MERCURY RENEWABLES

(CARROWLEAGH) LIMITED

FIRLOUGH WIND FARM, CO. MAYO

AND

HYDROGEN PLANT, CO. SLIGO

RESPONSE TO INSPECTOR QUESTION No. 1

'REVIEW OF EIAR SCREENING'

PLANNING APPLICATION REFERENCE

ABP-317560-23

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1 INTRODUCTION

Inspector Question No. 1 of the Oral Hearing Agenda states:

1. Review of the EIAR

Consider in the screening section of the report, whether the hydrogen plant would trigger an EIAR by itself, having regard to the various classes under Schedule 5 — notably Class 6 (b) of Part 1 and Class 6 (a) or (d) of Part 2 of the Planning and Development Regulations as amended.

Consider how the EIAR would be amended, in particular, the details of the preparedness for and proposed response to emergencies arising from such event.

This could include information on the preparedness of the local authority emergency services in dealing with an emergency, as per the consultations referred to in the documents already submitted.

2 RESPONSE

The Wind Farm element of the Project triggered EIA:

> **Section 172(1)(a)(ii)(I)** of the Planning Acts requires projects of a class specified in Part 2 of Schedule 5 of the Planning Regulations to be subject to an EIA where:
> "(I) *such development would exceed any relevant quantity, area or other limit specified in that Part,*".
>
> Part 2 of Schedule 5 of the Planning Regulations includes the following classes of EIA Development:
> **Class 3(i)** *"Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts."*
>
> The Project comes within the scope of Class 3(I) and consequently give rise to the requirement for the Project to be subject to an EIA.

In terms of the Hydrogen Plant, the Project was already subject to EIA, therefore if the Hydrogen Plant by itself had triggered an EIA this would not have affected the process followed. However, an exercise in screening the Hydrogen Plant under the various classes in Part 1 and Part 2 of the Planning and Development Regulations as amended is undertaken below.

2.1 EIA Screening Hydrogen Plant

Schedule 5 (Part 1 and 2)

To determine if an EIA is required, the first step is to determine whether the Project is a class set out in Annex I or II of the Directive. These classes have been broadly transposed into Schedule 5 (Part 1 and 2) of the Planning and Development Regulations 2001, As Amended, with national thresholds included for many of the Annex II classes.

2.1.1 Part 1

1. A crude oil refinery (excluding undertakings manufacturing only lubricants from crude oil) or an installation for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day.

   Not Relevant

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

   Not Relevant (78 MW)

   (b) A nuclear power station or other nuclear reactor including the dismantling or decommissioning of such a power station or reactor1 (except a research installation for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kilowatt continuous thermal load).

   Not Relevant

3. (a) All installations for the reprocessing of irradiated nuclear fuel.

   (b) Installations designed -

   - for the production or enrichment of nuclear fuel,

   Not Relevant

   - for the processing of irradiated nuclear fuel or high level radioactive waste,

   Not Relevant

   - for the final disposal of irradiated fuel,

   Not Relevant

   - solely for the final disposal of radioactive waste,

   Not Relevant

   - solely for the storage (planned for more than 10 years) of irradiated fuels or radioactive waste in a different site than the production site.

   Not Relevant

4. (a) Integrated works for the initial smelting of cast iron and steel.
Not Relevant

(b) Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes.
Not Relevant

5. An installation for the extraction of asbestos or for the processing and transformation of asbestos or products containing asbestos-
(a) in case the installation produces asbestos-cement products, where the annual production would exceed 20,000 tonnes of finished products,
Not Relevant

(b) in case the installation produces friction material, where the annual production would exceed 50 tonnes of finished products, or
Not Relevant

(c) in other cases, where the installation would utilise more than 200 tonnes of asbestos per year.
Not Relevant

6. Integrated chemical installations, i.e. those installations for the manufacture on an industrial scale of substances using chemical conversion processes, in which several units are juxtaposed and are functionally linked to one another and which are-
(a) for the production of basic organic chemicals,
Not Relevant
(b) for the production of basic inorganic chemicals,
Potentially Relevant

The Hydrogen Plant will produce hydrogen via water electrolysis powered by renewable wind energy. Water electrolysis is the process of splitting water (H2O) into its basic components, hydrogen (H2) and oxygen (O2), using an electric current in an electrolyser. Through this process, electrical energy can be stored as chemical energy in the resulting hydrogen. The newly formed chemical energy can be utilised as a fuel or converted back to electricity when required.

The Wind Farm configuration consists of 13 wind turbines, with an overall installed capacity of 65-78 MW. The electrolyser will be capable of producing up to circa 31,200 kg of hydrogen in 24 hours at maximum output. As the production of green hydrogen at the Hydrogen Plant is dependent on the wind resource, the actual volumes of green hydrogen produced daily will often be below the daily maximum output.

The Hydrogen Plant could trigger an EIA under this classification. However, this is irrelevant to the EIA process followed for the Project as the Project was classified as EIA based on the Wind Farm Element. The classification of the Hydrogen Plant under this classification would not have altered the EIAR.

In terms of assessment Chapter 16 Major Accidents and Natural Disasters;

“Based on the requirements of the EIA Directive, this chapter seeks to determine:

- The relevant major accidents and/or natural disasters, if any, that the Project could be vulnerable to.
- The potential for these major accidents and/or natural disasters to result in likely significant adverse environmental effect(s).
- The measures that are in place, or need to be in place, to prevent or mitigate the likely significant adverse effects of such events on the environment.”

The Hydrogen Plant Site has also been assessed by Preliminary Hazard Analysis (PHA) and Quantitative Risk Assessment (QRA).

Risktec solutions Ltd., an independent and specialist provider of risk management consulting, resourcing, learning and inspection services, part of the TÜV Rheinland Group. undertook a PHA on the green hydrogen system at the Proposed Development and generated a hazard log. The full report can be found in Appendix 16.1.

A Technical Land Use Planning based Quantitative Risk Assessment (the “TLUP QRA”) has been prepared in accordance with the guidelines set out in the HSA's Technical Land Use Planning (TLUP) Guidelines. The TLUP QRA has been submitted to the HSA as part of the planning application submission and was included in Appendix 16.3. The purpose of the TLUP QRA is primarily to assess the offsite risks to human health and the environment for the purposes of determining the suitably of the Hydrogen Plant Site.

The scoping and consultation process was carried out in accordance with the EIA Directive, as amended, and in accordance with the Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022) and the European Commission's 2017 guidance document on scoping. Scoping included details of the Hydrogen Plant.

The Developer has been engaging with various stakeholders and safety specialists for over 2 years. Actions to date include:

- Review of internationally recognised safety standards and codes
- Incorporation of safety considerations to initial Hydrogen Plant Site design
- Organisation of Preliminary Hazard Analysis (PHA) Identification sessions
- Development of PHA Report
- Development of TLUP QRA
- Engagement with the Health and Safety Authority (HSA)
- Engagement with Sligo Fire Service
- Engagement with Sligo and Mayo County Councils
- Development of a Major Accident Prevention Policy
- Continued engagement with local councils and HAS
- Update of TLUP QRA

Actions underway and planned for future phases include:

- Completion of onsite Quantitative Risk Assessment
- Development of a Risk Management Programme
- ATEX Assessment (workplace /employee based assessment)
- Development of a Safety Management System
- Completion of Major Accident Prevention Policy

A Major Accident Prevention Policy has been developed for the Hydrogen Plant Site. This was prepared by senior management and establishes a commitment to ensuring the achievement of high standards of control of major accidents and hazards, specifically in relation to the operation of Hydrogen Plant. Guaranteeing a high level of protection to human health and the environment. Senior management have commissioned and participated in the preparation of a Preliminary Hazard Analysis and Technical Land Use Planning Quantitative Risk Assessment, the results and mitigating measures of which have been incorporated into the design of the Hydrogen Plant layout. As part of the Major Accident Prevention Policy, a Safety Management

Plan, Risk Management Plan, Traffic Management Plan and Emergency Response Plan will be produced for the Hydrogen Plant Site. These processes will help identify and mitigate hazards onsite and reduce the risk to employees, the public and the environment during the construction and operational phase of the Hydrogen Plant.

(c) for the production of phosphorous, nitrogen or potassium based fertilisers (simple or compound fertilisers),
Not Relevant

(d) for the production of basic plant health products and of biocides,
Not Relevant

(e) for the production of basic pharmaceutical products using a chemical or biological process,
Not Relevant

(f) for the production of explosives.
Not Relevant

7. A line for long-distance railway traffic, or an airport2 with a basic runway length of 2,100 metres or more.
Not Relevant

8. (a) Inland waterways and ports for inland waterway traffic which permit the passage of vessels of over 1,350 tonnes.
Not Relevant

(b) Trading ports, piers for loading and unloading connected to land and outside ports (excluding ferry piers) which can take vessels of over 1,350 tonnes.
Not Relevant

9. Waste disposal installations for the incineration, chemical treatment as defined in Annex IIA to Directive 75/442/EEC3 under heading D9, or landfill of hazardous waste (i.e. waste to which Directive 91/689/EEC4 applies).
Not Relevant

10. Waste disposal installations for the incineration or chemical treatment as defined in Annex IIA to Directive 75/442/EEC under heading D9, of non-hazardous waste with a capacity exceeding 100 tonnes per day.
Not Relevant

11. Groundwater abstraction or artificial groundwater recharge schemes, where the annual volume of water abstracted or recharged is equivalent to or exceeds 10 million cubic metres.
Not Relevant

12. (a) Works for the transfer of water resources between river basins, where this transfer aims at preventing possible shortages of water and where the amount of water transferred exceeds 100 million cubic metres per year.
Not Relevant

(b) In all other cases, works for the transfer of water resources between river basins, where the multi-annual average flow of the basin of abstraction exceeds 2,000 million cubic metres per year and where the amount of water transferred exceeds 5 per cent of this flow.
Not Relevant

In the case of (a) and (b) above, transfers of piped drinking water are excluded.
Not Relevant

13. Waste water treatment plants with a capacity exceeding 150,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC5.
Not Relevant

14. Extraction of petroleum and natural gas for commercial purposes where the amount extracted exceeds 500 tonnes per day in the case of petroleum and 500,000 cubic metres per day in the case of gas.
Not Relevant

15. Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.
Not Relevant

16. Pipelines with a diameter of more than 800mm and a length of more than 40km:
— for the transport of gas, oil, chemicals, and,
— for the transport of carbon dioxide (CO2) streams for the purposes of geological storage, including associated booster stations.
Not Relevant

17. Installations for the intensive rearing of poultry or pigs with more than-

(a) 85,000 places for broilers, 60,000 places for hens,
Not Relevant

(b) 3,000 places for production pigs (over 30 kilograms), or
Not Relevant

(c) 900 places for sows.
Not Relevant

18. Industrial plants for the-
(a) production of pulp from timber or similar fibrous materials,
Not Relevant

(b) production of paper and board with a production capacity exceeding 200 tonnes per day.
Not Relevant

19. Quarries and open-cast mining where the surface of the site exceeds 25 hectares.
Not Relevant

20. Construction of overhead electrical power lines with a voltage of 220 kilovolts or more and a length of more than 15 kilometres.
Not Relevant

21. Installations for storage of petroleum, petrochemical, or chemical products with a capacity of 200,000 tonnes or more.
Not Relevant. Maximum onsite storage of Hydrogen is 40.128 tonnes

22. Any change to or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any, set out in this Annex.
Not Relevant

23. Storage sites pursuant to Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide6.
Not Relevant

24. Installations for the capture of CO2 streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations covered by this Part, or where the total yearly capture of CO2 is 1.5 megatonnes or more.
Not Relevant

2.1.2 Part 2

1. Agriculture, Silviculture and Aquaculture
(a) Projects for the restructuring of rural land holdings, undertaken as part of a wider proposed development, and not as an agricultural activity that must comply with the European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011, where the length of field boundary to be removed is above 4 kilometres, or where re-contouring is above 5 hectares, or where the area of lands to be restructured by removal of field boundaries is above 50 hectares.
Not Relevant

(c) Development consisting of the carrying out of drainage and/or reclamation of wetlands where more than 2 hectares of wetlands would be affected.
Not Relevant

(d)
(ii) Replacement of broadleaf high forest by conifer species, where
the area involved would be greater than 10 hectares.
(iii) Deforestation for the purpose of conversion to another type of land use, where the area to be deforested would be greater than 10 hectares of natural woodlands or 70 hectares of conifer forest.
Not Relevant

(e) (i) Installations for intensive rearing of poultry not included in Part 1 of this Schedule which would have more than 40,000 places for poultry.

Not Relevant

(ii) Installations for intensive rearing of pigs not included in Part 1 of this Schedule which would have more than 2,000 places for production pigs (over 30 kilograms) in a finishing unit, more than 400 places for sows in a breeding unit or more than 200 places for sows in an integrated unit.

Not Relevant

(f) Seawater fish breeding installations with an output which would exceed 100 tonnes per annum; all fish breeding installations consisting of cage rearing in lakes; all fish breeding installations upstream of drinking water intakes; other freshwater fish breeding installations which would exceed 1 million smolts and with less than 1 cubic metre per second per 1 million smolts low flow diluting water.

Not Relevant

(g) Reclamation of land from the sea, where the area of reclaimed land would be greater than 10 hectares.

Not Relevant

2. Extractive Industry

(a) Peat extraction which would involve a new or extended area of 30 hectares or more.

Not Relevant

(b) Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.

Not Relevant

(c) All extraction of minerals within the meaning of the Minerals Development Acts, 1940 to 1999.

Not Relevant

(d) Extraction of stone, gravel, sand or clay by marine dredging (other than maintenance dredging), where the area involved would be greater than 5 hectares or, in the case of fluvial dredging (other than maintenance dredging), where the length of river involved would be greater than 500 metres.

Not Relevant

(e) With the exception of drilling for investigating the stability of the soil, deep drilling, consisting of—

(i) geothermal drilling,

Not Relevant

(ii) drilling for the storage of nuclear waste material,

Not Relevant

(iii)drilling for water supplies, where the expected supply would exceed 2 million cubic metres per annum, or

Not Relevant Annual Water demand 65,021m^3

(iv) any other deep drilling, except where, in considering whether or not an environmental impact assessment should be carried out—

(I) a planning authority or the Board—

(A) concludes, or

(B) having regard to the criteria set out in Schedule 7, determines,

for the purposes of Part X of the Act, that the proposed drilling concerned would not have a significant effect on the environment,

(II) a local authority, in exercise of the powers conferred on it by regulation 120, concludes or determines that there is no real likelihood of significant effects on the environment arising from the proposed drilling concerned,

(III) a State authority, in exercise of the powers conferred on it by regulation 123A, concludes or determines that there is no real likelihood of significant effects on the environment arising from the proposed drilling concerned,

(IV) it is decided, in accordance with section 13A of the Foreshore Act 1933 (No. 12 of 1933) (in this subparagraph referred to as the “Act of 1933”), by the appropriate Minister (within the meaning of the Act of 1933) that the drilling concerned would not have a significant effect on the environment,

(V) the appropriate Minister (within the meaning of the Act of 1933) confirms—

(A) in accordance with paragraph (a) of subsection (2) of section 13B of the Act of 1933, that the authorisation of the Minister for Communications, Climate Action and Environment records that a screening or assessment referred to in that paragraph has been carried out by the Minister for Communications, Climate Action and Environment in respect of the underlying project to which the petroleum activity relates, or

(B) in accordance with paragraph (*b*) of the said subsection (2), that the Minister for Communications, Climate Action and Environment will carry out such a screening or assessment in respect of that project, or

(VI) the Minister for Communications, Climate Action and Environment—

(A) in accordance with section 8A of the Minerals Development Act 1940 (No. 31 of 1940), determines that a screening determination for environmental impact assessment is not required,

(B) when making a screening determination for environmental impact assessment in accordance with subsection (8) of the said section 8A of the Minerals Development Act 1940 (No. 31 of 1940), determines that the drilling concerned would not be likely to have significant effects on the environment.

Not Relevant

(f) All surface industrial installations for the extraction of coal, petroleum (excluding natural gas), ores or bituminous shale not included in Part 1 of this Schedule.

Not Relevant

(g) All extraction of petroleum (excluding natural gas) not included in Part 1 of this Schedule.

Not Relevant

(h) All onshore extraction of natural gas and offshore extraction of natural gas (where the extraction would take place within 10 kilometres of the shoreline) not included in Part 1 of this Schedule.

Not Relevant

3. Energy Industry

(a) Industrial installations for the production of electricity, steam and hot water not included in Part 1 of this Schedule with a heat output of 300 megawatts or more.

Not Relevant

(b) Industrial installations for carrying gas, steam and hot water with a potential heat output of 300 megawatts or more, or transmission of electrical energy by overhead cables not included in Part 1 of this Schedule, where the voltage would be 200 kilovolts or more.

Not Relevant. The Wind Farm configuration consists of 13 wind turbines, with an overall installed capacity of 65-78 MW. The electrolyser has been designed to consume the full output of the Wind Farm once built to full capacity. The maximum installed capacity of the Hydrogen Plant is proposed to be 80MW.

There are no overhead cables associated with the Hydrogen Plant.

(c) Installations for surface storage of natural gas, where the storage capacity would exceed 200 tonnes.

Not Relevant

(d) Installations for underground storage of combustible gases, where the storage capacity would exceed 200 tonnes.

Not Relevant Maximum onsite storage of Hydrogen is 40.128 tonnes

(e) Installations for the surface storage of fossil fuels, where the storage capacity would exceed 100,000 tonnes.

Not Relevant

(f) Installations for industrial briquetting of coal and lignite, where the production capacity would exceed 150 tonnes per day.

Not Relevant

(g) Installations for the processing and storage of radioactive waste not included in Part 1 of this Schedule.

Not Relevant

(h) Installations for hydroelectric energy production with an output of 20 megawatts or more, or where the new or extended superficial area of water impounded would be 30 hectares or more, or where there would be a 30 per cent change in the maximum, minimum or mean flows in the main river channel.

Not Relevant

(i) Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts.

Not Relevant to Hydrogen Plant

The Wind Farm element of the Project triggered EIA under this classification.

(j) Installations for the capture of CO2 streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations not covered by Part 1 of this Schedule.

Not Relevant

4. Production and processing of metals

(a) All installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting.

Not Relevant

(b) Installations for the processing of ferrous metals-

(i) hot-rolling mills and smitheries with hammers, where the production area would be greater than 500 square metres,

Not Relevant

(ii) application of protective fused metal coats, where the production area would be greater than 100 square metres.

Not Relevant

(c) Ferrous metal foundries with a batch capacity of 5 tonnes or more or where the production area would be greater than 500 square metres.

Not Relevant

(d) Installations for the smelting, including the alloyage, of non-ferrous metals, excluding precious metals, including recovered products (refining foundry casting etc.), where the melting capacity would exceed 0.5 tonnes or where the production area would be greater than 500 square metres.

Not Relevant

(e) Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process, where the production area would be greater than 100 square metres.

Not Relevant

(f) All installations for manufacture and assembly of motor vehicles or manufacture of motor-vehicle engines.

Not Relevant

(g) Shipyards, where the area would be 5 hectares or more, or with capacity for vessels of 10,000 tonnes or more (dead-weight).

Not Relevant

(h) All installations for the construction of aircraft with a seating capacity exceeding 10 passengers.

Not Relevant

(i) Manufacture of railway equipment, where the production area would be greater than 100 square metres.

Not Relevant

(j) Swaging by explosives, where the floor area would be greater than 100 square metres.

Not Relevant

(k) All installations for the roasting and sintering of metallic ores.

Not Relevant

5. Mineral Industry

(a) All coke ovens (dry coal distillation).

Not Relevant

(b) All installations for the manufacture of cement.

Not Relevant

(c) All installations for the production of asbestos and the manufacture of asbestos based products not included in Part 1 of this Schedule.

Not Relevant

(d) Installations for the manufacture of glass, including glass fibre, where the production capacity would exceed 5,000 tonnes per annum.

Not Relevant

(e) All installations for smelting mineral substances including the production of mineral fibres.

Not Relevant

(f) Manufacture of ceramic products by burning, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, or with a kiln capacity exceeding 4 cubic metres and with a setting density per kiln exceeding 300 kilograms per cubic metre.

Not Relevant

6. Chemical Industry (development not included in Part 1 of this Schedule)

(a) Installations for treatment of intermediate products and production of chemicals using a chemical or biological process.

Potential to trigger EIA

See response to Part 1 6a above

(b) All installations for production of pesticides and pharmaceutical products, paint and varnishes, elastomers and peroxides using a chemical or biological process.

Not Relevant

(c) Storage facilities for petroleum, where the storage capacity would exceed 50,000 tonnes.

Not Relevant

(d) Storage facilities for petrochemical and chemical products, where such facilities are storage to which the provisions of Articles 9, 11 and 13 of Council Directive 96/82/EC1 apply.

Potential to trigger EIA.

The Hydrogen Plant is expected to be designated a lower-tier COMAH site due to the provision of 26 tube trailer bays onsite, which based on current tube trailer technology could store a total of 31.2 tonnes of hydrogen at any one point in time. Maximum onsite capacity to store hydrogen is 40.128 tonnes, with 26 filled tube trailers occupying the tube trailer bays, plus 7 filled tube trailers, one at each of the filling stations plus the buffer tank capacity of 528 kg. The upper-tier threshold is 50 tonnes.

See response to Part 1 6a in terms of no effect to EIAR.

7. Food Industry

(a) Installations for manufacture of vegetable and animal oils and fats, where the capacity for processing raw materials would exceed 40 tonnes per day.

Not Relevant

(b) Installations for packing and canning of animal and vegetable products, where the capacity for processing raw materials would exceed 100 tonnes per day.

Not Relevant

(c) Installations for manufacture of dairy products, where the processing capacity would exceed 50 million gallons of milk equivalent per annum.

Not Relevant

(d) Installations for commercial brewing and distilling; installations for malting, where the production capacity would exceed 100,000 tonnes per annum.

Not Relevant

(e) Installations for confectionery and syrup manufacture, where the production capacity would exceed 100,000 tonnes per annum.

Not Relevant

(f) Installations for the slaughter of animals, where the daily capacity would exceed 1,500 units and where units have the following equivalents:-

1 sheep = 1 unit

1 pig = 2 units

1 head of cattle = 5 units

Not Relevant

(g) All industrial starch manufacturing installations.

Not Relevant

(h) All fish-meal and fish-oil factories.

Not Relevant

(i) All sugar factories.

Not Relevant

Textile, leather, wood and paper industries

(a) All installations for the production of paper and board not included in Part 1 of this Schedule.

Not Relevant

(b) Plants for the pre-treatment (operations such as washing, bleaching, mercerisation or dyeing of fibres or textiles), where the treatment capacity would exceed 10 tonnes per day.

Not Relevant

(c) Plants for the tanning of hides and skins, where the treatment capacity would exceed 100 skins per day.

Not Relevant

(d) Cellulose-processing and production installations, where the production capacity would exceed 10,000 tonnes per annum.

Not Relevant

9. Rubber Industry

Installations for manufacture and treatment of elastomer based products, where the production capacity would exceed 10,000 tonnes per annum.

Not Relevant

10. Infrastructure projects

(a) Industrial estate development projects, where the area would exceed 15 hectares.

Not Relevant

(b) (i) Construction of more than 500 dwelling units.

Not Relevant

(ii) Construction of a car-park providing more than 400 spaces, other than a car-park provided as part of, and incidental to the primary purpose of, a development.

Not Relevant

(iii) Construction of a shopping centre with a gross floor space exceeding 10,000 square metres.

Not Relevant

(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.

(In this paragraph, “business district” means a district within a city or town in which the predominant land use is retail or commercial use.)

Not Relevant

(c) All construction of railways and of intermodal transhipment facilities and of intermodal terminals not included in Part 1 of this Schedule which would exceed 15 hectares in area.

Not Relevant

(d) All airfields not included in Part 1 of this Schedule with paved runways which would exceed 800 metres in length.

Not Relevant

(dd) All private roads which would exceed 2000 metres in length.

Not Relevant. The Hydrogen Plant Site will be serviced by an access road of 515 m in length which will be 7 m wide.

(e) New or extended harbours and port installations, including fishing harbours, not included in Part 1 of this Schedule, where the area, or additional area, of water enclosed would be 20 hectares or more, or which would involve the reclamation of 5 hectares or more of land, or which would involve the construction of additional quays exceeding 500 metres in length.

Not Relevant

(f) (i) Inland waterway construction not included in Part 1 of this Schedule which would extend over a length exceeding 2 kilometres.

Not Relevant

(ii) Canalisation and flood relief works, where the immediate contributing sub-catchment of the proposed works (i.e. the difference between the contributing catchments at the upper and lower extent of the works) would exceed 100 hectares or where more than 2 hectares of wetland would be affected or where the length of river channel on which works are proposed would be greater than 2 kilometres.

Not Relevant

(g) Dams and other installations not included in Part 1 of this Schedule which are designed to hold water or store it on a long-term basis, where the new or extended area of water impounded would be 30 hectares or more.

Not Relevant

(h) All tramways, elevated and underground railways, suspended lines or similar lines of a particular type, used exclusively or mainly for passenger transport.

Not Relevant

(i) Oil and gas pipeline installations and pipelines for the transport of CO2 streams for the purposes of geological storage (projects not included in Part 1 of this Schedule).

Not Relevant

(j) Installation of overground aqueducts which would have a diameter of 1,000 millimetres or more and a length of 500 metres or more.

Not Relevant

(k) Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dikes, moles, jetties and other sea defence

works, where the length of coastline on which works would take place would exceed 1 kilometre, but excluding the maintenance and reconstruction of such works or works required for emergency purposes.

Not Relevant

(l) Groundwater abstraction and artificial groundwater recharge schemes not included in Part 1 of this Schedule where the average annual volume of water abstracted or recharged would exceed 2 million cubic metres.

Not Relevant Annual Water Demand 65,021m^3

(m) Works for the transfer of water resources between river basins not included in Part 1 of this Schedule where the annual volume of water abstracted or recharged would exceed 2 million cubic metres.

Not Relevant

11. Other projects

(a) All permanent racing and test tracks for motorised vehicles.

Not Relevant

(b) Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule.

Not Relevant

(c) Waste water treatment plants with a capacity greater than 10,000 population equivalent as defined in Article 2, point (6), of Directive 91/271/EEC not included in Part 1 of this Schedule.

(d) Sludge-deposition sites where the expected annual deposition is 5,000 tonnes of sludge (wet).

Not Relevant

(e) Storage of scrap metal, including scrap vehicles where the site area would be greater than 5 hectares.

Not Relevant

(f) Test benches for engines, turbines or reactors where the floor area would exceed 500 square metres.

Not Relevant

(g) All installations for the manufacture of artificial mineral fibres.
Not Relevant

(h) All installations for the manufacture, packing, loading or placing in cartridges of gunpowder and explosives or for the recovery or destruction of explosive substances.
Not Relevant

(i) All knackers' yards in built-up areas.
Not Relevant

12. Tourism and leisure
(a) Ski-runs, ski-lifts and cable-cars where the length would exceed 500 metres and associated developments.
Not Relevant

(b) Sea water marinas where the number of berths would exceed 300 and fresh water marinas where the number of berths would exceed 100.
Not Relevant

(c) Holiday villages which would consist of more than 100 holiday homes outside built-up areas; hotel complexes outside built-up areas which would have an area of 20 hectares or more or an accommodation capacity exceeding 300 bedrooms.
Not Relevant

(d) Permanent camp sites and caravan sites where the number of pitches would be greater than 100.
Not Relevant

(e) Theme parks occupying an area greater than 5 hectares.
Not Relevant

13. Changes, extensions, development and testing

(a) Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension referred to in Part 1) which would:-

(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and

(ii) result in an increase in size greater than –

- 25 per cent, or
- an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.

Not Relevant

(b) Projects in Part 1 undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than 2 years.
(In this paragraph, an increase in size is calculated in terms of the unit of measure of the appropriate threshold.)

Not Relevant

(c) Any change or extension of development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, which would result in the demolition of structures, the demolition of which had not previously been authorised, and where such demolition would be likely to have significant effects on the environment, having regard to the criteria set out under Schedule 7.

Not Relevant

14. Works of Demolition

Works of demolition carried out in order to facilitate a project listed in Part 1 or Part 2 of this Schedule where such works would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

Not Relevant

The demolition of agricultural shed C and partial demolition of agricultural shed B is required for the Proposed Development. Demolition of an existing dwelling and agricultural sheds D and E and the demolition of the remainder of shed B will be required as part of the Project and has been assessed in this EIAR but does not form part of the present application and will be subject to a separate application for planning permission.

The impacts have been assessed throughout the EIAR and have found to be not significant.

15. Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.

Not Relevant

The demolition of agricultural shed C and partial demolition of agricultural shed B is required for the Proposed Development. Demolition of an existing dwelling and agricultural sheds D and E and the demolition of the remainder of shed B will be required as part of the Project and has been assessed in this EIAR but does not form part of the present application and will be subject to a separate application for planning permission.

The impacts have been assessed throughout the EIAR and have found to be not significant.

2.2 Conclusion

Whether the Hydrogen Plant itself triggered EIA is not relevant as the Wind Farm element of the Project did trigger an EIA and therefore the entire project was subject to EIA.

The EIAR submitted was prepared in accordance with the EIA Directive as amended by the 2014 EIA Directive, as well as the national implementing legislation, in particular, the Planning Acts and the Planning Regulations as amended.

Section 171A of the Planning and Development Act 2000 (as amended) defines an Environmental Impact Assessment (EIA) as '*a process*—

(a) consisting of—

(i) the preparation of an environmental impact assessment report by the applicant in accordance with this Act and regulations made thereunder,

(ii) the carrying out of consultations in accordance with this Act and regulations made thereunder,

(iii) the examination by the planning authority or the Board, as the case may be, of—*(I) the information contained in the environmental impact assessment report, (II) any supplementary information provided, where necessary, by the applicant in accordance with section 172(1D) and (1E), and (III) any relevant information received through the consultations carried out pursuant to subparagraph (ii),*

(iv) the reasoned conclusion by the planning authority or the Board, as the case may be, on the significant effects on the environment of the proposed development, taking into account the results of the examination carried out pursuant to subparagraph (iii) and, where appropriate, its own supplementary examination, and

(v) the integration of the reasoned conclusion of the planning authority or the Board, as the case may be, into the decision on the proposed development, and

(b) which includes—
(i) an examination, analysis and evaluation, carried out by the planning authority or the Board, as the case may be, in accordance with this Part and regulations made thereunder, that identifies, describes and assesses, in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of the proposed development on the following: (I) population and human health; (II) biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive; (III) land, soil, water, air and climate; (IV) material assets, cultural heritage and the landscape; (V) the interaction between the factors mentioned in clauses (I) to (IV), and

(ii) as regards the factors mentioned in subparagraph (i)(I) to (V), such examination, analysis and evaluation of the expected direct and indirect significant effects on the environment derived from the vulnerability of the proposed development to risks of major accidents or disasters, or both major accidents and disasters, that are relevant to that development.

Article 5 of the 2014 EIA Directive by Directive 2014/52/EU provides where an EIA is required, the developer shall prepare and submit an Environmental Impact Assessment Report (EIAR). The information to be provided by the developer shall include at least:

(a) *a description of the Development comprising information on the site, design, size and other relevant features of the Development*
(b) *a description of the likely significant effects of the Development on the environment*
(c) *a description of the features of the Development and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment*

(d) a description of 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 the option chosen, taking into account the effects of the Development on the environment

(e) a non-technical summary of the information referred to in points (a) to (d) and

(f) any additional information specified in Annex IV relevant to the specific characteristics of a particular Development or type of Development and to the environmental features likely to be affected.

The function of the EIAR is to provide information to allow the competent authority to reach a reasoned conclusion on the effects of a development and inform subsequent decisions, such as planning. All elements of the Project, (including the Grid Connection, Hydrogen Plant Site and Turbine Delivery Route) have been assessed as part of this EIAR.