

Appendix 6B

EIAR Consultation Letter (Issued)

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02 June 2023

Dear Sir/Madam

Re: EIA Consultation – Proposed Derrygreenagh Power Project, Co. Offaly

AECOM have been appointed by Bord na Móna Powergen Limited (herein referred to as the Applicant) to undertake an assessment of the environmental impact of Derrygreenagh Power Project (herein referred to as the Proposed Development) within the Bord na Móna Energy Park. Bord na Móna Energy Park is situated within the Derrygreenagh bog group in Counties Offaly, Westmeath and Meath, but the Proposed Development lies entirely within the administrative boundary of Offaly County Council.

A thermal power plant at Derrygreenagh was previously consented (An Bord Pleanála (ABP) case reference no 19.PA0011) in 2010, as a Strategic Infrastructure Development (SID) and remains extant, as the appropriate period was extended under Section 42 of the Planning and Development Act as amended. The extant planning permission for the power plant cannot be developed without consents being in place for overall project including the gas connection corridor to the north and electricity grid connection to the south. The design of the power plant and technology associated will meet current standards for the use of best available techniques (BAT) for Large Combustion Plants CID (EU) 2021/2326, national targets around carbon reduction and long term climate action strategy in the SID planning application. The Proposed Development will comply with Best Available Technology (BAT) for new large combustion plants.

The Proposed Development will be a responsive power generator to secure national electricity networks and stability of power supply complementary to the growing installed levels of intermittent renewable generation as part of the transition to net zero including anticipated growth in energy demand due to increased activity by high energy industries and electrification of heat and transport. The Proposed Development will also allow for replacement of existing conventional generation power stations with lower carbon technology and the plant design will enable transition to hydrogen use in future. The plant will operate primarily off gas from the national grid pipeline supply, the Proposed Development will have storage of a secondary fuel source, to comply with Secondary Fuel Obligations on Licensed Generation Capacity as required.

Environmental Impact Assessment (EIA) and EIA Consultation

To inform the updated planning application to ABP, an Environmental Impact Assessment Report (EIAR) for the Proposed Development and Overall Project is being provided in accordance with the EU EIA Directive 2011/92/EU, as amended by EIA Directive 2014/52/EU (assessment of effects of certain public and private projects on the environment) and the European Union (Planning and Development (Environmental Impact Assessment) Regulations 2018.

The EIAR will assess the components of the project for which planning consent is being applied for (the 'Proposed Development' - i.e. the Power Plant Area and the Electricity Grid Connection to the south of the power plant) and to ensure a robust environmental assessment for the wider project context will include the gas connection corridor and Above Ground Infrastructure (AGI) at tie-in connection to the Gas Pipeline (BGE/77), to the north of the power plant area (i.e. the 'Overall Project'). The gas pipeline and AGI at the high pressure line will be subject to separate consenting processes by Gas Networks Ireland under Section 39A of the Gas Act as amended and Section 34 of Planning and Development Act as amended, respectively.

Baseline assessments have been underway for some time and it is expected the planning application and associated EIAR will be submitted for consideration by ABP in the second half of 2023.

A comprehensive Environmental Impact Assessment Report (EIAR) is being prepared at present by AECOM and will form part of the planning application. In addition, the application will be subject to Appropriate Assessment (AA). The first stage of this, Appropriate Assessment Screening, is underway at present.

As part of the EIA process, the Applicant wishes to consult with your organisation to request any specific environmental comments or further information requests regarding the Proposed Development and Overall Project to further inform the EIA process.

The Proposed Development and Overall Project

The site of the proposed power plant is located in the townland of Derrygreenagh, in close proximity to the border between Co. Offaly and Co. Westmeath. The Power Plant Area is located to the east of the R400 road, with the exception of the process water discharge pipe which extends west of the R400 road discharging to the Yellow River c. 3km southwest of the power plant area. The main Power Plant Area is accessed east from the R400 Rochfortbridge-Rhode road and is c. 2.2km to the south-east of junction 3 on the M6 motorway. The electricity grid connection is located to the west of the R400 road and north of the Grand Canal and runs across the townlands of Derryarkin, Derryiron, Ballybeg, Barrysbrook, Togher and Coole and will connect to the existing 400Kv power line that runs in a west to east direction.

The Proposed Development and Overall Project will comprise of the following main components (for construction, operation and decommissioning phases) as presented on Table A below:

Table A – Key Project Elements and their Role

Proposed Elements	Description of Elements
<p>Power Plant Area <i>Relates to components which form part of the planning permission being requested and includes the main thermal power plant area and gas AGI, east of R400 with the process water discharge pipe route extending west of the R400 before discharging to the Yellow River some 3km southwest of the power plant area.</i></p>	
<p>The Power Plant Area (located on the existing BnM Derrygreenagh Works site and will also be the Industrial Emission (IE) Licenced Area) includes the following main components:</p> <ul style="list-style-type: none"> ○ Combined Cycle Gas Turbine (CCGT) Unit which includes a CCGT Turbine Hall and buildings and Heat Recovery Steam Generator (HRSG) and emission stack ○ Open Cycle Gas Turbine (OCGT) Plant and emission stack ○ Secondary Fuel Storage and Unloading Facility ○ Gas Connection Above Ground Installation (AGI) Compound and associated gas connection corridor and site entrance onto R400 ○ Administration, stores, workshop buildings and car parks ○ Maintenance Compounds ○ Water Storage Tanks ○ Water Treatment Plant ○ Surface water drainage and attenuation ○ The Proposed Development will require demolition works of existing buildings, the BnM Derrygreenagh Works including 	<p>The proposed power plant will contain a Combined Cycle Gas Turbine (CCGT) unit and an Open Cycle Gas Turbine (OCGT) unit. It will have the ability to cover longer periods of low generation from renewable resources (CCGT) and also to operate as a rapid start-up 'peaking plant' (OCGT).</p> <p>Both elements of the proposed plant are a key part of supporting the transition to a renewables-based grid, allowing more reliance on renewable generation when available, with a responsive and high-efficiency alternative available for longer periods when needed.</p> <p>The proposed CCGT consists of a gas turbine fuelled by natural gas. The gas turbine generates electricity, with the heat from the exhaust generating steam in a heat recovery steam generator (HRSG). The steam produced in the HRSG is used by a steam turbine to also generate electricity.</p> <p>The steam exhausted by the turbine is condensed in an air-cooled condenser. The condensate is returned to the HRSG to continue the steam generation process. The overall thermal efficiency is substantially greater than the efficiencies of the gas or steam turbines individually. The efficiency is also considerably higher than conventional coal, peat, biomass, waste or oil-fired generation plants.</p> <p>The proposed OCGT operates without a HRSG and enables rapid response to changes in electricity demand and/or renewable generation by being able to start up very quickly and achieve full output within short periods of time.</p> <p>As the energy generation process requires water, the proposed development will include water abstraction, water storage tanks, water treatment (to demineralise water to prepare it for passing through the HRSG) and waste water treatment (to remove any build up of salts, regulate pH, oxygen content and temperature) in advance of discharge.</p>

Proposed Elements	Description of Elements
<p>offices, workshops and associated buildings.</p>	<p>Based on the general use of the Proposed Development, there will be foul water treatment and surface water management in advance of discharge. The processes used in abstraction and treatment will comply with the relevant Water Framework Directive Objectives.</p>
<p>Electricity Grid Connection <i>Relates to components which form part of the planning permission being requested and includes the proposed 220kV substation west of the power plant area and proposed loop-in 400 substation onto the existing 400kV Oldstreet-Woodland line south of the site.</i></p>	
<p>To facilitate a connection from the Power Plant Area to the electricity grid the following is proposed:</p> <ul style="list-style-type: none"> ○ 220kV underground Cable connection to the Power station site; ○ 220kV substation (west of R400 road); ○ 220kV Overhead Line; ○ 200kV Interface Compound; ○ 220kV Underground Cable Connection; ○ 400kV substation at entry point to the transmission network; ○ 2 no telecommunication masts at each of the substation sites. 	<p>Once power is generated, it has to be distributed into the wider electricity network.</p> <p>To facilitate this link into the distribution network, it is proposed to build a short underground cable connecting to a 220kV substation west of the Power Plant Area (west of the R400 road) and a 220kV double circuit overhead line (with c. 45m high suspension and strain pylons, c. 4.9km corridor in length, facilitated by 19 no pylons) connecting into a 220kV underground cable via interface compound, the double circuit cable (c. 2.3km – 3.2km depending on cable option) will then link the into the existing 400kV transmission network through a new 400kV loop in substation located north of the Grand Canal.</p>
<p>Temporary Construction Work <i>Relates to components which form part of the planning permission being requested and includes temporary works required to facilitate the construction phase of the project.</i></p>	
<p>The following will be required to facilitate the Proposed Development and Overall Project and will be assessed in the EIAR:</p> <ul style="list-style-type: none"> ○ Demolition of the existing Derrygreenagh Works site buildings; ○ Temporary Construction Compounds, facilities, security cabins and stores; ○ Temporary site access points and car parks; ○ Temporary traffic management measures; ○ Temporary Signage, crossing points and road markings; ○ Temporary lighting; ○ Peat and spoil management. 	<p>In order to construct the various elements of the Proposed Development, there will be a requirement to have temporary construction compounds for each of the elements both within Power Plant Area, and in the location of the 220kV substation area and tie into the existing electricity network at the 400kV- substation area.</p> <p>The duration of the construction works will vary between key elements but it is expected that the works will commence in H2 2024 and complete ahead of the Power Plant becoming operation in H1/H2 2027.</p> <p>The Proposed Development will require demolition works of existing buildings, the BnM Derrygreenagh Works including offices, workshops and associated buildings.</p> <p>All proposed activities on the site will be provided for in the Construction and Environmental Management Plan (CEMP) which will set out the key environmental considerations to be taken into account by the contractor during construction of the Proposed Development and Overall Project. The CEMP also details the mitigation and monitoring measures to be implemented in order to comply with the environmental commitments outlined in the EIAR. The contractor will be contractually obliged to comply with all such measures.</p> <p>A Construction Traffic Management Plan (CTMP) will be created for the site to ensure work activities in, near, or having impact upon the public highway, are undertaken safely and with minimal impact on traffic movement and existing infrastructure throughout the works programme.</p>

Proposed Elements	Description of Elements
<p>Gas Connection Corridor <i>Relates to components which will not form part of the planning permission being requested and includes an underground connection to the existing high pressure Gas Pipeline to the West (BGE/77), north of the power plant site via AGI at tie-in location and underground routing of pipeline.</i></p>	
<p>To facilitate a connection from the Power Plant Area to the existing gas grid the following is proposed:</p> <ul style="list-style-type: none"> ○ An underground high-pressure (HP) natural gas pipeline up to 400mm in diameter and with a maximum design pressure of up to 85 bar to transport natural gas from the BGE/77 Transmission Pipeline to the Power Plant Area AGI; ○ Connection will be via a tie-in location through an AGI to provide the connection to the BGE/77 Transmission Pipeline; ○ A cathodic protection (CP) system; ○ Aerial gas pipeline identification marker posts and CP test posts; ○ Surface water drainage systems including channelling, culverting, crossings and works to existing drainage ditches and systems. 	<p>The Gas Connection Route Corridor will contain the gas connection pipe to be constructed between the Gas Pipeline to the West (BGE/77) c. 9.7km to the north of the Site and the Power Plant Area.</p> <p>The gas connection pipe is part of the Overall Project and will enable the Proposed Development to connect to the existing high pressure gas pipeline to the north via tie-in connection (through AGI requirement) and underground routing. An underground gas connection is not being applied for in the planning application for the Proposed Development (as it will be applied for by Gas Networks Ireland), however an underground connection corridor and construction and operation will be assessed in the EIAR as part of the Overall Project Site to ensure a robust environmental assessment.</p> <p>The proposed corridor route is based upon a set of high level constraints and is considered a suitable route corridor for the gas pipeline connection and traverses mostly through agricultural land, west of Rochfortbridge with crossing points at local roads, 1 x regional road, the M6 motorway, and 2 x streams. The final corridor and route selection will be carried out as part of the GNI design and application process.</p>

Consultation

Based on the foregoing, we would be grateful for any comments or additional information of relevance which you may have that can be taken into consideration as part of the environmental assessment process.

If you do wish to make comment, **please forward these by email to derrygreenagh@aecom.com** as soon as reasonably possible, but **no later than 30 June 2023** in order for them to be taken into consideration.

Should you wish to discuss any aspects of the project further, or seek clarification about the information requested, please do not hesitate to contact us. An early response would be appreciated.

Yours faithfully

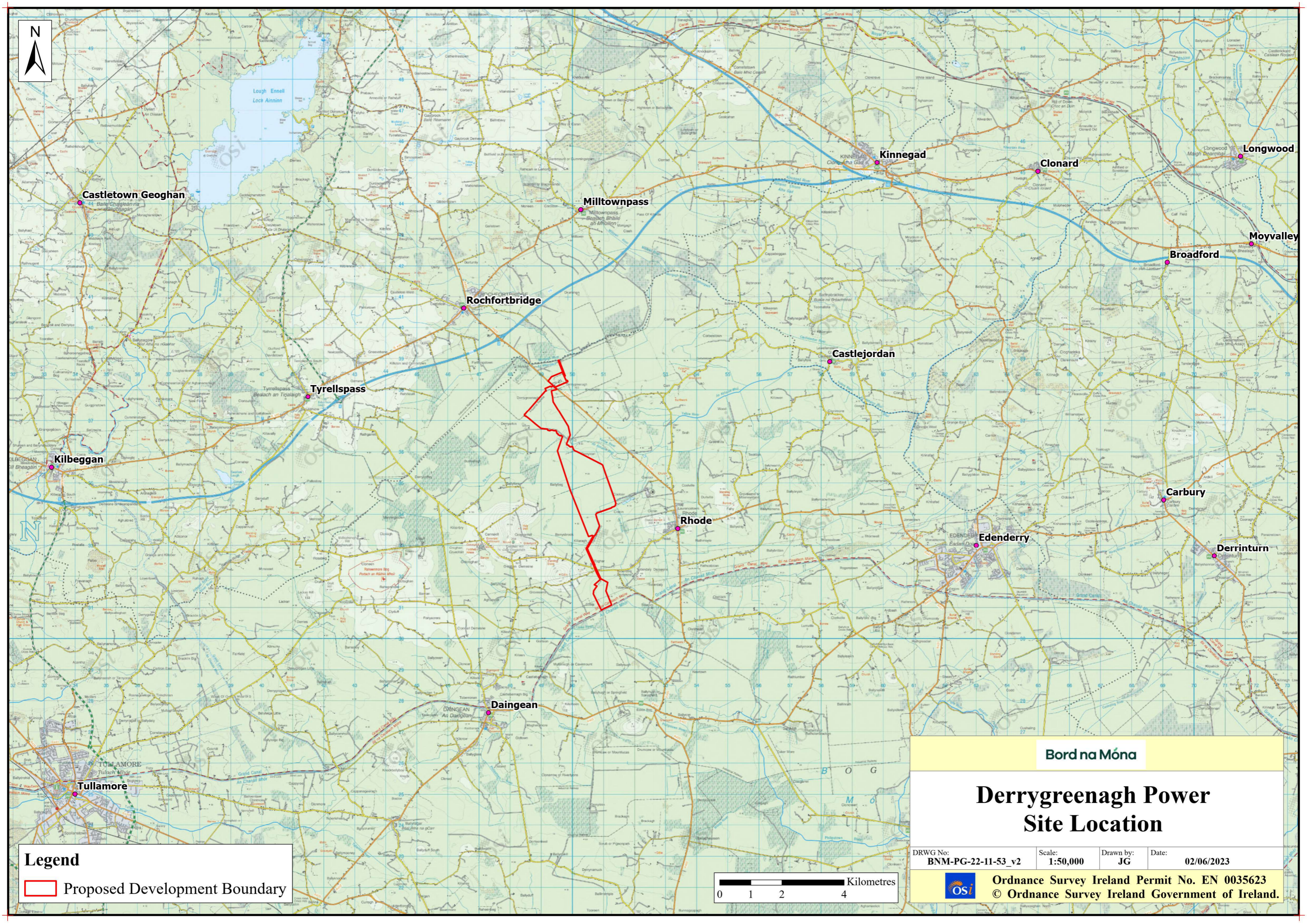


Peter O'Connor MRICS MCIWM
 Associate Director, Environment
 AECOM Environment & Planning

Enc:

Figures (attached)

- Derygreenagh Power Site Location
- Derygreenagh Power Proposed Development Overview
- Indicative Site Layout



Legend
 Proposed Development Boundary



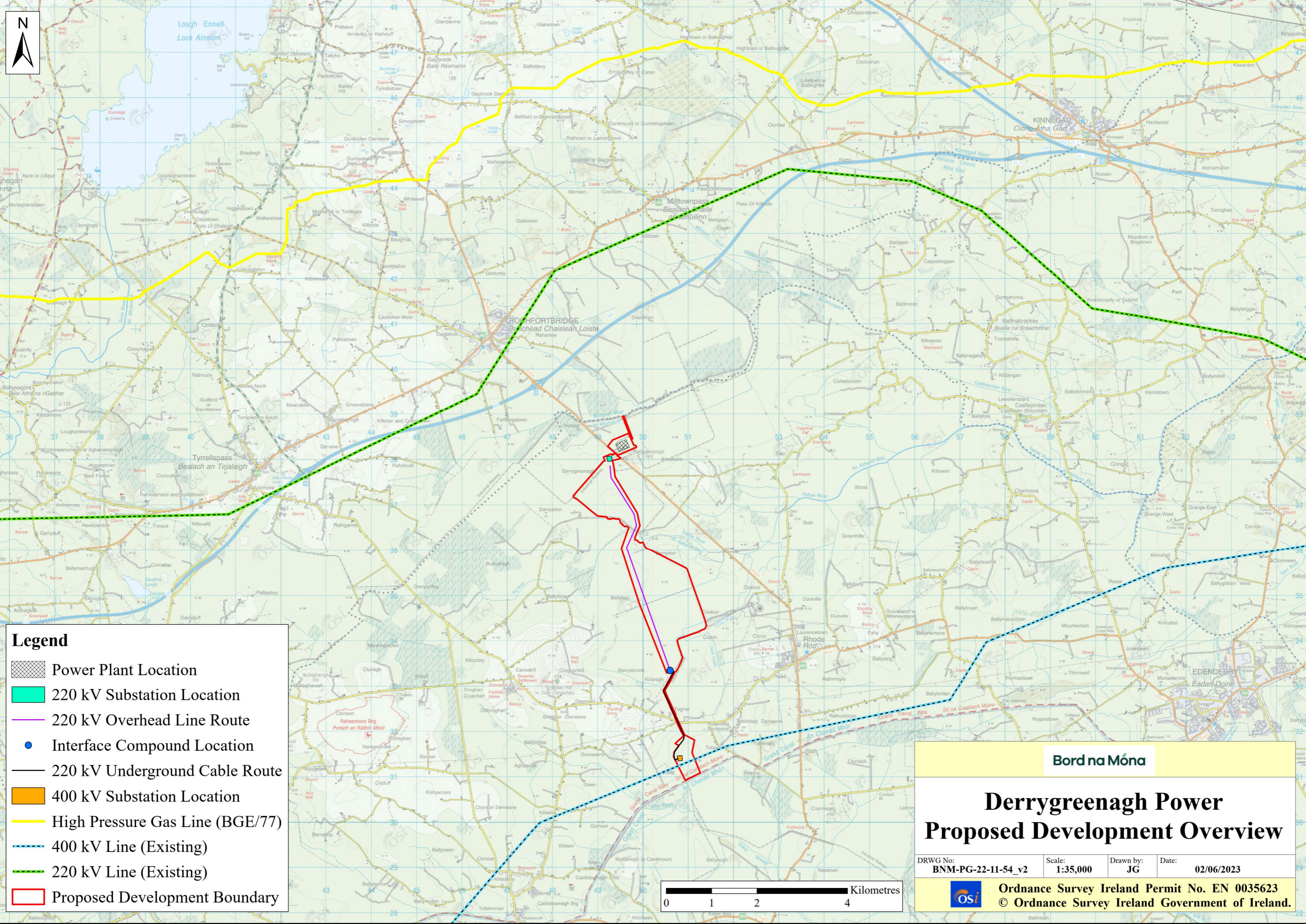
Bord na Móna

Derrygreenagh Power Site Location











DRWG No: **BNM-PG-22-11-53_v2** Scale: **1:50,000** Drawn by: **JG** Date: **02/06/2023**



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Legend

-  Power Plant Location
-  220 kV Substation Location
-  220 kV Overhead Line Route
-  Interface Compound Location
-  220 kV Underground Cable Route
-  400 kV Substation Location
-  High Pressure Gas Line (BGE/77)
-  400 kV Line (Existing)
-  220 kV Line (Existing)
-  Proposed Development Boundary



Bord na Móna

Derrygreenagh Power Proposed Development Overview

DRWG No: BNM-PG-22-11-54_v2	Scale: 1:35,000	Drawn by: JG	Date: 02/06/2023
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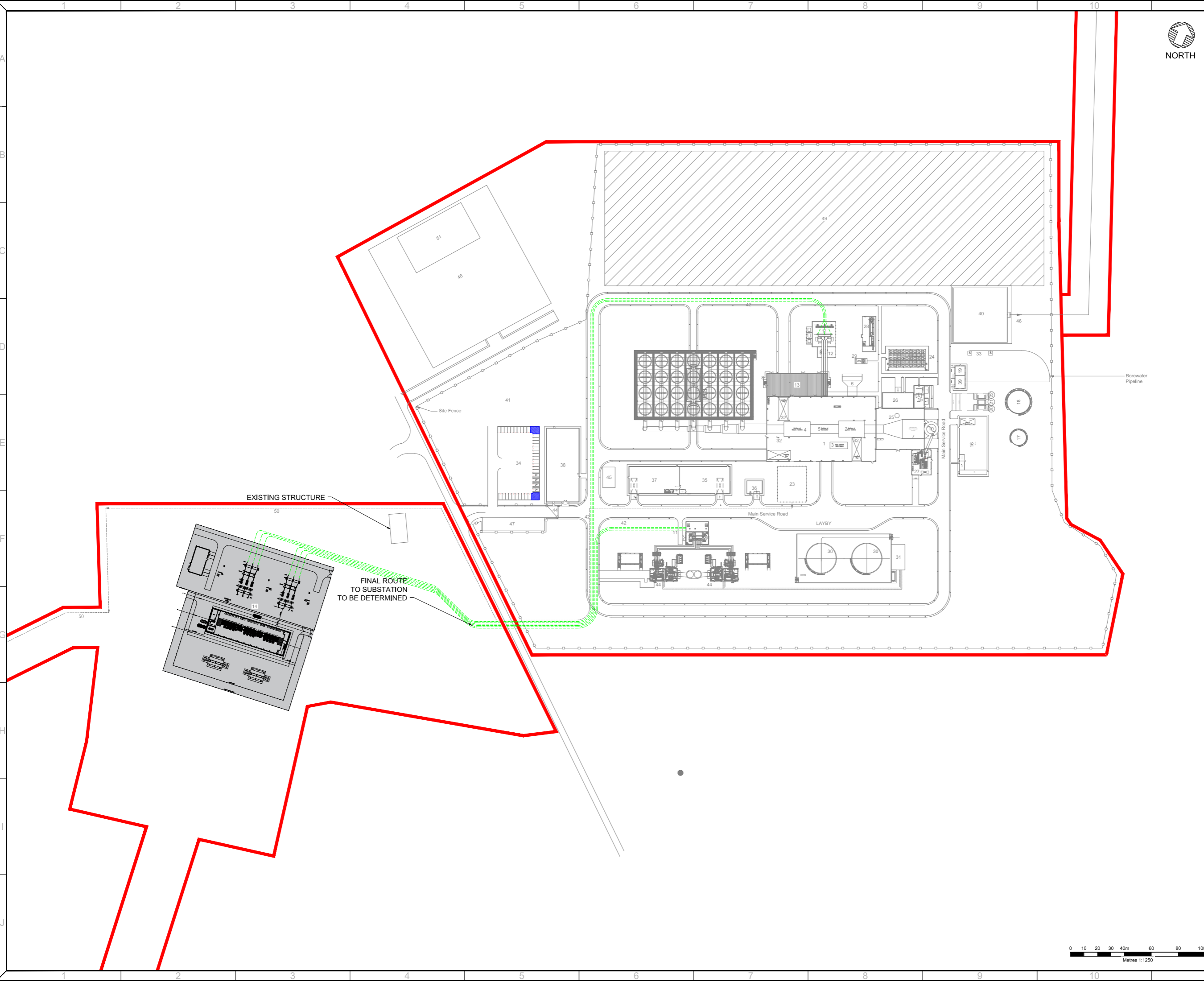
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ALL INFORMATION ON THIS DRAWING IS INDICATIVE ONLY.
AND MAY BE SUBJECT TO
FURTHER DESIGN DEVELOPMENT.
DO NOT SCALE

- LEGEND**
- SITE BOUNDARY
 - CABLE ROUTE
 - GAS PIPE ROUTE
 - FUTURE CCUS SITE

- KEY**
1. COGT TURBINE HALL
 2. GAS TURBINE
 3. MCC ROOM
 4. STEAM TURBINE
 5. GENERATOR
 6. AIR INLET FILTER
 7. HEAT RECOVERY STEAM GENERATOR (HRSG)
 8. AIR COOLED CONDENSER (ACC)
 9. ACC MCC ROOM
 10. EXHAUST STACK
 11. GENERATOR TRANSFORMER
 12. UNIT AUXILIARY TRANSFORMER
 13. ELECTRICAL BUILDING
 14. 220kV SUBSTATION
 15. BOILER DOSING BUILDING
 16. WATER TREATMENT PLANT
 17. DEMIN WATER STORAGE TANK
 18. RAW WATER STORAGE TANK
 19. RAW WATER PUMPHOUSE
 20. CAUSTIC STORAGE TANK
 21. CAUSTIC BRINE TANK
 22. ACID STORAGE TANK
 23. PROCESS WASTE WATER
 24. ANCILLARY COOLERS
 25. BOILER WASTE WATER DRAIN TANK
 26. BOILER FEED PUMPS
 27. AUXILIARY BOILER
 28. FUEL GAS PERFORMANCE HEATER ROOM
 29. EMERGENCY DIESEL GENERATOR
 30. DISTILLATE STORAGE TANK IN BUND
 31. DISTILLATE PUMP SUPPLY CANOPY
 32. LOADING BAY
 33. WATER BOREHOLES & PIPELINE
 34. STAFF CAR PARK
 35. STORES BUILDING
 36. LUBE OIL STORAGE
 37. WORKSHOP
 38. ADMINISTRATION BUILDING & CONTROL ROOM
 39. FIRE PUMPHOUSE
 40. SURFACE WATER ATTENUATION TANKS
 41. AREA FOR OUTAGE CONTRACTORS COMPOUND
 42. UNDERGROUND CABLE ROUTE
 43. OPEN CYCLE GAS TURBINE GENERATOR
 44. MAIN ACCESS GATE
 45. FOUL WATER TREATMENT PLANT
 46. SURFACE WATER DISCHARGE PIPE
 47. LAY-BY
 48. ABOVE GROUND GAS INSTALLATION (AGI) COMPOUND
 49. AREA FOR CONSTRUCTION PHASE
 50. PROCESS WATER DISCHARGE ROUTE
 51. SPACE RESERVE FOR GAS COMPRESSORS & ANCILLARIES



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CLIENT:
BORD NA MÓNA POWERGEN LIMITED

SITE:
MAIN AND SUBSTATION SITE

PROJECT:
DERRYGREENAGH THERMAL POWER PLANT

TITLE:
INDICATIVE SITE LAYOUT

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