 7, 9, 11,	Y
1355 Otter	Restore the favourable conservation condition	1, 2, 3, 4, 6, 7, 9, 11, 13, 14, Habitat loss is not significant and is not brought forward to Section 3	Y

River Shannon and River Fergus Estuaries SPA		**Potential Impact mechanism**	**Likely significant effects (Y/N)**
Interest	**Conservation Objective**		
A017 Cormorant	Maintain the favourable conservation condition	1, 2, 3, 4, 6, 9, 11, 12, 13, 14 No direct loss of habitat	Y
A052 Teal		1, 2, 3, 6, 9, 11, 12	
A054 Pintail			
A062 Scaup			
A050 Wigeon			

A056 Shoveler			
A048 Shelduck			
A137 Ringed Plover			
A140 Golden Plover			
A141 Grey Plover			
A149 Dunlin			
A156 Black-tailed Godwit			
A157 Bar-tailed Godwit			
A160 Curlew			
A162 Redshank			
A164 Greenshank			
A142 Lapwing			
A046 Light-bellied Brent Goose			
A038 Whooper Swan			
A179 Black-headed Gull			
Habitat			
Wetland and Waterbirds	To maintain the favourable conservation condition of the wetland habitat as a resource for the regularly-occurring migratory waterbirds that utilise it	3, 9, 11 No significant change to wetland habitat This change is not brought forward to Section 3.	

The applicants screening assessment excluded the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA, Moanveanlagh Bog SAC and Tullaher Lough and Bog cSAC from stage II assessment. I note that the attributes and targets associated with the conservation objectives in respect of active raised bog in Moanveanlagh Bog SAC and Tullaher Lough and Bog cSAC include target values for Air quality: nitrogen deposition not exceeding 5kg N/ha/yr.

Attribute and targets associated with the conservation objectives for the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA include the extent and condition of heath, bog and associated habitats. It is considered that airborne pollution could potentially impact on bog habitats within the SPA which support hen harrier.

The application provided limited detail in respect of the basis for the exclusion of these sites from Stage II assessment, notwithstanding the potential pathway for impacts in respect of air quality, and N deposition in particular. This matter was the subject of a request for further information. With regard to the potential zone of influence of the development, I note that guidance in relation to industrial air emissions published by the UK Environment Agency (EA) and Defra (https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit#screen-out-pecs-from-detailed-modelling) recommends a search area of 15km for larger power generation sites of greater than 50 megawatts (MW). Having regard to the conservation objectives for these sites and the applicant's further information response, I consider that it is appropriate to bring these sites forward to Stage II appropriate assessment. The conclusions in respect of these three are summarised below.

Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA

Interest	**Conservation Objective**	**Impact Mechanism**	**Likely significant effects (Y/N)**
A082 Hen Harrier	Maintain or restore the favourable conservation condition.	No ex-situ impacts. Potential air	Y

		quality impacts on a supporting habitat.	

Moanveanlagh Bog SAC

Interest	Conservation Objective	Impact Mechanism	Likely significant effects (Y/N)
7110 Active raised bogs	To restore the favourable conservation condition	Air quality – N deposition	Y
7120 Degraded raised bogs still capable of natural regeneration	Long-term aim to re-establish peat-forming capability, the objective is inherently linked to that of Active raised bogs		
7150 Depressions on peat substrates of Rhynchosporion	A separate conservation objective has not been set		

Tullaher Lough and Bog cSAC

Interest	Conservation Objective	Impact Mechanism	Likely significant effects (Y/N)
7110 Active raised bogs	To restore the favourable conservation condition	Air quality – N deposition	Y
7120 Degraded raised bogs still capable of natural regeneration	Long-term aim is to re-establish peat forming capability; the objective is inherently linked to that of Active raised bogs		
7140 Transition mires & quaking bog	To maintain the favourable conservation condition		

7150 Depressions on peat substrates of Rhynchosporion	A separate conservation objective has not been set		

12.3.4. In Combination Effects

The applicant's screening statement identifies the following plans / projects as presenting a risk of acting in-combination with the Proposed Development:

- 220 kV and 20 kV power connections from the site to the national grid at Kilpaddoge, to be subject to future planning applications.
- 10-year permission for a Battery Energy Storage Project at Kilpaddoge, Tarbert, previously subject to AA Screening.
- LNG pipeline, previously subject to AA Screening.
- Cross Shannon 400 kV Cable Project between Moneypoint and Kilpaddoge, subject to AA and granted permission under ABP-313661.
- Moneypoint Synchronous Condenser (PA ref: 20/318), previously subject to AA (complete).
- ESB Green Atlantic@Moneypoint project, subject to future planning applications.
- Future adjacent data centre to be subject to separate future planning application.
- Survey of pipelines between Tarbert Generating Station and Kilkerin Point, Co. Clare, understood to be complete.
- It is stated that previous planning applications and foreshore licence applications for projects at the site of the proposed development have been considered in full in the screening exercise.

I note also the application to the Minister for approval of proposed temporary emergency electricity generation capacity at Tarbert Generating Station, under the Development (Emergency Electricity Generation) Act 2022. There is potential for in-combination operational effects from the burning of fossil fuels at these sites.

12.3.5. Conclusion

On the basis of the information and submissions on the file, including the AA Screening Report and supporting information and the further information received,

the nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and proximity and functional relationship between the proposed works and the European sites and their conservation objectives, I conclude that the proposed development could result in significant effects on the European sites identified in the table below.

Appropriate Assessment is therefore required to determine if adverse effects on the integrity of these sites can be ruled out. There is also the potential likelihood for significant in-combination effects with other plans or projects or activities. The conclusions are summarised in the tables below.

European Site	Separation Distance	Connections / pathway	Considered further in screening
Lower River Shannon cSAC (002165)	0	Water, air	Y
River Shannon and River Fergus Estuaries SPA (004077)	0	Water, air	Y
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)	10km south	No	Y
Moanveanlagh Bog cSAC (002351)	12.4km south	Air	Y
Tullaher Lough and Bog cSAC (002343)	14.0km northwest	Air	Y

The potential for significant effects on the conservation objectives of European Sites outside of the zone of influence can be screened out with confidence because of the separation distances and the lack of substantive ecological linkages or pathways between the proposed works and other European sites.

In reaching the conclusion of the screening assessment, no account was taken of measures intended to avoid or reduce the potentially harmful effects of the project on any European Site.

Screening summary:

Possible significant effects in view of the conservation objectives of the site?

Impact mechanisms by general impact categories

Qualifying Interest	Habitat Loss / modification	Disturbance / displacement / barrier	Reduction in species density	Change in key indicator of conservation value (e.g. water quality)
Lower River Shannon cSAC				
1095 Sea Lamprey		3, 4	8	1, 7, 9, 11
1096 Brook Lamprey		3, 4	8	1, 7, 9, 11
1099 River Lamprey		3, 4	8	1, 7, 9, 11
1106 Atlantic Salmon (fresh water)		3, 4	8	1, 7, 9, 11
1110 Sandbanks slightly covered by sea water all the time		3		9, 11
1130 Estuaries	5	3		1, 7, 9, 11
1140 Mudflats and sandflats not covered at low tide	Air quality	3		9, 11
1150 *Coastal lagoons	Air quality	3		1, 9, 11
1160 Large shallow inlets and bays		3		9, 11
1170 Reefs	5	3		1, 7, 9, 11
1220 Perennial vegetation of stony banks	Air quality	3		1, 9, 11
1310 Salicornia and other annuals colonizing mud & sand		3		1, 9, 11
1330 Atlantic salt meadows		3		1, 9, 11
1410 Mediterranean salt meadows		3		1, 9, 11
1349 Bottlenose Dolphin		3, 4, 6, 13	8	1, 7, 9, 11
1355 Otter		2, 3, 4, 6, 13, 14		1, 9, 11
3260 Water courses of plain to montane levels	No mechanism			
6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils				
91E0 *Alluvial forests				

1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 1029 Freshwater Pearl Mussel				
River Shannon and River Fergus Estuaries SPA				
All SCI birds		2, 3	12	1, 9, 11
Wetland		3		9, 11
Cormorant		4, 6, 13, 14		
Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA				
A082 Hen Harrier	Air quality impact on supporting habitats			
Moanveanlagh Bog SAC				
Active raised bogs, Degraded raised bogs still capable of natural regeneration, Depressions on peat substrates of Rhynchosporion	Air quality impact on habitats			
Tullaher Lough and Bog cSAC				
Active raised bogs, Degraded raised bogs still capable of natural regeneration, Transition mires and quaking bogs, D Depressions on peat substrates of Rhynchosporion	Air quality impact on habitats			

12.4. Stage II - Natura Impact Statement

12.4.1. Introduction

The application is accompanied by an NIS which examines and assesses potential adverse effects on the Conservation features of Lower River Shannon cSAC (Site code 002165) and River Shannon and River Fergus Estuaries SPA (Site code 004077) identified above. In addition, notwithstanding the findings of the applicant's screening statement, I have concluded that the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (code: 004161), Moanveanlagh Bog cSAC (Code 002351) and Tullaher Lough and Bog cSAC (code: 002343) should be brought forward to Stage II assessment.

Studies, surveys and consultations informing the NIS include the following:

- Desk top studies.
- Habitat Surveys.
- Otter surveys.
- Breeding Bird surveys
- Estuarine Bird Surveys.
- Aquatic Survey of freshwater stream / macro-invertebrate survey.
- Intertidal and subtidal marine habitat surveys
- Marine mammal monitoring.
- Underwater Noise modelling.
- Impact assessment of potential acoustic effects on marine mammals and fish.
- Hydrodynamic and Dispersion modelling.

The NIS concludes that, following a comprehensive evaluation of the potential direct, indirect and cumulative impacts on the conservation features in light of their conservation objectives, and subject to implementation of the recommended mitigation measures, the construction and operation of the proposed development will not have an adverse effect on the River Shannon and River Fergus Estuaries SPA or the Lower River Shannon cSAC.

Further information was sought from the applicants in relation to a number of matters and a response was received on 18/08/2022. I have reviewed the AA Screening Statement and NIS, the EIAR and the supporting documentation, the applicant's

further information response and the submissions received on the case. I am satisfied that there is adequate information available in respect of baseline conditions, and to clearly identify potential adverse impacts on European sites. Details of mitigation measures are set out in Section 3.6 of the NIS. Mitigation will be manged by the appointed contractor and will be incorporated into a finalised site-specific construction environmental management plan (CEMP).

I am satisfied that the information is sufficient to allow for a complete assessment of the proposed development in view of the requirements of appropriate assessment, and that precise and definitive findings can be reached with regard to the implications of the project on European Sites.

12.4.2. Appropriate Assessment of the implications of the proposed development on each European site

The following is an objective assessment of the implications of the project for the relevant conservation objectives of the European sites, based on the best available knowledge. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are examined and assessed.

I have had regard to the following guidance:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service. (2009).
- Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC (2002)
- Guidelines on the implementation of the Birds and Habitats Directives in Estuaries and coastal zones EC (2011)
- Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC (2018).

12.4.3. Relevant European sites:

The following sites are subject to Stage II Appropriate Assessment.

- Lower River Shannon cSAC (Site code 002165)
- River Shannon and River Fergus Estuaries SPA (Site code 004077)
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (code 004161).
- Moanveanlagh Bog cSAC (Code 002351).
- Tullaher Lough and Bog cSAC (code 002343).

A description of these sites and their Conservation Objectives and Qualifying Interests are set out in the NIS and are summarised above. I have also examined the Natura 2000 data forms as relevant and relevant Conservation Objectives Supporting Documents for these sites available through the NPWS and European websites (www.npws.ie and https://natura2000.eea.europa.eu).

The main mechanisms by which the proposed development could adversely affect the conservation objectives of European sites are identified in the NIS as follows:

1. Release of pollutants during construction
2. Land-based construction noise and vibration disturbance
3. Release of spoil during piling
4. Underwater noise
5. Seabed habitat loss
6. Vessel physical disturbance and collision injury
7. Discharge of treated cooled seawater
8. Entrainment and impingement of fauna by the FRSU seawater system
9. Discharge of Wastewater and Power Plant Process Heated Water Effluent
10. Introduction of invasive species
11. Accidental large-scale oil or LNG spill
12. Collision with site infrastructure
13. Barrier to connectivity
14. Reduction in prey biomass

I refer also to comments above in relation to potential operational air quality impacts on European Sites, which would constitute an additional impact mechanism. I consider that together, these mechanisms reasonably and

comprehensively describe the potential impacts on European Sites arising from the proposed development.

12.4.4. Receiving Environment

Lower River Shannon cSAC

Marine/ Coastal Annex I Habitats: Two habitat types are directly impacted by the proposed development – Estuaries (1130) and Reefs (1170), which comprise extensive areas within the overall cSAC. The intertidal habitats encountered during site investigations are described as typical of cobbly rocky shores in Ireland, while subtidal fauna was noted to be dominated by species typical of fine sandy habitats. No rare, protected or unusual species were observed. All observed species are identified as typical of this area of the cSAC and all sites examined were described as either undisturbed or slightly disturbed.

Annex II Species: Two critical habitat areas for Bottlenose Dolphin are identified within the estuary through which at least part of the resident population migrates throughout the year, including an area off Moneypoint, Tarbert and Ardmore Point. While the adjoining waters are regularly used by the dolphin passing through the area, they rarely stop and socialize or forage there. Use of this area is therefore described as more likely a transition corridor to move between the outer and inner estuary.

There are no spawning sites for Atlantic Salmon at the project area; however, adult fish will pass the site when travelling up the river to spawn or on return to the sea or as smolts on their first migration to the sea. There is potential that Sea Lamprey, River Lamprey and Brook Lamprey may pass in close proximity to the proposed development, notwithstanding that Brook lamprey are a freshwater species.

Activity recorded in otter surveys in 2007, 2011-2012 and 2018-2021 was concentrated outside the western boundary of the site, along the Ralappane Stream and Shannon Estuary. While a holt/resting area was recorded to the west of the Ralappane Stream in 2007, no resting areas or natal holts were recorded within the development site boundary or the study area.

River Shannon and River Fergus SPA

The application provides the results of winter bird surveys undertaken in respect of the subject development in 2018-2021 and summer bird surveys undertaken in 2021, with further surveys undertaken 2021-2022. The numbers of birds recorded were relatively low and no species were recorded in nationally important numbers. Regard was also had to the results of previous surveys carried out on these lands in 2006 / 2007, 2011/2012 and 2018/2019. With the exception of black-headed gull, bird numbers recorded foraging in the vicinity of jetty were low, reflecting the lack of suitable intertidal foraging habitat in this area. Very small numbers of conservation feature bird species were recorded within 500m of the jetty site during winter and summer bird counts. Curlew were recorded foraging on wet grassland habitat west of the subject site and along the northern shoreline, however, the application reports that no terrestrial foraging conservation feature bird species were recorded within the development site boundary.

The conclusions of the applicant's bird surveys are generally supported by the findings of detailed independent surveys of the overall Lower Shannon SPA undertaken in 2017/2018 by MKO consultants on behalf of Clare Co. Co,. under the auspices of the SIFP[5]. The results of these surveys indicate that across all of the 87 no. sub-sites surveyed, species richness and total waterbird numbers per count were amongst the lowest in the subsite overlapping with the subject site (sub-site 0N010). Areas recording the highest species richness included the Ballylongford Bay area to the west of the project site.

Breeding bird surveys were carried out in 2019 and 2020. No signs of breeding cormorant were recorded at the development site and no cormorant roosts or breeding sites were recorded in this part of the Estuary. The numbers foraging in the vicinity of the jetty site were low.

Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA:
The conservation objective for the SPA is to restore the favourable conservation condition of hen harrier. The proposed development site is at a remove from the SPA (10km+/-) and does not provide suitable ex-situ nesting or foraging habitat for hen

[5] MKO, (2019). Waterfowl numbers, usage and distribution on the River Shannon and River Fergus Estuaries - Final Survey Report. 170160 – F – Final Survey Report – 2019.01.30. 170160 – F – Final Survey Report – 2019.01.30.

harrier. Operational air emissions could impact on heath and bog habitats supporting hen harrier, with potential indirect impacts on the conservation objectives of the SAC

Moanveanlagh Bog cSAC: The SAC is located at a remove from the proposed development (13km south) and no direct impacts on habitats for which it is designated are likely. Air emissions comprise a potential indirect impact on the conservation objectives of the SAC in respect of active raised bog.

Tullaher Lough and Bog cSAC: The cSAC is located approx. 14.0km northwest of the proposed development with no likely direct on impacts for which it is designated, including active raised bog. Air emissions comprise a potential indirect impact on the conservation objectives of the SAC in respect of active raised bog.

12.4.5. Impact Prediction

Section 3.4 of the NIS considers each Impact Mechanism and potential impacts on relevant conservation features, in respect of which I note the following:

Impact Mechanism No. 1. Release of pollutants / sediment during construction
Any effect of increased turbidity or localised sediment deposition will be short-term due to rapid dispersion by local currents. Accidental release / spillage of chemical pollutants could potentially contaminate seabed sediments, inhibiting recolonisation of the area. Uncontrolled hydrocarbon and chemicals spills can give rise to tainting of fish or, fish / invertebrate kills. Subject to best construction practice and identified mitigation and monitoring measures, including adherence to the Outline Construction Environmental Management Plan, the uncontrolled release of sediment / pollutants during construction is unlikely. Modelling indicates that the likely depth of any sediment deposition would not be significant. Measures include the containment and clean-up of spillages. Remediation will be carried out in the unlikely event of pollution of the marine environment. Significant effects for local benthic habitats and fauna are not likely.

Conclusion:	Subject to implementation of identified mitigation, there will be no adverse effects on the integrity of European sites.

Impact Mechanism No. 2. Land-based noise, light and vibration disturbance

Blasting locations are at a remove from areas used by conservation feature birds and otter, and significant noise will dissipate quickly outside the immediate works area. Blast frequency and vibration emissions will be limited. Given the temporary nature of the activity and the distribution of conservation feature species in the vicinity, significant impacts are not predicted.

Very small numbers of conservation feature birds were recorded foraging along the shoreline within 500m of the jetty. Peak construction noise levels will attenuate quickly outside the piling works area.

Noise levels in excess of disturbance thresholds will be confined to a small area in the immediate vicinity of the jetty. Visual disturbance of wading birds will be confined to within c.300m of the jetty works and impacts in this area will not be significant. This finding is consistent with published guidance in this regard[6], having regard to the observed species in this area, and is considered reasonable. I note also the generally low value of the intertidal area for waterbird roosting or foraging activity. While estuarine birds may temporarily avoid habitat in the immediate vicinity of construction, they will likely forage in other areas within the estuary. The temporary displacement of very small numbers of conservation feature birds would not significantly impact on overall foraging bird numbers within the estuary.

Modelling of peak operational noise indicates low to moderate levels of disturbance to which birds will become habituated. Outside subtidal/intertidal habitats in the immediate vicinity of the site, significant disturbance impacts from operational noise are not likely. Topography will screen works from shoreline habitats to the west of Knockfinglas Point where higher numbers of conservation feature birds are recorded, and noise levels will not be significant.

[6] Cutts, N., Hemingway, K. and Spencer, J. (2013). Waterbird Disturbance Mitigation Toolkit. Institute of Estuarine and Coastal Studies, University of Hull

Artificial lighting could potentially result in disruption of SCI species. Mitigation measures during construction will limit light-spill into the SPA from the jetty area. The submitted drawings identify lumen specifications for proposed external operational lighting, and light columns will be fitted with focused luminaires to avoid glare, sky glow and light spill to the estuary. Light temperatures will be reviewed to minimise the content of blue light and iIllumination will be minimised to levels required to meet national and international engineering standards.

Artificial light in intertidal habitats is identified as having potential positive impacts on nocturnal foraging by waterbirds and may reduce predation risk to roosting birds, however, given the low numbers of birds recorded in the area such effect is not likely to be significant. Increased lighting would not therefore be expected to have a significant disturbance effect on the number or distribution of birds in the SPA. Planned operational maintenance activities will be conducted predominantly during daytime and there will no lighting during construction or operation along the lower reaches of the Ralappane Stream or along the estuary shoreline to the west of the site, where otter activity was recorded.

Construction works are likely to result in temporary to short-term displacement of a small number of waterbirds. Having regard to the limited numbers of birds frequenting this area and their ability to habituate to predictable disturbance such as traffic, shipping and boats associated with the development, no significant effect from visual or noise disturbance during construction or operation is predicted. Subject to mitigation, there will be no significant adverse effects to SCI birds within the SPA from this mechanism.

Otter have been recorded using lands to the west, however, no holts/couches were recorded within 150m of the site. While otter are likely to avoid bridge works on the Ralappane Stream due to disturbance during construction, this is not likely to be a critical foraging area. Construction works will not have a significant impact on otter due to disturbance or impacts on prey availability.

Daytime construction will avoid the largely nocturnal foraging habits of otter. While there is potential for noise disturbance during jetty works, the works area is over 1km from all records of otter. Exclusion from the jetty area during construction could potentially impact on otter foraging range, however. Blasting and piling

works will be a significant distance from the areas of recorded otter activity. Short-term displacement is unlikely to significantly impact on otter due to their ability to move away from or adapt to short-term disturbance. Otter can habituate to human disturbance and have been known to make use of manmade structures, which can also create additional habitat for marine species, e.g. artificial reef habitat created by the jetty. Operational mitigation measures will ensure that noise levels at known areas for otter are less than 36 dB(A).	
Conclusion	Based on the above and subject to implementation of identified mitigation, there will be no adverse effects to the conservation features of the estuary or on the integrity of these Natura sites.

Impact Mechanism No. 3. Release of spoil during piling

The majority of jetty piles would be driven, with some piles (80 no.) drilled and socketed into the underlying rock. Release of spoil during drilling has the potential to increase turbidity and deposition / smothering of benthic habitats or organisms.

The use of reverse circulation drilling reduces potential for release of sediment. A hydrodynamic and dispersion modelling study shows that while plumes of spoil extend significant distances, deposition is generally limited to areas along the southern and northern coasts of the estuary, and islands to the northwest. Deposition rates will be significantly below the threshold identified by the OSPAR Commission for impacts on marine life and adverse impacts to habitats are not predicted.

While increased turbidity may result in temporary displacement of otter and cormorant, there are extensive alterative habitat areas available and there is no risk of significant effects. Given the temporary nature of the work and the action of local water currents, there is no risk of significant suspended sediments impacting on oxygen levels. Any elevated turbidity would be limited to the immediate project area, with no risk of significant effects. The estuary waters are already turbid, and diadromous fish species have evolved to deal with such conditions. Significant indirect effects to bird foraging can be excluded due to the low rate of deposition.

Conclusion	It is concluded that there will be no adverse effects to the conservation features species arising from Impact Mechanism 3.

Impact Mechanism No. 4. Underwater noise

An ecological assessment of noise during the construction and operational phases of the project considered different scenarios/project activities at various positions:

(1) a stationary FSRU emitting hull-radiated sound continuously, including noise from seawater cooling pumps,
(2) an FSRU with an offloading LNGC alongside and one idling tug,
(3) impact pile driving,
(4) vibratory pile driving with support vessels,
(5) socket drilling with support vessels,
(6) blasting,
(7) an approaching LNGC assisted by four transiting tugs at a location 1.15k0m NW of the terminal, along with the FSRU at the marine terminal; and
(8) the FSRU together with a berthing LNGC and four sailing tugs at the terminal, together with a general cargo ship in the middle of the estuary and a ship moored at Moneypoint.

Modelling identifies two events of potential exposure of Bottlenose Dolphin to impact piling. No permanent auditory injury (Permanent Threshold Shift (PTS)), or other injuries would be expected, however, because of the short distance (94 m) from the works area to the threshold criteria and the requirement to remain within that limited area for 60min of the piling activity, and subject to monitoring and mitigation in line with NPWS 2014 Guidance. Neither vibratory piling nor drilling were reported as exceeding the threshold criteria for PTS or TTS (Temporary Threshold Shift) for dolphins. No significant temporary impacts are predicted.

Although PTS was modelled to be a possibility relatively far from impact pile driving (up to 3163 m) for harbour porpoise, these cetaceans rarely occur within the Shannon Estuary and are not a qualifying interest of the site.

During operations, modelling indicates that individuals would have to remain within the predicted threshold distances for the entire duration of the activity, in order to

experience TTS or PTS, or for at least 24 hrs if the activity lasts longer than a day. In addition, the modelled operational scenarios often involve multiple sources in different locations and the distances calculated are therefore not continuous. Combined with the highly mobile nature of dolphins, it is described as very unlikely that any marine mammals will experience PTS or even TTS from the planned activities.

In terms of disturbance of bottlenose dolphins (or other marine mammals), the assessments note that there are likely to be very few daily instances of disturbance during either construction or operational activities. Distances to disturbance thresholds would be <140m for all construction and most operational activities, and strong impulsive sounds from impact pile driving would occur over relatively short periods (1 hr / day for each pile, or 4% of the time). Temporary avoidance of the area at these distances is not likely to have significant impacts.

The two operational scenarios with disturbance threshold distances of almost 1 km, would occur for relatively short periods of time and infrequently. They are described as unlikely to substantially disrupt important marine mammal behaviours. While all individuals in the population could be exposed at some point to operational noise, the exposures are likely to have a minor effect, such as localized short-term avoidance, with no effect on the population. The study anticipates that dolphins would likely habituate to the sounds produced during operations as they have to similar existing noise and shipping traffic in the estuary.

The short duration of piling activity is unlikely to hinder fish migration. The distances within which mortality and/or mortal injuries to fish could occur are relatively small and would not impact overall fish populations. Avoidance of operational noise around the FSRU would likely be restricted to within tens of metres.

The cumulative sound scenario and approaching/departing LNGC have the largest distances to behavioural disturbance thresholds during operations, but both scenarios would occur only briefly up to 3 times per week, and only if other vessels are located within the vicinity of the project site.

The NIS therefore assesses any effects from project activities as minor, temporary, and localised to the area immediately around the terminal, with no

long-term effects on marine mammal or fish populations. I note the submission from the DAU on the conclusions of the NIS in this regard.

The zone of influence of disturbance to otter is determined as <100m from piling works. No signs of otter were recorded in this part of the estuary and no PTS or other injuries would be expected. There will be no significant impact on otter from underwater noise.

Underwater noise during piling works would be significantly below the threshold for mortality or injury in diving birds. All other activity during construction and operation will be significantly below noise thresholds. Potential disturbance exposures would be minor, such as localised short-term avoidance and there will be no effect on the population of qualifying species.

Conclusion	There will be no adverse effects on the conservation features of the Lower River Shannon cSAC or the River Shannon and River Fergus Estuaries SPA arising from Impact Mechanism 4.

Impact Mechanism No. 5. Seabed habitat loss

The proposed jetty piles will occupy approx. 163m^2 of Annex I habitats, until decommissioning. Approximately 10 piles will be installed in the Annex I habitat Reefs [1170], while approx. 193 no. will be installed in Annex I habitat Estuaries [1130]. The installation of the outfall pipe will result in the loss of approximately 90m^2 of Annex I habitat above the low water mark and 10m^2 below the low water mark. The extent of habitat loss relative the overall SAC is set out below. Note that there is an overlap in the classification of habitat types within SAC, as described in the Conservation Objectives report, which is reflected in the footprint of the outfall works.

	Annex I Habitat Estuaries [1130]	**Annex I habitats Reefs {1170]**
Piles	155-sq.m. (0.000064%)	8-sq.m. (0.000004%)
Outfall	100-sq.m. (0.000041%)	65-sq.m. (0.000030%)

These direct impacts were the subject of a request for further information. I note the submission of the DAU to the applicant's response, which refers to their original submission, that this development may be contrary to the conservation objective of Lower River Shannon SAC to maintain the stability of the area of the specified Annex I marine habitats.

The applicants describe the loss of Annex I habitats as not giving rise to significant negative impacts on the functioning or conservation status of the habitats. Furthermore, it is argued that following decommissioning, there will be recovery within months or a few years and that the impacts are therefore "transient" effects that can be made good rather than permanent adverse effects on site integrity.

Based on the evidence presented, I do not consider that the proposed development, occurring within this dynamic environment, will give rise to an adverse effect on the integrity of the Lower River Shannon Estuary cSAC as the loss of this very small amount of benthic habitat would not adversely impact on the ecological structure or function of the site or of the habitats and community complexes therein.

Having examined the information and data provided I am satisfied that the very minor loss of habitat along the periphery of River Shannon and River Fergus Estuaries SPA boundary will not affect the overall site integrity due to the very small area of habitat affected and the low-quality of habitat for SCI birds, which is reflected in the low numbers of birds recorded utilising this area of the estuary.

I refer to the more detailed discussion of this item in section 12.5.1 below in respect of these conclusions.

Conclusion	The loss of Annex I habitats 1130 Estuaries and 1170 Reefs, arising from the development will not give rise to negative impacts to the functioning of the habitats, and will not result in adverse effects on the integrity of the cSAC or the SPA.

Impact Mechanism No. 6. Vessel physical disturbance and collision injury

Shannon Foynes is identified as national Tier 1 port. The proposed development will not give rise to a significant increase in shipping activity in the estuary over

existing levels. Operational vessels will travel at low speeds, with significant alternative water available, and collision with common bottlenose dolphin, otter or cormorant is therefore very unlikely. No significant increase in the risk to common bottlenose dolphin, otter and cormorant is likely.	
Conclusion	There will be no adverse effects to conservation features or to the integrity of European sites arising from Impact Mechanism 6.
Impact Mechanism No. 7. Discharge of treated cooled seawater	
Modelling indicates that within 200m of the FSRU discharge point the maximum reduction in ambient temperature is less than 0.5º C and that within 3km it is less than 0.1ºC. The maximum temperature reduction beyond this area is insignificant and these effects are in line with normal EPA limits. 1.5km east and west of the discharge point the predicted maximum residual chlorine concentration is less than 0.01mg/l. Maximum chlorine concentration above 0.1mg/l occurs only within 20m of the discharge point and for a short period. No significant effects on the qualifying interests of the SAC or SPA are likely from such changes.	
Conclusion	Given the insignificant relative change in water temperature, and in chlorine levels, there will be no adverse effects to habitats, marine mammals or fish species, or integrity of European sites arising from Impact Mechanism 7.
Impact Mechanism No. 8. Entrainment and impingement of fauna by the FRSU seawater system	
The approach velocity at the seawater intakes will range from 0.15m/sec to a max of 0.3 m/s (c. 1% of the time), running parallel to the current. These are lower than current speeds of waters in the estuary of 0.50 - 75m/sec at the intake location, and will allow mobile marine biota to swim away. The screen mesh size will be approx. 5 mm x 5 mm and the intake system will follow BAT. Larvae of salmon, sea lamprey or brook lamprey will not be present in the project area and no risk of	

entrainment or impingement arises. The impact of the intake is considered to be low given the extent of the estuary and volumes of water therein, and the small numbers of fish and biota which might be impacted.	
Conclusion	There will be no adverse effects to conservation features or on the integrity of European sites arising from Impact Mechanism 8.

Impact Mechanism No. 9. Discharge of Wastewater and Power Plant Process Heated Water Effluent

Process water and wastewater effluent will be continuously monitored for compliance with the IE licence limits, including pH, before discharge to the estuary. Modelling shows a very local rise in temperature at the outfall site having a maximum increase of <1^{o} C and mean increase of 0.069^{o} C. The maximum temperature increase reduces within 100m of the discharge point to +0.171^{o} C which is an insignificant impact.

The predicted E.coli concentration plume shows no impact on Ballylongford and Glencloosagh Bays where shellfish activities are located. All of the modelled water quality parameters, including BOD, Ammonia and Phosphorus, satisfy the limits set out in the surface water regulations and will not impact the water quality status of the receiving waters.

No significant effects on water quality of qualifying interests of European sites is likely from such discharges.

Conclusion	There will be no adverse effect on the integrity of European sites from Impact Mechanism 9.

Impact Mechanism No. 10. Introduction of invasive species

No seventh schedule invasive species or High or Medium Impact invasive species were recorded within the site. Suitable control / mitigation measures to manage the introduction or spread of invasive species are identified. Established protocols to manage the use of ballast water and the risk of introduction and spread of marine invasive species are provided.

Conclusion	Strict adherence to protocols will ensure the risk of impact from the introduction and spread of marine invasive species is managed and adverse effects on the integrity of the site arising from Impact Mechanism 10 are not likely.

Impact Mechanism No. 11. Accidental large-scale oil or LNG spill

The development will be subject to HSA requirements as a COMAH site.

An Oil and Hazardous and Noxious Substances (HNS) Spill Plan Development Framework has been prepared. This provides for the immediate containment and clean-up of small-scale accidental spillages, and remediation measures in the unlikely event of pollution of the marine environment. If released to its surroundings, LNG vaporises rapidly to form natural gas, leaving no residue. Mitigation should include adherence to EPA guidance on the storage and transfer of materials for scheduled activities.

The risk of major accident is very low and does not pose a significant risk to habitats or species. As LNG and natural gas are not toxic to the environment, hazards arising are associated with exposure to low temperatures or fires. Environmental receptors at risk are flora and fauna.

While harm to birds close to the development may be possible in the event of a fire or explosive event, surveys identify no significant populations of bird species in the vicinity of the site. The preliminary MATTE assessment accompanying the application concludes that no significant risk of major accidents to the environment is likely subject to identified mitigation measures. Development should adhere to EPA guidance on firewater retention.

Conclusion	Adverse effects on the integrity of European sites from Impact Mechanism 11 are not likely.

Impact Mechanism No. 12. Collision with site infrastructure

Lighting of structures at night potentially increases the risk of bird collision. Mitigation measures during construction include reduced on-site lighting and

design to reduce glare, sky glow and light spill. The occurrence of jetty construction works 24 hours a day, will likely deter birds flying toward this area and no significant construction impacts are predicted.

Operational lighting will be at the minimal levels to meet national and international engineering standards. The risk of diverting nocturnal migrants is described as not significant and no significant impact will occur. Similar structures along the southern shores of the estuary do not appear to pose any current collision risk during day or night and it is stated that no records of night-time or poor weather bird collision with such structures have been found.

There were no commuting routes for whooper swan or light-bellied brent geese recorded along this stretch of coastline and observed swan flights were above the height of the platform. Cormorants are known to effectively forage and breed in the vicinity of busy ports throughout Ireland and their risk of collision with the jetty structure is not significant.

Given the low risk of collision, the lattice design of the jetty and location outside commuting routes for large SCI birds, and the lighting design measures, no significant risk has been identified and no impact on SCI birds is predicted.

Conclusion	There will be no adverse effects to the conservation features of the SPA from Impact Mechanism 12.

Impact Mechanism No. 13: Barrier to Connectivity

The jetty design will not create a physical barrier to otter movement along the shoreline. Given otter's ability to adapt to disturbance they will continue to use the habitats in the vicinity of the jetty during operations. No significant physical or disturbance barriers to connectivity for otter have been identified.

There are no breeding cormorants in the vicinity of the site. Some displacement could take place during construction or operation, however, very small numbers were recorded in the vicinity of the jetty. Cormorant are more tolerant to disturbance than other diving birds and are flexible with respect to habitat use. They are likely to forage in other areas within the SPA during construction but will

be likely to continue to use the site during operations. No significant barriers to connectivity for cormorant will arise.	
Conclusion	Based on the tolerance of cormorant and otter to anthropogenic disturbance, no significant effects from disturbance, noise or collision are identified. No adverse effects to the conservation features of the cSAC or SPA are.
Impact Mechanism No. 14. Loss of prey biomass	
Loss of prey biomass for SCI birds and otter during construction and operation could arise. Fish mortality due to discharges, pollutants and sediment plumes, underwater noise or entrainment and impingement are predicted to be slight and localised, however. No significant loss of otter foraging habitat will arise. A small loss of prey for otter may arise, however, the area of suitable habitat is limited and numbers of prey / common frog at the site are small. There are extensive alternative habitats in the surrounding area.	
Conclusion	There will be no adverse effects on the conservation features of the Lower River Shannon cSAC or the River Shannon and River Fergus Estuaries SPAarising from Impact Mechanism 4.

Additional Impact Mechanism: Airborne Pollution during the Operational Phase
Moanveanlagh Bog SAC and Tullaher Lough and Bog cSAC: The Conservation Objectives for Active Raised Bog for both Moanveanlagh Bog SAC and Tullaher Lough and Bog cSAC, identify an air quality target of N deposition not exceeding 5kg N/ha/yr. The objectives note that a change in air quality can result from fertiliser drift; adjacent quarry activities; or other atmospheric inputs. The supporting documents report that N deposition for the area around Tullaher Lough and Bog was approximately 9.5kg N/ha/yr in 2014, while a figure in the vicinity of Moanveanlagh Bog of 11kg N/ha/yr in 2014 is

reported. These values are lower than the national background levels cited by the applicants of 12.1kg.

At further information stage, the applicants were requested to further consider potential impacts on Natura sites in terms of impacts on air quality, and in particular nitrogen deposition. On the basis of the applicant's response, I note the following:

- There is a wide zone of contribution to current deposition rates at the European Sites, including surrounding agricultural lands. Background concentrations are already significantly in excess of the target values.
- Modelling of emissions is based on a conservative assumption of continuous 24/7 operation of the proposed 600MW CCGT plant. Modelling also assumes that Tarbert and Moneypoint are operating at their emission licence limits, which has not been the case for some years.
- Projected N deposition rates from the proposed development are less than 1% (0.2 – 0.8%) of the target values for N at these sites which impact, based on UK EA guidance, is regarded as not significant.
- Deposition from the proposed development would constitute 0.09 – 0.3% of the reported 2014 background values for these sites.
- Cumulative impacts with Tarbert and Moneypoint plants would exceed 1% of the target value for Tullaher Lough and Bog SAC, based on conservative modelling, however the contribution of the proposed development to such cumulative levels is not significant.
- Moneypoint and Tarbert are programmed to cease burning fossil fuels in coming years and the identified cumulative contribution from these sources is greater than the modelled impact of the proposed development. The residual cumulative contribution in terms of N deposition would not therefore be significant.

Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA:

I note that attributes and targets associated with the conservation objectives of the SPA include the extent and condition of heath and bog and associated habitat. Air

emissions could impact on such habitats which support hen harrier. The conservation objectives do not identify any quantitative targets for the quality of bog habitats in the SPA, and air quality (N deposition), is not explicitly referenced. A conservative critical load of 5kg/N/ha/yr could be considered appropriate for such habitats, although the applicants model assumes a critical load value of 10-20kg/N/ha/yr.

Modelling reported in the EIAR indicates that N deposition arising from the proposed development in the SPA will be <0.1kg/N/ha/yr, which is not a significant contribution (i.e. <1%). A national baseline level of 12kg/ha/yr is assumed which exceeds the critical load value of 5kg/N/ha/yr, however, the contribution of the proposed development to such exceedance is insignificant.

Modelling indicates that the cumulative environmental concentration (N), with Tarbert and Moneypoint, would be >1% of the 5kg/N/ha/yr critical load, however, the background values are the limiting factor in this regard. The contribution of the proposed development to predicted cumulative N concentrations are not significant and with the cessation of use of fossil fuels in Moneypoint and Tarbert the residual cumulative effect would not be significant.

These conclusions are consistent with those reached in respect of emergency electricity generation development at Tarbert under ABP-315838-23 with regard to potential effects on habitats within the SPA.

Lower River Shannon cSAC

Modelling of emissions (NOx, SO2, N deposition and Acid deposition) includes the assessment of sensitive habitats within the SAC, including perennial vegetation on stony banks habitat. No exceedances of the critical load or AQS for these parameters was identified.

Given the absence of specific data for the area, the study assumes baseline levels for acid deposition. The relevant critical load / AQ standard is not exceeded at any modelled receptor and the contribution of the proposed development to cumulative effects is insignificant. Similar results are shown in respect of N deposition on habitats within the SAC.

Conclusion	There will be no adverse effects on qualifying interests of European sites, or supporting habitats, arising from airborne pollution.

12.4.6. Mitigation Measures

General Construction

- Implementation of the CEMP and standard construction best practice - including measures to ensure no significant release of pollutants, sediment laden water, runoff chemicals or other waste material pollution into the nearby habitats, watercourses and waterbodies.
- Supervision of construction operations.
- Storage and availability of oil-spill accident response equipment.
- Import of clean backfill material, checked for invasive species.
- Stockpile management to avoid the release of sediment and use of clean rock / aggregate material.

Underwater Noise mitigation:

- Adherence to 2014 *Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters*.
- No simultaneous impact piling activities.
- Continuity between piling activities.
- Additional seasonal observation for bottlenose dolphin (ensuring the full width of the estuary is observed in August).
- Application of standard mitigation measures during land-based blasting, with only single blasts to take place each day.
- Continuation of the marine mammal monitoring programme by IWDG for validation of predictions.

Lighting Mitigation

- Design and siting of lighting to minimise spillage and minimise blue light content.
- Provision of minimum luminosity necessary for safety and security purposes.

Land Based Noise Mitigation

- Fixed and semi-fixed ancillary plant located away from sensitive receptors.
- Selection of plant on basis of noise emissions and regular maintenance.
- All noise generating construction plant shall be shut down when not in use.
- Management and siting of material loading and unloading activities.
- Timing of activities to less sensitive periods.
- Design of site operations and vehicle routes.
- Staff induction and individual behaviour.
- Application of standard mitigation measures during land-based blasting, limiting the Maximum Instantaneous Charge (MIC) in accordance with BS6472.
- Only single blasts will take place in each day.
- Co-ordination of traffic from this and other concurrent developments (i.e. pipeline and grid connections).
- A regime of noise and vibration monitoring, with reporting to relevant stakeholders in an appropriate manner and frequency.
- Adherence to operational noise limits, including the need to address distinctive acoustic characteristics and/or adjust the noise limits accordingly.
- Long term operational monitoring and adherence to EPA IE license requirements.

Invasive Species

- Pre-development invasive species surveys and application of bio-security measures during construction.
- Ballast water will be managed in accordance with legislative requirements and the requirements of the Shannon Foynes Port Company operating procedures.

Pollution Mitigation and Response Protocols

- Implementation of the Oil and HNS Contingency Plans
- Membership of the Shannon Estuary Anti-Pollution Team (SEAPT)

12.4.7. Potential for Adverse Effects on Site Integrity

In respect of the Lower River Shannon Estuary cSAC, the most significant habitat impacts arise in relation to the loss of Estuary [1130] and Reefs [1170) habitats due to construction of the jetty and sw outfall. The footprint of development is very limited and it is not considered that the loss of a very small area of habitat will affect

the overall structure or functioning of these dynamic habitats, or of the community complexes therein. Other effects are localised and significant effects on the qualifying features of the cSAC are not anticipated. With regard to Common Bottlenose Dolphin, construction activity has the potential to impact negatively thereon, however, subject to implementation of the mitigation and monitoring measures outlined in Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (DAHG 2014), adverse effects on this qualifying species are not anticipated.

The assessment of the effects of sediment and water discharge plumes on Annex I habitats identified no significant impacts from changes in water quality and no adverse impacts on habitats or species of the SAC or wetland habitat within the River Shannon and River Fergus Estuaries SPA.

Given the distribution of breeding colonies within the SPA and the absence of barriers to connectivity, no adverse effects on the characteristics of the SPA will occur. SCI species do not occur in high numbers in the vicinity of the development site. In the absence of mitigation there may be potential effects on small numbers of birds, however, there is no risk of significant adverse effects at the population level or impacts on the conservation objectives of the SPA. Significant adverse effects on the SPA are not predicted.

Modelling of operational airborne emissions indicates that there will be no adverse effects on the conservation objectives of European sites, or on habitats supporting the qualifying interests of such sites.

Summary of Appropriate Assessment of implications of the proposed development on the integrity of European Sites alone and in combination with other plans and projects in view of the sites Conservation Objectives.

Lower River Shannon Estuary cSAC.				
Summary of appropriate assessment				
Conservation objective	**Targets and attributes**	**Potential adverse effects**	**Potential In-combination effects**	**Can adverse effects on integrity be excluded?**
Estuaries [1130]	Habitat Area, Community distribution	Direct loss of habitat area. The area loss is de minimis relative to the habitat area within the cSAC and will not have an adverse effect on site integrity (See further discussion below). Disturbance during construction activity will be temporary and not significant. Modelling of air emissions and deposition indicates that the effects of the proposed development will be minor and localised, and will not have an adverse effect on site integrity. Where cable activities occur concurrently there is potential for sediment plumes to overlap. The combined sediment deposition depths are not sufficient to impact on habitats and faunal communities. No significant from airborne pollution likely.	Cross-Shannon 400kV cable project. Operational airborne emissions with Moneypoint and Tarbert	Yes. The loss of a very small area of habitat will not affect the overall structure or functioning of this habitat.
Reef [1170]	Habitat Distribution Habitat Area		Cross-Shannon 400kV cable project	

	Community distribution			
Bottlenose Dolphin	Access to suitable habitat Habitat use: Critical areas Disturbance	Noise disturbance and associated impacts could constitute a negative effect on site integrity. Subject to identified mitigation measures, adverse effects will be avoided. Discharges / emissions during construction and operation have potential to impact on water quality and prey abundance. Subject to identified mitigation, impacts will be minor and localised, and will not have an adverse effect on site integrity. No significant increase in shipping activities is likely.	Other port / shipping movements Cross-Shannon 400kV cable project	Yes. The conclusions regarding the absence of long-term effects are reasonable.
1095 Sea Lamprey 1096 Brook Lamprey 1099 River Lamprey	Distribution Population. structure of juveniles. Extent and distribution of spawning habitat. Availability of juvenile habitat	Discharges / emissions during construction and operation have potential to impact on water quality. Subject to identified mitigation, impacts will be minor and localised, and will not have an adverse effect on site integrity. The impact of construction noise will be localised with no adverse effects on the conservation feature. As larvae will not be present in the project area, no risk of impingement or entrainment arises.	No	Yes. The conclusions regarding the absence of long-term effects are reasonable.
1106 Atlantic Salmon (fresh water)	Distribution Adult spawning fish Fry abundance			

	Smolt abundance Redds no. and distribution. Water quality			
1355 Otter	Distribution Habitat extent. Couching sites and holts. Fish biomass. Barriers to connectivity.	Temporary disturbance and displacement during construction along foraging habitats. Minor loss of foraging habitat of lower importance will not have adverse effects and there is no likely significant loss of prey. No physical barriers to movement and disturbance of nocturnal movements at operation stage not likely. No adverse effects on the conservation feature are anticipated.	No	Yes. The conclusions regarding the absence of long-term effects are reasonable.
1110 Sandbanks which are slightly covered all the time	Distribution Area Community Distribution	Discharges / emissions during construction and operation have potential to impact on water quality. Subject to identified mitigation, impacts will be minor and localised, and will not have an adverse effect on site integrity. On release, LNG vaporises rapidly and is not toxic. The risk of major accident is very low and does not pose a significant risk to habitats or species within or in the vicinity of the site. Remediation and mitigation of any spillage or MATTE event involving contaminating or polluting substances will ensure no adverse effects on site integrity.	Cross-Shannon 400kV cable project Operational airborne emissions with Moneypoint and Tarbert, including emergency	Yes. The conclusions regarding the absence of long-term effects are reasonable.
1140 Mudflats and sandflats not covered at low tide	Area Community Distribution			
1150 Coastal Lagoons	Area Distribution Salinity regime			

	Hydrological regime Barrier: connection to sea. Water quality Depth of macrophyte colonisation Typical plant and animal species Negative indicator species	Modelling indicates that sediment deposition is not likely to have adverse effects. Where cable activities occur concurrently, there is potential for sediment plumes to overlap. The combined sediment deposition depths are not sufficient to impact on habitats and faunal communities. No significant effects from airborne pollution are likely.	generation development at Tarbert	
1160 Large shallow inlets and bays	Area Community Distribution			
1220 Perennial vegetation of stony banks	Area. Distribution. Physical structure: functionality and sediment supply			

	Vegetation structure: zonation. Vegetation composition: - typical species & sub-communities - negative indicator species			
1310 Salicornia and annuals colonising mud & sand	Area Distribution Physical Structure Vegetation Structure Vegetation Composition			
1330 Atlantic salt meadows 1410 Mediterranean salt meadows	Area Distribution Physical Structure			

	Vegetation Structure Vegetation Composition			
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of the European Sites in view of the sites conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.				
91E0 *Alluvial forests, 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soil, 3260 Water courses of plain to montane levels, 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts, 1029 Freshwater Pearl Mussel were screened out.				

River Shannon and River Fergus SPA				
Summary of appropriate assessment				
QI	**Conservation Objective**	**Potential adverse effects**	**In-combination effects**	**Exclude adverse effects on integrity?**
SCI Bird Species (all)	Maintain the favourable conservation condition.	Potential noise and visual disturbance and displacement during construction, however, generally small number of birds occur in the vicinity of the works and works are relatively short-term in nature. Operational noise emissions may result in limited disturbance but some habituation to noise is also likely.	Cross Shannon 400 kV Cable Project.	Yes Low number of SCI birds use the area in the vicinity of the

	Attributes and targets broadly relate to 1. characteristics of the SPA site 2. characteristics of the SCI populations	Underwater noise would be significantly below the threshold for mortality or injury in diving birds There is potential for lighting disturbance during construction and operations. Design will minimise extent and intensity of impacts. Discharges / emissions during construction and operation have potential to impact on water quality and prey biomass. Subject to identified mitigation, impacts will be minor and localised, including impacts on prey biomass, and will not have an adverse effect on site integrity. Where cable activities occur concurrently there is potential for sediment plumes to overlap. The combined sediment deposition depths are not sufficient to impact on habitats and faunal communities or on prey biomass; consequently in-combination effect will not occur. Low risk of accident or fire events. Pollution and spillage response plans, including containment and remediation measures, and adherence to HSA requirements, address potential impacts. Mitigation measures identified in the Navigation Risk Assessment address potential events arising from vessel collision. Potential for bird collision with vessels and infrastructure, however, recorded bird numbers are low in this location and no flight paths	Other shipping activity in the estuary	site. No significant change in numbers of birds or distribution in the SPA is likely. No doubt regarding the effectiveness or implementation of mitigation measures proposed to prevent indirect effects

		for relevant species were recorded crossing the site. No adverse impacts are predicted.		
Wetland and waterbirds	Maintain the favourable conservation condition	No significant effects from airborne pollution are likely.	Operational airborne emissions with Moneypoint and Tarbert, including emergency generation development at Tarbert	
Overall conclusion: Integrity test Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of the European Site in view of the site's conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.				

Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA	
Summary of appropriate assessment	

QI	Conservation Objective	Potential adverse effects	In-combination effects	Exclude adverse effects on integrity?
A082 Hen Harrier	Maintain or restore the favourable conservation condition.	No significant effects on the conservation objectives of the SPA arising from airborne pollution are likely, based on modelling of emissions.	Operational emissions at Moneypoint and Tarbert, including emergency generation development at Tarbert.	yes

Overall conclusion: Integrity test

The construction and operation of this proposed development will not adversely affect the integrity of the European Site in view of the site's conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.

Moanveanlagh Bog SAC	
Summary of appropriate assessment	

QI	Conservation Objective	Potential adverse effects	In-combination effects	Exclude adverse effects on integrity?
Active raised bogs, Degraded raised bogs still capable of natural regeneration, Depressions on peat substrates of Rhynchosporion	To restore favourable conservation condition, defined by attributes and targets including: Air quality: nitrogen deposition	No significant effects on the conservation objectives of the SPA arising from airborne pollution are likely based on the modelled emission.	Operational emissions at Moneypoint and Tarbert, including emergency generation development at Tarbert.	Yes
Overall conclusion: Integrity test The construction and operation of this proposed development will not adversely affect the integrity of the European Site in view of the site's conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.				

Tullaher Lough and Bog cSAC	
Summary of appropriate assessment	

QI	Conservation Objective	Potential adverse effects	In-combination effects	Exclude adverse effects on integrity?
Active raised bogs, Degraded raised bogs still capable of natural regeneration, Depressions on peat substrates of Rhynchosporion	Restore favourable conservation condition, defined by attributes and targets including: Air quality: nitrogen deposition	No significant effects on the conservation objectives of the SPA arising from airborne pollution are likely based on the modelled emissions.	Operational emissions at Moneypoint and Tarbert, including emergency generation development at Tarbert.	Yes
Transition mires and quaking bogs	Maintain favourable conservation condition defined by attributes and targets including Air quality: nitrogen deposition			
Overall conclusion: Integrity test The construction and operation of this proposed development will not adversely affect the integrity of the European Site in view of the site's conservation objectives. No reasonable scientific doubt remains as to the absence of such effects.				

12.5. Supplementary Discussion

Following on from the matters identified above, certain key issues that arose through my examination and assessment of the NIS and further information response are expanded upon in the text below as follows:

12.5.1. Habitat loss: Lower River Shannon Estuary cSAC.

The Lower River Shannon Estuary is an extensive and dynamic environment, comprising a complex of different habitats. The proposed development will result in the direct loss of areas of Annex I habitats, Estuaries and Reefs, which habitat types are well represented within the cSAC.

The *Conservation Objectives Supporting Document - Marine Habitats and Species*, references the dynamic nature of such habitats and environments and notes that significant continuous or ongoing anthropogenic disturbance of communities should not exceed an approximate area of 15% of the interpolated area of each community type. While this refers to ongoing activities, as opposed to new proposals, it illustrates the dynamic nature and resilience of these habitats to ongoing activities.

The dynamic nature of the environment is also reflected in the results of the subtidal surveys which note differences in substrates between 2012 and 2020, reflecting strong current speeds and mobile sediments in the area. No rare, protected or unusual species were recorded in the subtidal surveys, while subtidal fauna was dominated by species typical of fine sandy habitats.

The proposed development will lead to the permanent loss of an extremely small area of these habitats relative to the overall cSAC site. In respect of the Estuary habitat specifically, this is calculated as 250-sq.m. or 0.0000105% of the total habitat occurring within European Site. The development will lead to the loss of 73-sq.m. of reef habitat (1170), which equates to approx. 0.00000034% of the total habitat area within the cSAC. The applicant maintains that following decommissioning of the development, these habitats will become re-established at the site.

The conservation objective is to maintain the favourable conservation condition of these habitats, based on the permanent area being stable or increasing and community types being maintained in natural condition. Any permanent loss of Annex I habitat would be considered a significant effect. Reference is made in

applicant's correspondence to a review by Natural England[7] of decisions relating to how the scale of effects affecting European sites has been considered. A review of this report and the decisions cited therein indicates that scale is not the only factor in helping to determine the significance of an effect.

In this case, although the spatial extent of habitat loss is not significant there is a need to examine the qualifying features and the ecological function that would be changed or otherwise affected, or how the habitat loss would or could change the ecological structure or function of the site as a whole. In this regard, the relative importance of the area affected is influenced by its rarity, location, distribution, vulnerability to change and ecological structure.

Within the two Annex I habitats, two community types will be affected, namely Subtidal sand to mixed sediment with Nucula nucleus community complex, and Fucoid-dominated intertidal reef community complex. The extent of loss of these community types occurring within each of the affected Annex I habitats of the cSAC is very small, as described below.

Community Type **Annex I Habitat**	**Subtidal sand to mixed sediment with Nucula nucleus community complex**	**Fucoid-dominated intertidal reef community complex**
1130 Estuaries	0.000374%	0.000118%
1170 Reefs.		0.000757%

I note that these community types are not rare and occur widely within the estuary and around the coasts of the country. They occur in dynamic environments and are not highly vulnerable to change. Species identified in the applicant's subtidal faunal survey and analysis are not rare, protected or unusual, and are typical of this area of the estuary. The community type 'Subtidal sand to mixed sediment with Nucula nucleus community complex' is recorded as including species that are typically tolerant to disturbance and increased sedimentation or have lower sensitivity (including Pholoe inornata, Nucula spp, Scoloplos armiger, Nephtys cirrose, Dendrodoa grossularia, Golfingia spp). The effect of the limited extent of loss of such

[7] Small-scale effects: How the scale of effects has been considered in respect of plans and projects affecting European sites - a review of authoritative decisions. Natural England Commissioned Reports, Number 205

community types is not therefore regarded as significant or likely to affect the ecological structure or function of the SAC. In this regard, I note the response of the applicants to the request for further information and generally concur therewith.

The applicants refer to the remediation and recovery of the site following decommissioning of the terminal, however, I note that the life of the facility is >25 years. Notwithstanding reference by the applicants to a separate report from Natural England[8], in the absence of a commitment to removal and decommissioning within a specified period, I do not consider that the effects of the proposed development can be regarded as transient or temporary and thus do not consider that regard can be had to these proposals in considering the adverse effects on site integrity.

In the long-term, however, there will some offset / remediation of the changes in soft and hard benthos by the colonisation of the additional hard benthic surfaces by flora and fauna. There is also likely to be some recovery along the route of the outfall pipe due to sediment deposition, however, these mechanisms are not described or investigated in the NIS.

Impacts from platform piling will be temporary in duration and the nature of the habitats and sub-tidal fauna are such that recovery on completion of works would be expected in a relatively short period. The displacement of any macroinvertebrate in-fauna around the site during construction is regarded as a temporary moderate, local impact. During the operational phase, dispersion modelling indicates that having regard to water movements at this location, temperature and hydrochlorite concentrations will not have significant adverse impacts on the integrity of the site.

Based on the evidence presented or otherwise available, I do not consider that the proposed development, occurring within this dynamic environment, will give rise to an adverse effect on the integrity of the Lower River Shannon Estuary cSAC as the loss of this very small amount of benthic habitat would not adversely impact on the ecological structure or function of the site or of the habitats and community complexes therein.

[8] Temporary effects: How the longevity of effects has been considered in respect of plans and projects affecting European sites - a review of authoritative decisions. Natural England Commissioned Reports, Number 206

Similarly, having examined the information and data provided or otherwise available, I am satisfied that the very minor loss of habitat along the periphery of River Shannon and River Fergus Estuaries SPA will not affect the overall integrity of the site in this instance due to the very small area affected and the low-quality habitat for SPA birds at this location, which is reflected in the low numbers of birds recorded utilising this area of the estuary.

12.5.2. Disturbance of Special Conservation Interest Bird Species

The potential to cause direct disturbance and displacement effects on the Special Conservation Interest (SCI) bird species is considered in the NIS. The potential for adverse effects was excluded based on the low numbers of foraging SCI birds occurring within the vicinity of the development site and the distribution of cormorant breeding sites. The assessment concluded that there will be no barriers to connectivity giving rise to adverse effects on the characteristics of the SPA and that there is no risk of adverse population level effects in the absence of mitigation.

Factors that can adversely affect the achievement of conservation objectives include, disturbance resulting in the displacement of one or more listed waterbird species, habitat modification and activities that could modify discrete areas within the SPA causing displacement from feeding or roosting areas.

Given the predicted noise and visual disturbance likely to be generated during the construction phase and to a lesser degree during the operational phase, direct disturbance effects could arise in the vicinity of the site. Given the very low number of SCI waterbirds likely to be present within the zone of influence of the development and the low suitability of intertidal foraging habitats, the modelled noise emissions at construction and operational phases, and the likely habituation of birds that happen to utilise this area, I accept the conclusions of the NIS that there would be no significant displacement effects as a result of the proposed development.

At further information stage the applicants were requested to address potential ex-situ impacts on wintering birds, having regard to inconsistencies in the EIAR and NIS with regard to the presence of curlew foraging on the application site and adjacent lands. It was confirmed that reference to such sightings was an error and that these

recorded sightings relate to lands to the west of the subject site. No foraging curlew or other SCI species were recorded on the subject site itself.

Based on my examination of the application file, including the NIS, the submitted bird survey results and NPWS data, and the independent 2017/2018 MKO survey data, no significant effect on the number of wintering waterbirds or the range of areas used by such species will occur as result of the proposed development and there will be no adverse effect on the Special Conservation Interests waterbirds of the SPA in view of this conservation objective.

12.5.3. Indirect Effects: Potential disturbance

The estuary sees regular movement of large vessels in the current scenario. Concerns have been raised with regard to potential increased disturbance of waterbirds due to vessels moving closer to foraging / roosting sites in order to achieve the required separation from LNGC and the FSRU associated with the development.

I note that existing marine traffic passing through the estuary is controlled by Shannon Foynes Port Company and that ship movements are limited to the defined navigation channel, in deeper waters. The application refers to potential for up to 60 no. LNGC deliveries per annum, which would not constitute a significant increase over existing shipping movements in the estuary. The Marine Navigation Risk Assessment (NRA) identifies a lateral control / separation distance of 150m from LNGC's and the FSRU. Having regard to the measures proposed within the NRA, the width of the channel and the limited number of vessels previously recorded close to the proposed jetty, any displacement arising from such lateral control distance would most likely be toward deeper waters away from more favourable roosting and foraging areas, and is likely to be imperceptible. I do not consider that adverse impacts on the integrity of the cSAC or SPA would be likely to arise in this regard.

I note the submission of the Development Applications Unit with regard to the impacts of lighting on waterbirds and the applicant's further information submission. The DAU did not raise any subsequent issues with the proposed development in this regard and I consider that subject to appropriate conditions on lighting design and having regard to the low numbers of birds of conservation interest recorded in the

vicinity of the site, adverse effects arising from lighting and visual disturbance effects are not likely.

12.6. In combination effects

Other plans and projects that could act in-combination with the proposed development are identified in the NIS. This analysis is considered to be complete and robust in terms of plans and projects and no potentially significant impacts are identified taking into account any residual impacts from the proposed development.

I note also the subsequent application for emergency electricity generation development on the site of the existing Tarbert power plant under ABP-315838-23. Subject to the identified mitigation measures, no significant in-combination effects, including effects on air quality, or marine mammals, are predicted.

In respect of the 400kV cable crossing of the estuary, potential for significant in-combination effects is considered to arise where works were to occur concurrently with the proposed construction activities. Modelling indicates, however, that deposition from combined sediment plumes is not likely to give rise to adverse effects on habitats or species identified as qualifying interests / SCI's of any European Sites. Similarly, subject to application of the DAHG guidelines in respect of the impacts of noise on marine mammals, significant in-combination effects are not likely.

12.7. Appropriate Assessment Conclusions

Having carried out screening for appropriate assessment of the project, it was concluded that it would be likely to have a significant effect on the following European Sites:

- Lower River Shannon cSAC (002165)
- River Shannon and River Fergus Estuaries SPA (004077).
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (code 004161).
- Moanveanlagh Bog cSAC (Code 002351).
- Tullaher Lough and Bog cSAC (code 002343).

Consequently, an appropriate assessment was undertaken of the implications of the project on the qualifying features of those sites in light of their conservation objectives. Following such assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of those European Sites in view of their Conservation Objectives. No reasonable scientific doubt remains as to the absence of such effects.

This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including proposed mitigation and ecological monitoring measures.
- Careful consideration of the implications of the loss of small areas of benthic habitat within the estuary, which is assessed as not being significant to the overall functioning of the cSAC or SPA and will not impact on the overall integrity of these sites.
- No adverse effects to wintering or breeding Special Conservation Interest bird species of the SPA following the application of mitigation measures.
- Taking full account of all proposed mitigation measures which will ensure no adverse effects on the qualifying interests of the SAC, including Bottlenose Dolphin, Atlantic Salmon, Sea and River lamprey and Otter, their habitats or prey upon which they are dependant.
- No significant effects on the qualifying interests of European sites or supporting habitats, arising from operational airborne pollution.

13.0 Conclusions and Recommendation

The proposed development comprises a terminal for the importation of LNG, a 600MW gas fired power generation plant and associated battery storage facility and associated development.

The proposed development is aligned with local and regional planning policy and land use objectives. There is a range of energy and climate policy documents and statements which are relevant to the proposed development, and I have noted the distinction between security of gas supply and security of electricity generation in this report. I have concluded that the proposed LNG import terminal does not align with current, and indeed evolving, government policy and that a decision to grant permission for the terminal would be contrary to the current position set out in the Policy Statement on the Importation of Fracked Gas. It is noted that this statement does not constitute a s.28 guideline or s.29 policy directive.

Notwithstanding this conclusion, the proposed 600MW power generation plant is supported by national energy and climate policy which identifies a requirement for additional conventional generation capacity as a priority. This is seen in the light of the wider transition to a renewables-based generation system, notwithstanding the fossil-fuel powered nature of the plant.

Notwithstanding the conclusions with regard to energy and climate policy, the assessment of the impacts of the proposed development above has concluded that, subject to the identified mitigation measures, the overall proposed development would not have significant adverse effects on the ecology of the area or on any European Sites. While some direct loss of a small area of benthic habitat within the estuary would arise from the jetty and outfall construction, such loss is not assessed as having an adverse effect on the overall functioning of the cSAC or SPA and or on the overall integrity of these sites. It is concluded that, following the application of mitigation measures, the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of European Sites in view of their Conservation Objectives.

Having regard to the existing context of the site, which includes significant elements of energy infrastructure and marine activities, the impacts of the development on the landscape and visual amenities of the area are not regarded as unacceptable.

Significant short-term traffic movements during construction are likely, however, upgrade of the L-1010 serving the development is anticipated prior to main construction activities commencing on the site, while a final CTMP will be subject to agreement with the planning authority. Operational traffic volumes are not likely to be significant. Special development contributions in respect of the upgrade of roads serving the site have been recommended by the planning authority. In addition, I note that the planning authority have recommended the establishment of an Annual Community Contribution Scheme and the applicants have not raised any objection to such proposals.

Construction activity has the potential to impact on water quality in the estuary and in freshwater bodies adjoining the site, however, subject to the identified mitigation measures, significant impacts are not considered likely. Modelling indicates that rapid dispersion of discharges from the site will occur in the estuary and no significant sedimentation impacts are likely. Similar dispersion effects are predicted in respect of discharges at operational stage, and I note that operational emissions will be subject to the requirements of an IE licence.

Operation of the proposed power plant will result in the combustion of fossil fuels and emissions to the environment. It is concluded that in the conservative scenarios assessed, there will be no exceedances of Air Quality Standards and no significant effects are likely. The facility will be subject to EPA licencing and that there is no evidence that the proposed development cannot be operated appropriately in accordance with such licence or would otherwise be unacceptable on environmental grounds.

Extensive investigations across the site have identified features of archaeological interest, while there is one recorded monument bounding the development. Detailed mitigation measures have been identified and further conditions have been recommended by the Development Applications Unit. In this context, significant negative effects on archaeological heritage are not considered likely.

The development would constitute an Upper Tier COMAH site. I refer to the report of the external consultant (Byrne O'Cléirigh) in relation to the risk of Major Accidents and Disasters and the matters raised therein. The conclusions of the applicants' assessments are found to be valid, notwithstanding that a number of items of

clarification in respect of the methodology used are identified. I note that the development is subject to a separate regulatory process under the 2015 COMAH regulations, wherein the HSA are the competent authority, and it is considered that these matters would be most properly pursued by this authority.

Having regard to the foregoing, a split decision is recommended wherein permission is granted for the power generation plant and permission is refused for the proposed LNG import terminal on the basis of compliance with stated government policy.

14.0 Reasons and Considerations

i) Refuse Permission

That permission be refused for the following elements of the development:

- A proposed Floating Storage and Regasification Unit (FSRU), with a Liquified Natural Gas (LNG) storage capacity of 170,000 m^3 (up to 180,000m^3), 292.6m long and 43.4m wide, with a scantling draft water line of 12.9m.
- A proposed jetty, the deck of which will be set at +9 m OD (Malin Head), and ancillary structures.
- Proposed onshore receiving facilities.

for the reasons and considerations set out below.

It is Government policy, as set out in the *Policy Statement on the Importation of Fracked Gas* (May 2021), that it would not be appropriate to permit or proceed with the development of any LNG terminals in Ireland pending completion of the review of the security of energy supply of Ireland's electricity and natural gas systems. Other policy statements, including the National Marine Planning Framework 2020, National Energy Security Framework (2022) and the National Energy & Climate Action Plan 2021-2030 confirm that completion of the review is a key priority in considering risks to energy supply, and the need for energy storage, fuel diversification and additional capacity to import energy.

The *Review of The Security of Energy Supply of Ireland's Electricity and Natural Gas Systems* (Department of the Environment, Climate and Communications Sept 2022) has been subject to public consultation and the initial technical analysis does not support the development of a commercially operated Floating LNG FSRU. The review has not yet been completed.

In this regard the development at this time of:

- A proposed Floating Storage and Regasification Unit (FSRU), with a Liquified Natural Gas (LNG) storage capacity of 170,000 m3 (up to 180,000m3), 292.6m long and 43.4m wide, with a scantling draft water line of 12.9m.
- A proposed jetty, the deck of which will be set at +9mOD (Malin Head), and ancillary structures, and;
- Proposed onshore receiving facilities.

would be contrary to current government policy, and in the absence of such policy support, such development would be contrary to the proper planning and sustainable development of the area.

ii) Grant Permission

That permission be granted for the following:

- 600MW power plant and associated structures.
- 120 MW battery energy storage system, and ancillary development.
- Proposed Above Ground Installation (AGI) and ancillary structures, and
- All ancillary works.

For the reasons and considerations and subject to the conditions set out below.

In coming to its Decision, the Board has had regard to the following:

(a) European, national, regional and local planning, energy, climate and other policy of relevance, including in particular the following:

European Policy

- Directive 2014/52/EU amending Directive 2011/92/EU (EIA Directive)

- Directive 92/43/EEC (Habitats Directive, and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directive).
- Directive 2000/60/EC (Water Framework Directive)

National Policy

- Project Ireland 2040 – National Planning Framework (2018) (NPF)
- National Development Plan (2021-2030) (NDP);
- National Marine Planning Framework 2020;
- Programme for Government – Our Shared Future (2020);
- Climate Action and Low Carbon Development Amendment Act 2021, amending the Climate Action and Low Carbon Development Act 2015;
- Climate Action Plan 2023;
- Long-term Strategy on Greenhouse Gas Emissions Reductions (2023)
- Government Policy Statement on the Importation of Fracked Gas (May 2021);
- Review of The Security of Energy Supply of Ireland's Electricity And Natural Gas Systems (Sept 2022) Consultation Paper;
- Policy Statement on Security of Electricity Supply (November 2021);
- National Energy Security Framework (April 2022);
- National Adaptation Framework (NAF) (January 2018), and the Electricity and Gas Networks Sector Climate Change Adaptation Plan (2019);
- National Energy & Climate Action Plan 2021-2030;
- National Ports Policy (2013).

Regional and Local Policy

- Regional Spatial and Economic Strategy (RSES) for the Southern Region (2019-2031);
- Strategic Integrated Framework Plan for the Shannon Estuary (2013 – 2020);
- Shannon-Foynes Port Company Masterplan – Vision 2041 (2013);
- Kerry County Development Plan 2022-2028
- Listowel Municipal District Local Area Plan 2019-2025

(b) The location, nature, scale and layout of the proposed development.

(c) The range of mitigation measures set out in the Environmental Impact Assessment Report, Natura Impact Statement and Navigation Risk Assessment,

(d) The submissions received in relation to the application by all parties.

(e) The inspector's report and recommendation, informed by the report prepared by Byrne O'Cléirgh, "*Review of Shannon LNG COMAH Documentation*" 20/04/2023.

Appropriate Assessment

AA Phase 1

The Board noted that the proposed development is not directly connected with, or necessary for the management of a European Site.

The Board completed an Appropriate Assessment Screening exercise in relation to potential effects on designated European Sites, taking into account the Screening Report submitted with the application, the report and screening assessment completed by the Board's Inspector which concluded that the following sites are the European Sites for which there is a likelihood of significant effects on:

- Lower River Shannon cSAC (Site code 002165)
- River Shannon and River Fergus Estuaries SPA (Site code 004077)
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (code 004161).
- Moanveanlagh Bog cSAC (Code 002351).
- Tullaher Lough and Bog cSAC (code 002343).

The Board determined that Appropriate Assessment was required for these European Sites.

AA Stage 2:

The Board considered that the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, including the further information response submitted to the Board on 18th August 2022, and carried out an Appropriate Assessment of the implications of the proposed development on

European Sites in view of the conservation objectives for the sites. The Board considered that the information before it was adequate to allow the carrying out of an Appropriate Assessment and to allow it to reach complete, precise and definitive conclusions for Appropriate Assessment.

In completing the assessment, the Board considered in particular the likely direct and indirect impacts arising from the proposed development both individually and in combination with other plans and projects, the mitigation measures which are included as part of the current proposal and additional mitigation measures recommended by the inspector in view of the sites' conservation objectives. In completing the Appropriate Assessment, the Board accepted and adopted the Appropriate Assessment carried out by the Board's Inspector, of the potential effects of the development on the aforementioned European Sites, having regard to the sites' conservation objectives. In overall conclusion, the Board was satisfied that the proposed development would not adversely affect the integrity of the

- Lower River Shannon cSAC (Site code 002165)
- River Shannon and River Fergus Estuaries SPA (Site code 004077)
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (code 004161).
- Moanveanlagh Bog cSAC (Code 002351).
- Tullaher Lough and Bog cSAC (code 002343).

, in view of the conservation objectives of those sites and there is no reasonable scientific doubt as to the absence of such effects.

Environmental Impact Assessment:

The Board completed an Environmental Impact Assessment of the proposed development taking account of:

a) The nature, scale and location of the proposed development.

b) The Environmental Impact Assessment Report and associated documentation in support of the application for which approval is sought, along with the further information submitted to the Board on 18th August 2022.

c) The submissions received during the course of the application.

d) The inspector's report and recommendation, informed by the report of Byrne O'Cléirigh dated, 20/04/2023.

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, adequately considers alternatives for the proposed development and identifies and describes adequately the direct, indirect and secondary and cumulative impacts 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 for approval.

Reasoned Conclusion on Significant Effects:

Having regard to the examination of the environmental information set out above, and in particular the Environmental Impact Assessment Report and supplementary information submitted by the applicant, and the submissions received from the planning authority, prescribed bodies and observers in the course of the application, it is considered that the main significant direct, indirect or cumulative impacts on the environment of the development permitted herein are, and will be mitigated as follows:

1. The development could give rise to impacts on surface and groundwaters as a result of run-off of sediments, accidental spillages of chemicals, hydrocarbons or other contaminants entering waterbodies during construction. These impacts would be adequately mitigated by:
   - the implementation of the Construction Environmental Management Plan, and standard construction best practise guidance and measures, including measures for the control of soils, materials and pollutants, and drainage design and management of surface waters.
   - Soil and stockpile management, including separation from waterbodies and from areas subject to flooding.
   - Maximising the use of precast concrete elements. Any in-situ concrete work would be staged to prevent concrete entering the water.

2. Construction activity will give rise to noise and vibration emissions, particularly during blasting and rockbreaking activities. The impacts from such activities would be adequately mitigated by:

   - Adherence to identified emission limit values and guidelines for such activities, BS5607:2017 CoP and BS6472-2:2008.
   - The short-term nature of the activities and limits on daily blasting activities.
   - Separation from the shoreline and sensitive receptors.
   - Process management and a dedicated Public Liaison Officer and protocol for community relations.
   - Adherence to DAHG Guidance to *Manage the Risk to Marine Mammals from Man-Made Sound Sources*, including provisions relating to the observation periods and timing of activities.
   - On-going monitoring.

3. Operational discharges to the marine environment, including wastewater, accidental spillages and process discharge, have the potential to impact on water quality and dependent species and habitats. The impacts from such activities would be adequately mitigated by:

   - Design, operation and monitoring of drainage systems in compliance IE licence requirements.
   - Attenuation of stormwater runoff from paved / impermeable areas.
   - Drainage systems capable of handling anticipated volumes, incorporating treatment facilities and monitoring equipment appropriate to each effluent stream (including silt trap, Class 1 hydrocarbon interceptor, a firewater retention facility, package wastewater treatment plant and pH adjustment).
   - Adherence to EPA Guidance in respect of Firewater Run-Off and the Storage and Transfer of Materials for Scheduled Activities.
   - Measures for the control and management of hazardous materials and removal of identified waste / effluent streams off-site for treatment.
   - Availability of secondary containment and spill kits for other hazardous materials.

- Dispersion effects within a short distance of the discharge point, given the extent and dynamic nature of waters in the estuary.
- Protocols to manage the risk of accidental spills and potential environmental impact and membership of the Shannon Estuary Anti-Pollution Team (SEAPT).

4. Construction activity in the marine environment will give rise to potential for sediment release and deposition in the estuary. The impacts from such activities would be adequately mitigated by:
    - The limited extent and short-term nature of the activities.
    - Implementation of the CEMP, including standard construction best practice mitigation measures.
    - The extent and hydrodynamically active nature of the estuary.
    - Maximising the use of precast concrete elements. Any in-situ concrete work would be staged to prevent concrete entering the water.

5. Construction of the development will result in the direct loss of marine environment habitats. The impacts from such activities would be adequately mitigated by:
    - The limited spatial extent of loss, where the affected habitats and community types are not uncommon or rare and where natural recolonisation can occur.

6. Development of the site will result in terrestrial habitat removal and disturbance and displacement of species occurring on or around the site. The impacts from such activities would be adequately mitigated by:
    - Implementation of Construction Environmental Management Plan and appointment of an Environmental Clerk of Works.
    - Adherence to published guidance including CIRIA guidance on water pollution and IFI guidelines of protection of fisheries, Bat Conservation Ireland

guidance on lighting design, NRA Guidelines for the treatment of Badgers, Bats and Otters.

- Monitoring of Badger setts during and post-construction.
- Avoidance of in-stream works in Ralapanne Stream.
- A detailed method statement in respect of disturbance to cliff habitat from vehicular access.
- Planting and landscaping works using native species.
- Clear delineation and fencing-off of habitat conservation areas and retained trees / vegetation.
- Timing and management of tree / vegetation and structure removal works, with pre-development surveys of features to be removed.
- Erection of bat boxes and bird nesting boxes.
- A method statement specifying the timing of blasting operations and the need for ecological supervision.

7. Operation of the proposed power plant would give rise to an increase in operational greenhouse gas emissions with resulting impacts on the achievement of EU and National climate change and carbon emission reduction targets. The impacts from such activities would be adequately mitigated by:

    - The role of the CCGT in the overall energy generation sector and in facilitating renewable generation capacity and the transition to a low carbon system.
    - Displacement of potentially older, more carbon intensive power generation.
    - Operation in the EU ETS scheme.
    - Embedded design mitigation, including high efficiency and ability to operate at a low minimum generation capacity means that it will be dispatched before less efficient plants. The Power Plant will not operate at 100% capacity all year round.
    - Availability of battery storage.
    - Stated ability to transition to alternative low carbon fuels / hydrogen.
    - Regassification using sea water.

8. Traffic generated during construction will give rise to potential disturbance and congestion on the local road network. These impacts would be adequately mitigated by:

    - Existing low traffic volumes on road network.
    - Upgrade of the L1010 prior to the main construction phase.
    - Short term nature of the activities.
    - Implementation of a Construction Traffic Management Plan including the routing and scheduling of construction traffic.
    - Appointment of a logistic manager.

9. Excavation and redevelopment of the site will give rise to direct impacts on features of archaeological interest and previously unrecorded features. There will also be impacts on the setting of recorded monuments. The impacts would be adequately mitigated by:

    - Full resolution of all archaeological sites and areas identified during archaeological testing, including intertidal and subtidal areas.
    - Compliance with the National Monuments Acts and the CEMP.
    - A Method Statement for Archaeological Works will be agreed with the National Monuments Service, with fieldwork and monitoring by a suitably qualified and licensed archaeological contractor.
    - Completion of archaeological works prior to commencing enabling works.
    - Designated buffer around recorded monument.

10. Having regard to the nature and volume of materials to be stored and processed at the facility, the development gives rise to the potential for major accident or disaster or Major Accident to the Environment. The impacts from such activities would be adequately mitigated by:

    - Siting, design and operation in accordance with industry standards and HSA requirements and adherence to operator requirements under the COMAH regulations 2015.
    - Integral isolation valves in pipelines to isolate the inventory and reduce the consequences of an accident.

- Adherence to EPA guidance for firewater retention and for the Storage and Transfer of Materials for Scheduled Activities.
- The spill management framework.
- Separation of uses within the site.

Cumulative Impacts and Impacts from interactions

It is considered that effects as a result of interactions, indirect and cumulative effects can be avoided, managed or mitigated by the measures which form part of the proposed development, the proposed mitigations measures detailed in the Environmental Impact Assessment Report and the additional documentation submitted, and with suitable conditions. There is, therefore, nothing to prevent the approval of the development on the grounds of significant environmental effects, or as a result of cumulative effects or effects arising from interactions between environmental factors.

Proper Planning and Sustainable Development:

The proposed development comprises the following elements

- 600MW power plant and associated structures.
- 120 MW battery energy storage system, and ancillary development.
- Proposed Above Ground Installation (AGI) and ancillary structures, and
- All ancillary works.

The development accords with the relevant policy at a European, National, regional and local level. It will provide conventional power generation capacity in line with the provisions of the Climate Action Plan 2023, which would facilitate the transition to a more renewables based national electricity system. The proposed power generation development has been designed to provide an efficient and flexible plant in line with current design standards, which combined with the proposed battery energy storage facility, will facilitate its role as a back-up to a renewables-based electricity grid. While it is acknowledged that the operational of the development would generate greenhouse gas emissions, the need for such generation capacity is recognised as a national priority in the Government Policy Statement on Security of Electricity

Supply, notwithstanding an overall commitment in the Climate Action and Low Carbon Development (Amendment) Act 2021 to becoming a carbon-neutral economy by 2050. When taken in context, and noting the need and policy support for the proposed development including consistency with the relevant provisions of the Climate Action Plan 2023, significant negative impacts on the global climate receptor are not likely.

While there will be landscape and visual impacts associated with the proposed development, in the context of the surrounding pattern of development and the long-term objectives for the development of these lands, such impacts are not considered to be significant adverse.

Significant ecological effects are not anticipated arising from the proposed power plant. Direct impacts on habitats are limited and are not considered to adversely affect the conservation objectives of European Sites. Low numbers of estuarine birds were recorded in the vicinity of the site, and there is noted to be limited intertidal foraging habitat of value along the shore, while the site itself provides limited foraging potential. Negative impacts on terrestrial flora and fauna, and habitats within the site will be localised, negative but not significant.

Overall, it is reasonable to conclude that the consequences for the proper planning and sustainable development of the area would be largely acceptable. While there are negative local impacts, these are not regarded as outweighing the benefits arising and it is therefore concluded that there is a clear justification in favour of granting approval for the proposed

- 600MW power plant and associated structures.
- 120 MW battery energy storage system, and ancillary development.
- Proposed Above Ground Installation (AGI) and ancillary structures, and
- All ancillary works.

15.0 Conditions

1. This grant of permission relates to the development described in the application documentation submitted to the Board on 27/08/2021, comprising:

   (a) A proposed Power Plant, principally comprising 3 no. turbine halls each containing 1no. Combined Cycle Gas Turbine (CCGT). Each turbine hall will have a capacity of approximately 200MW for a total installed capacity of 600MW and will be linked via 1 no. exhaust duct to 1 no. Air Cooled Condenser (ACC), and ancillary structures.

   (b) A proposed 120 MW 1-hour (120 megawatt hour (MWh)) Battery Energy Storage System (BESS) and ancillary development

   (c) A proposed Above Ground Installation (AGI) and ancillary structures.

   (d) All ancillary structures / works, including new access off the L-1010 (Coast Road).

   For clarity, this grant of permission does <u>not</u> include:

   i. A proposed Floating Storage and Regasification Unit (FSRU), with a Liquified Natural Gas (LNG) storage capacity of 170,000 m^3 (up to 180,000m^3), 292.6m long and 43.4m wide, with a scantling draft water line of 12.9m.
   ii. A proposed jetty, the deck of which will be set at +9 m OD (Malin Head), and ancillary structures.
   iii. Proposed on-shore receiving facilities.

   Prior to the commencement of development on the site, revised plans and details shall be submitted to and agreed in writing with the planning authority illustrating the layout and extent of permitted development on the site.

Reason: In the interests of clarification

2. (a) The proposed development shall be carried out and completed in accordance with the plans and particulars, including the mitigation measures specified in the Environmental Impact Assessment Report, the Natura Impact Statement and the Outline Construction Environmental Management Plan, lodged with

the application to An Bord Pleanála on the 27th day of August, 2021, as amended by the plans and particulars submitted to An Board Pleanála on 18th August, 2022, except as may otherwise be required in order to comply with the conditions set out herein.

(b) An updated Schedule of Environmental Commitments to include the relevant mitigation measures outlined in the Environmental Impact Assessment Report and NIS, and as required through conditions contained in this schedule, shall be prepared and placed on the file and retained as part of the public record, and shall be implemented in full.

Reason: In the interest of clarity, to mitigate the environmental effects of the development, and to protect the amenities of properties and sensitive receptors in the vicinity.

3. The period during which the development hereby permitted may be carried out shall be 10 years from the date of this order.

Reason: Having regard to the nature and scale of the proposed development, the Board considers it appropriate to specify a period of validity of this permission in excess of five years.

4. (a) The upgrade of the L1010 Coast Road between the R551 at Tarbert and the proposed development lands at Kilcolgan Lower and Ralappane shall be completed prior to the commencement of the main construction elements of the proposed development. This shall not preclude the undertaking of site preparation and earthworks contemporaneously with the upgrading of the L1010 coast road. The precise extent of works which may be carried out prior to the completion of the public infrastructure works, shall be agreed in writing with the planning authority, prior to commencement of development and in default of agreement, shall be determined by An Bord Pleanála.

(b) Final detail in relation to the design of the proposed entrance to the site from the L1010, including drainage design, shall be agreed in writing with the planning authority prior to the commencement of development on the site.

Reason: In the interests of road safety

5. (a) Prior to commencement of development, the developer shall submit to and agree in writing with the planning authority, a detailed construction traffic management plan. This management plan shall include restrictions on traffic movements at Tarbert Comprehensive School, which shall prohibit the movement of heavy goods vehicle traffic associated with the construction of the terminal for an agreed period before and after the opening and closing times of the school. It shall also include the staggering of various shift start and finish times.

   (b) Pre and post-construction phase surveys of the public road network to be used as haul routes, shall be carried out by the applicant, to include inspections of bridges, structures and culverts at locations to be agreed with the relevant Roads Authorities to confirm their capacity to accommodate any abnormal weight load proposed.

   (c) Abnormal load licences shall be secured by the developer in advance, if required, for the transportation of components, units and materials. Consultation with the Road Authority, An Garda Siochana and all necessary stakeholders shall be carried out in advance of transportation of abnormal loads.

   (d) Any required alterations to the road network for the transportation of components, units and/or materials shall be agreed in advance with the roads authority and reinstated thereafter to the satisfaction of roads authority. Where such works affect the national road network, they shall be undertaken in accordance with TII publications. Any temporary alterations to utilities shall be agreed with the appropriate utility provider in advance by the developer. Any land acquisition or temporary access to lands required for the conveyance of abnormal loads or materials will be incumbent on the applicant to agree with the relevant landowner. A schedule of alterations to the road network including but not limited to signage, street furniture and vegetation shall be agreed in advance with the relevant roads authority.

(e) Any damage to the local and national road network arising from the transportation of components, units and/or materials to the site shall be rectified in accordance with the requirements of the Road Authority, at the developer's expense.

Reason: In the interest of road safety, orderly development and the proper planning and sustainable development of the area.

6. The developer shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site. All mitigation measures set out in the EIAR shall be fully implemented prior to the commencement of developing works. In this regard, the developer shall:

   (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operations (including hydrological and geotechnical investigations) relating to the proposed development,

   (b) employ a suitably-qualified archaeologist who shall assess the site and monitor all site development works.

   (c) Prior to the commencement of any archaeological works, the following shall be submitted to and agreed in writing with the planning authority and the National Monuments Service of the Department of Housing, Local Government and Heritage:

   - A detailed Archaeological Mitigation Strategy and
   - A management plan for the continued preservation in-situ of recorded monument (KE002 004).

   (d) The archaeologist shall undertake an assessment of (i) the nature and location of archaeological material on the site, and (ii) the impact of the proposed development thereon. Prior to commencement of construction works, a report containing the results of the assessment and details of any further archaeological requirements including, if necessary, archaeological excavation, shall be submitted to and agreed in writing with the planning authority.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation in-situ or by record, and protection of any archaeological remains that may exist within the site.

7. Prior to the commencement of development works along the foreshore, an Underwater Archaeological Impact Assessment (UAIA) of the intertidal and subtidal areas by a licenced, experienced and suitably qualified underwater archaeologist shall be undertaken, comprising a desktop study, an on-site walkover survey of the foreshore and a marine geophysical survey.
   (a) The Desktop study of the archaeological potential of the coastal, foreshore and off-shore areas, should be informed by all recent relevant sources, and should also have regard to the terrestrial / on-shore development works proposed as part of the project.
   (b) The walkover survey of the foreshore / intertidal zone, and any terrestrial works for landings, shall be accompanied by a metal detection survey. All identified sites, features or anomalies shall be georeferenced and mapped.
   (c) The geophysical survey shall be undertaken in advance of any other development works / investigations in this area, by a suitably qualified and experienced marine geophysicist in compliance with the requirements of the Department of Housing, Local Government and Heritage for marine geophysical survey for archaeological purposes.
   (d) A report, containing the results of the assessment, shall be submitted to the planning authority and to the National Monuments Section of the Department of Housing, Local Government and Heritage, and shall identify all features of cultural heritage interest and include recommendations to mitigate any archaeological impacts, and any further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site.

8. Prior to the commencement of development, revised landscaping details having regard to the requirements of condition no. 1 above, shall be submitted to and agreed in writing with the planning authority. Such revised details shall include additional planting along the northern / estuarine boundary of the site in order to provide additional screening and connectivity for terrestrial fauna, including any revisions or set-back of the perimeter security fence required in this regard.

Reason: In the interest of visual amenity.

9. (a) Prior to commencement of development, all trees, groups of trees, hedging and shrubs which are to be retained shall be enclosed within stout fences not less than 1.5 metres in height. This protective fencing shall enclose an area covered by the crown spread of the branches, or at minimum a radius of two metres from the trunk of the tree or the centre of the shrub, and to a distance of two metres on each side of the hedge for its full length, and shall be maintained until the development has been completed.

(b) No construction equipment, machinery or materials shall be brought onto the site for the purpose of the development until all the trees which are to be retained have been protected by this fencing. No work is shall be carried out within the area enclosed by the fencing and, in particular, there shall be no parking of vehicles, placing of site huts, storage compounds or topsoil heaps, storage of oil, chemicals or other substances, and no lighting of fires, over the root spread of any tree to be retained.

Reason: To protect trees and planting during the construction period in the interest of visual amenity.

10. Trees to be removed on site shall be felled in late summer or autumn. Any disturbance to bats and badger setts on site shall be in a manner to be agreed in writing with the planning authority on the advice of a qualified ecologist.

Reason: In the interest of nature conservation.

11. During the construction phase, the developer shall adhere to the measures set out in the following documents:
    a) 'Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes', published by the National Roads Authority in 2006. The mitigation measures set out in section 7B.7.1.7 of the EIAR shall be implemented in full.
    b) "Bat Mitigation Guidelines for Ireland v2". Irish Wildlife Manuals, No. 134, published by the National Parks and Wildlife Service (2022). The specific mitigation measures set out in section 7B.7.1.8 of the EIAR shall be implemented in full.
    c) "Guidelines for the Treatment of Otters Prior to the Construction of National Road Schemes", published by the National Roads Authority in 2008. The mitigation measures set out in section 7B.7.1.9 of the EIAR shall be implemented in full.

    The requirements of any licence required from the National Parks and Wildlife Service shall be strictly adhered to and details of any such licence shall be submitted to the planning authority.

    Reason: In the interest of wildlife protection.

12. Water supply arrangements shall comply with the requirements of Irish Water for such works and services.

Reason: In the interest of public health.

13. The construction of the development shall be managed in accordance with a final Construction 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 practice for the development, including, inter alia:

(a) Location of the site and materials compounds including areas identified for the storage of construction refuse;
(b) Location of areas for construction site offices and staff facilities;
(c) Details of site security fencing and hoardings;
(d) Details of the timing and routing of construction traffic to and from the construction site and associated directional signage, to include proposals to facilitate the delivery of abnormal loads to the site;
(e) Measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network;
(f) Details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels;
(g) Containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater;
(h) Off-site disposal of construction/demolition waste and details of how it is proposed to manage excavated soil;
(i) A site-specific water management plan, to include detailed drawings for each development phase of the project identifying measures to ensure that surface water run-off is controlled such that no silt or other pollutants enter estuarine waters, local surface waters or drains.

A record of daily checks that the works are being undertaken in accordance with the Construction Management Plan shall be kept for inspection by the planning authority.

Reason: In the interest of amenities, public health and safety.

14. Construction and demolition waste shall be managed in accordance with a construction waste and demolition management plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall be prepared in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and

Demolition Projects", published by the Department of the Environment, Heritage and Local Government in July 2006.

Reason: In the interest of sustainable waste management.

15. During the site clearance, preparation and construction phase of the development, dust levels shall not exceed 350 milligrams per square metre (TA LUFT Air Quality Standard) per day averaged over 30 days, when measured at the site boundary.

Reason: In the interest of public health and residential amenity.

16. (a) The vibration levels from blasting shall not exceed a peak particle velocity of 12mm/sec.
    (a) Blasting shall not give rise to air overpressure values exceeding 125 dB (Lin) max peak.
    (b) Blasting shall only take place between the hours of 10.00 a.m. to 17.00p.m Monday to Friday. Prior to the firing of any blast, the developer shall give notice of his intention to the occupiers of all dwellings within 600 metres of the site. An audible alarm for a minimum period of one minute shall be sounded. This alarm shall be of sufficient power to be heard at all dwellings adjacent to the site.
    (c) Blasting activities shall be carried out in accordance with the details submitted to An Bord Pleanála on 18th August 2022.

Reason: In the interest of residential amenity and public safety.

17. Details of the material, colours and textures of all external finishes to the proposed buildings and structures shall be as submitted with the application, unless otherwise agreed in writing with the planning authority prior to the commencement of development.

Reason: In the interests of landscape and visual amenity.

18. (a) The development shall be carried out in accordance with the *Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters*, Department of Arts, Heritage and the Gaeltacht (2014).

(b) The developer shall employ suitably qualified marine mammal observers for the duration of on-shore blasting. Commencement of blasting shall be delayed if the marine mammal observers note dolphins within 500 metres of the site within 20 minutes of the planned commencement of works. No action shall be necessary if a dolphin approaches once operations have commenced. A log of the marine mammal observer operations shall be submitted to the planning authority, following completion of these works.

Reason: In the interest of wildlife protection.

19. The firewater retention pond shall be sized and designed in accordance with the Environmental Protection Agency (EPA) Guidance on Retention Requirements for Firewater Run-off (EPA 2019). In the event of a fire or a spillage to storm water, the system shall provide for the automatic diversion of storm water for collection.

Reason: In the interests of environmental protection.

20. Prior to commencement of development, the developers shall agree the location and nature of any obstacle lights, which may be necessary, with the Irish Aviation Authority. Details of such lights, if any, shall be submitted for the records of the planning authority.

Reason: In the interest of public safety.

21. Prior to commencement of development, a comprehensive lighting scheme for the development prepared by a suitably qualified lighting specialist in accordance with Guidance Note 01/21 The Reduction of Obtrusive Light at Night (Institute of Lighting Professionals (2021)) shall be submitted to and agreed in writing with the planning authority. Lighting for the facility shall be designed to incorporate relevant best-practice mitigation measures to minimise light pollution,

and shall avoid the use of unfiltered, white LED, metal halide, white fluorescent, halogen and mercury vapour lighting. Full cut-off lighting shall be employed for all lighting.

LED lighting used on the site should have CCT values at or below 3000K, where possible and light spill onto the estuary should be restricted. Consideration may be given to the use of variable lighting levels or other controls to minimise unnecessary lighting. The scheme shall also set out practices to minimise light pollution during construction.

Reason: In the interest of visual amenity and to reduce impacts on wildlife and habitats.

22. The developer shall pay to the planning authority a financial contribution in 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, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority 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 An Bord Pleanála to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000, as amended, 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.

23. The developer shall pay to the planning authority a financial contribution as a special contribution under section 48(2) (c) of the Planning and Development Act 2000 in respect of works which will facilitate the proposed development, comprising

a) The upgrade of the public road (L1010) between the proposed development site and the R551.
b) Improvements at the junction of the R551 and L1010 to accommodate the projected nature and volume of traffic travelling along the L1010 Coast Road.

The amount of the contribution shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála for determination. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

24. The developer shall pay to the planning authority a financial contribution as a special contribution under section 48(2) (c) of the Planning and Development Act 2000, as amended, in respect of the purchase of specialist equipment and to facilitate specialist training required by the fire service in respect of this development. The amount of the contribution shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála for determination. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

25. Prior to commencement of development, the developer shall prepare an Annual Community Contribution Scheme to be administered by the planning authority in conjunction with the Community Liaison Committee established under condition 26 for the benefit of the local community. The amount of the annual contribution shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála for determination. The first payment contribution shall be paid prior to commencement of development and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. The application of any indexation required by this condition 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.

Reason: It is considered appropriate that the developer should contribute towards the cost of community projects in the vicinity of the development, in accordance with the provisions of section 37g(7) of the Planning and Development Act, 2000, as amended by the Planning and Development (Strategic Infrastructure) Act, 2006.

26. Prior to commencement of development a community liaison committee shall be established to liaise between the developer and the local community. The membership of the committee shall include representation from two elected members of Kerry County Council, two officials of Kerry County Council, three members of the local community (Ballylongford, Kilcolgan and Tarbert) and two representatives of the developer. The community liaison committee shall have responsibility for the administration of the community fund to be set out under condition number 25 above and for decisions on projects to be supported by the fund in addition to acting as a liaison committee with the local community in relation to ongoing monitoring of the construction and operation of the proposed terminal.

Reason: To provide for appropriate ongoing review of operations at the site in conjunction with the local community and to provide for the allocation of resources from the community gain fund in accordance with the requirements of the community.

27. (i) Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or other security to secure the provision and satisfactory reinstatement of public roads damaged by the transfer of materials or use as haul routes associated with the proposed development, coupled with an agreement empowering the local authority to apply such security or part thereof to the satisfactory completion of such works. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

(ii) Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the satisfactory reinstatement of the site on cessation of the project coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: To ensure the satisfactory completion of the development.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Conor McGrath
Senior Planning Inspector
14/06/2023

Appendix 1:

Byrne Ó Cléirigh, *Review of Shannon LNG COMAH Documentation Prepared for: An Bord Pleanála*, Rev.2, 20th April 2023

519-22X0182 - Review of Shannon