Appendix 14H

Construction Traffic Management Plan (CTMP)

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Proposed Derrygreenagh Power Project

Construction Traffic Management Plan (CTMP)

Bord na Mona

January 2024

Delivering a better world

Quality information

Prepared by	Checked by	Verified by	Approved by
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Revision History

Revision	Revision date	Details	Authorized	Name	Position
0	14.11.23	Initial Draft for client review	EG	Emma Greenlees	Associate Director
1	24.11.23	Final	EG	Emma Greenlees	Associate Director
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1. Introduction

1.1 Background

AECOM have been commissioned by Bord Na Móna, to provide a Construction Traffic Management Plan (CTMP) to accompany the proposals for their development at Derrygreenagh Power Station, Co. Offaly ('the Site').

This document is a live working document and will therefore be updated with more detail by the contractor once appointed. Reference will therefore be made throughout to a 'full construction traffic management plan', this refers to the CTMP once the contractor has provided input.

1.2 Site Location

The site on which the Proposed Development will be located is in the townlands of Derrygreenagh, Derryarkin, Derryiron, Ballybeg, Barrysbrook, Togher and Coole. The Power Plant Area (PPA) site (with the exception of the process & surface water discharge pipelines) will be predominantly located on the site of existing Derrygreenagh Works east of the R400 road. The location of the existing Bord Na Mona facility is shown in Figure 1. The proposed site boundary is shown in **Appendix A.**

Figure 1 - Site Location

The Proposed Development and Overall Project will consist of three elements:

- Power Plant Area;
- Electric Grid Connection; and
- Gas Corridor Connection.

The Gas Connection Corridor, which runs from the Dublin-Galway high pressure gas network (BGE/77) to the Power Plant Area, is not included as part of this planning application but is integral to the Overall Project and so is considered throughout the EIAR in so far as reasonably practicable. The Gas Connection Corridor may be subject to change during the detailed design and consenting process to be carried out by Gas Networks Ireland (GNI). The location of site entrances and transport routes for the construction phase of the Gas Connection Corridor cannot be established until the design has been further progressed by GNI.

This CTMP is therefore, by necessity, associated only with the Proposed Development i.e., the Power Plant Area and Electric Grid Connection. It is envisaged that a separate CTMP for the Gas Connection Corridor will be developed and submitted as part of the future consenting process by GNI. Any future CTMP for the Gas Connection Corridor will also consider the Proposed Development (i.e., Power Plant Area and Electricity Grid Connection).

2. Proposed Development Overview

The Proposed Development includes a Power Plant Area which comprises a Combined Cycle Gas Turbine (CCGT) unit and an Open Cycle Gas Turbine (OCGT) unit, and an Electricity Grid Connection which includes 220kv and 400kV substations and associated buildings, grid connection cabling in the form of overhead lines and underground cabling and all associated infrastructure. The Proposed Development is located in County Offaly, predominantly on Bord na Móna land within the Derrygreenagh bog group.

The Proposed Development will support Bord Na Mona's portfolio of renewable energy and associated intermittent renewable generation but will also support the security of supply for the National Grid network by allowing for replacement of older conventional power systems with lower carbon gas-fired technology. The Proposed Development will also have the capability to operate off renewable gas blends as supply chains for hydrogen and biogas develop in accordance with the Hydrogen Strategy for Ireland and subject to future fuel mixes which will be provided by GNI through a high-pressure gas pipeline.

3. Outline Construction Traffic Management Plan

3.1 General

This CTMP deals directly with the impacts of construction of the Proposed Development. This document is considered to be a live working document and will therefore be appropriately updated by the contractor once appointed. Reference to the 'final' CTMP relates to any changes or revisions which may be made to this live document once the contractor has provided more detailed input.

The purpose of this CTMP is to outline measures to manage the expected construction traffic activity during the construction period.

3.2 Construction Programme and Phasing

The preliminary works are scheduled to commence in Q3 2024. The construction process for the entirety of the Proposed Development is expected to take 39 months.

The contractor will be required to update this document if any programme changes are made.

3.3 Construction Route

All HGVs will be required to travel to the site via the M6, exiting at Junction 3 onto R400 Regional road.

Any potential future deviations from this route will be agreed in advance between the contractor and the Local County Councils prior to the commencement of the construction phase.

The M6 and R400 in relation to the site are shown in Figure 1.

3.4 Parking

Parking areas are available for construction staff at the Power Plant Area, 220kV and 400kV sites. These parking areas are shown in **Appendix A.**

3.5 Mitigation Measures

This CTMP will be updated by the contractor prior to the commencement of work on site and will be finalised in consultation with Offaly County Council (OCC) and Westmeath County Council (WCC).

No works shall commence until such time that the full CTMP has been approved by OCC and WCC. Details of anticipated vehicle volumes are noted within this report, however final confirmation on movements and trip distribution will be set out in the final CTMP.

The Contractor will be required to accommodate and make provision for access and egress to local residential premises, paying particular attention to the provision of pedestrian/disabled/cyclist safe access and egress for the entire duration of the construction phase. The contractor will identify alternative routes for pedestrians and vehicles in the event that public roads or right of ways are closed during works, though this is not expected to be required. The CTMP will also include measures to limit the amount of queuing required by construction vehicles outside the site boundaries.

All licensing and administration matters should be directed through the Roads Department in OCC and WCC.

Construction debris, particularly site clearance, spoil removal and dirty water run off can have a significant impact on footpaths and roads adjoining a construction site, if not adequately dealt with and these matters will be fully addressed in the contractors full CTMP.

3.5.1 Site Management

The site activities will be undertaken with due consideration of the surrounding environment and the close proximity of sensitive receptors such as residents and pedestrians. Dust management during the construction phase will be the most important aspect in terms of minimising the impacts of the project on the surrounding air quality. The following measures will be implemented to ensure impacts are minimised:

- Complaint registers will be kept detailing all telephone calls and letters of complaint received in connection with construction activities, together with details of any remedial actions carried out;
- Equipment and vehicles used on site will be in good condition such that emissions from diesel engines etc. are not excessive;
- Pre-start checks will be carried out on equipment to ensure they are operating efficiently and that emission controls installed as part of the equipment are functional;
- Monitoring and control of demolition/construction traffic during construction works; and
- The use of prefabricated elements to minimise on site fabrication and assembly thereby reducing the numbers of site operatives required.

Dust deposition levels will be monitored on a regular basis in order to assess the impact that site activities may have on the local ambient air quality. The following procedures will be implemented:

- The dust deposition rate will be measured by positioning Bergerhoff Dust Deposition Gauges at strategic locations near the boundaries of the site for a period of 30 (+/- 2) days. Monitoring should be conducted as required during periods when the highest levels of dust are expected to be generated i.e., during site preparation works and soil stripping activities.
- The exact locations will be determined after consideration of the requirements of VDI standard 2119 with respect to the location of the samplers relative to obstructions, height above ground and sample collection and analysis procedures.
- After each 30 (+/- 2 days) exposure period, the gauges will be removed from the sampling location, sealed and the dust deposits in each gauge will be determined gravimetrically by an accredited laboratory and expressed as a dust deposition rate in mg/m^2/day in accordance with the relevant standards.
- Technical monitoring reports detailing all measurement results, methodologies and assessment of results shall be subsequently prepared and maintained by the Site Manager.

3.5.2 Dust Control Measures

The aim is to ensure good site management by avoiding dust becoming airborne at source. This will be done through good design, planning and effective control strategies. The timing of construction activities including stockpiling will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. In addition, good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures quickly before the potential for nuisance occurs.

- During working hours, technical staff will be available to monitor dust levels as appropriate; and
- At all times, the dust management procedures put in place will be strictly monitored and assessed.

The dust minimisation measures will be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust generation. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed, and procedures implemented to rectify the problem. Specific dust control measures to be employed are presented below.

3.5.3 Site Routes

Site access routes (particularly unpaved areas) can be a significant source of fugitive dust from construction sites if control measures are not in place. The most effective means of suppressing dust emissions from unpaved roads is to apply speed restrictions. Studies show that these measures can have a control efficiency ranging from 25% to 80%.

- A speed restriction of 20 km/hr will be applied as an effective control measure for dust for on-site vehicles or delivery vehicles within the site construction boundaries;
- Bowsers will be available during periods of dry weather throughout the construction period. Research has shown that the effect of surface watering is to reduce dust emissions by 50%. The bowser will operate during dry periods to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicular use; and

- Any hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced areas shall be restricted to essential site traffic only.

3.5.4 Excavation

Excavation works during periods of high winds and dry weather conditions can be a significant source of dust.

- During dry and windy periods, and when there is a likelihood of dust nuisance, watering shall be conducted to ensure moisture content of materials being moved is high enough to increase the stability of the soil and thus suppress dust; and
- During periods of very high winds (gales), activities likely to generate significant dust emissions should be postponed until the gale has subsided.

The movement of truck containing materials with a potential for dust generation to an off-site location will be enclosed or covered.

3.5.5 Stockpiling

The location and moisture content of stockpiles are important factors which determine their potential for dust emissions. The following measures will be put in place:

- Overburden material will be protected from exposure to wind by storing the material in sheltered parts of the site, where possible;
- Regular watering will take place during dry/windy periods to ensure the moisture content is high enough to increase the stability of the soil and suppress dust;
- Should short-term stockpiles be required these will be located at least 50 m away from any watercourse. Slopes of these stockpiles will be made stable and regularly checked by the contractor or appointed staff member. Stockpiles shall be stored on impermeable surfaces and covered using tarpaulin.

3.5.6 Site Traffic on Public Roads

Spillage and blow-off of debris, aggregates and fine material onto public roads will be reduced to a minimum by employing the following measures:

- Vehicles delivering material with potential for dust emissions to an off-site location shall be enclosed or covered at all times to restrict the escape of dust;
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only;
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate;
- Road sweepers will be employed to clean the site access route as required.

3.6 Hours of Operation

Working hours, will be in line with Council requirements and/or planning conditions and are to be agreed in advance with WCC and OFF**.** The hours are expected to be as follows, subject to approval:

- 07:00 hours to 19:00 hours Monday to Friday;
- 08:00 hours to 13:00 hours Saturday.

There may be circumstances when construction activities may need to be completed outside of these hours, and these activities and times will be discussed and agreed in advance with appropriate stakeholders on a case by case basis.

During the commissioning of the development at the onset of the Operational Phase, commissioning activities will be required outside of normal working hours and may result in 24 hour operation during the latter stages of commissioning.

3.7 Traffic Management Measures

Below is a list of the proposed traffic management measures to be adopted during the construction works. Please note that this is not an exhaustive list, and it will be updated by the appointed contractor:

- Warning signs / Advanced warning signs will be installed at appropriate locations in advance of the construction access locations. For example, warnings advise other road users of times of slow-moving vehicles during abnormal load deliveries;
- Consideration will be given to reduce the volume of construction traffic accessing the site through reduce – reuse and recycle methods. Delivery control will also be adopted to reduce potential heavy vehicle convoys.
- Temporary signage designating permissible HGV routes;
- Material deliveries and collections from site will be planned, scheduled and staggered to avoid unnecessary build-up of demolition/construction works related traffic;
- HGV trips are anticipated to arrive and depart the site at a uniform rate throughout the day to avoid pressure on the morning and evening peak hour periods;
- Speed limits of construction vehicles to be managed by appropriate signage, to promote low vehicular speeds within the site;
- Parking of site vehicles will be managed and will not be permitted on the public road, unless proposed within a designated area that is subject to traffic management measures and agreed with OCC and WCC;
- A road sweeper will be employed to clean the public roads adjacent to the site of any residual debris that may be deposited on the public roads leading away from the construction works;
- On site wheel washing will be undertaken for construction trucks and vehicles to remove any debris prior to leaving the site, to remove any potential debris on the local roads;
- All vehicles will be suitably serviced and maintained to avoid any leaks or spillage of oil, petrol or diesel. Spill kits will be available on site. All scheduled maintenance carried out off-site will not be carried out on the public highway;
- Safe and secure pedestrian facilities are to be provided where construction works obscure any existing pedestrian footways. Alternative pedestrian facilities will be provided in these instances, supported by physical barriers to segregate traffic and pedestrian movements, and to be identified by appropriate signage. Pedestrian facilities will cater for vulnerable users including mobility impaired persons; and
- Using Garda escorts for abnormal loads where required.

The mitigation measures will therefore ensure that the presence of construction traffic will not lead to any significant environmental degradation or safety concerns in the vicinity of the proposed works. Furthermore, it is in the interests of the construction programme that deliveries, particularly concrete deliveries are not unduly hampered by traffic congestion, and as a result continuous review of haulage routes, delivery timings and access arrangements will be undertaken as construction progresses to ensure smooth operation.

3.8 Staff Travel

During the site construction, the staff will be required to adhere to staff travel to work restrictions.

These restrictions are as follows:

- All PPA construction staff will be encouraged to travel to the site in minibuses to limit the number of vehicles entering the site. These minibuses will be organised by the contractor and will pick up staff at a range of different locations where parking is available. Pick up locations will be confirmed once the contractor staff are confirmed.
- For those PPA construction staff travelling to site in private vehicles the contractor will promote and organise a car sharing scheme.
- Staff working on the EGC sites will be permitted to drive to work, however, will also be encouraged to car share to limit vehicle arrivals. Once appointed, the contractor will identify staff living within close proximity to each other to organise car sharing groups.

3.9 Predicted Construction Traffic

The anticipated level of construction phase HGV traffic has been based on an assumed and preliminary outline construction methodology. The construction HGV traffic will be scheduled around the construction sequencing and avoid or minimise deliveries during the morning and afternoon traffic peaks.

Appendix 14B sets out the daily total trips expected each month during construction.

The maximum/peak combined construction traffic volumes are expected to occur between December 2025 and February 2026 when there are expected to be 828 two-way trips generated (412 of which are HGVs). However, the peak HGV traffic generation is expected between March 2025 and May 2025 when there are 454 two-way HGVs trips generated.

3.10 Abnormal Loads

During the construction of the Power Plant Area there are expected to be abnormal load deliveries for the following components:

- CCGT Gas Turbines Circa 350 tonnes;
- CCGT Generator 400 tonnes;
- CCGT Steam turbine modules;
- OCGT modules;
- OCGT and CCGT Generator Transformers; and
- HRSG modules.

During the Construction of the Electric Grid Connection there are expected to be abnormal load deliveries for the following components:

- 2 no. Transformers.

Abnormal load assessments have been completed on the local road network to identify where vehicle movements will require alternations to the road network, such removal of street furniture/ signage. The route assessed covers travel from the M6 to as far as the 400kV access i.e., from the M6, along R400, and through Rhode then along L1010 to the 400kV access. The contractor will undertake a detailed assessment of the full route once appointed.

WCC, OCC, TII, MMARC and An Garda Síochána will need to be informed of and approve any abnormal load movement before they take place as these may require road closures or other temporary measures.

Appendix A – Red Line Boundary

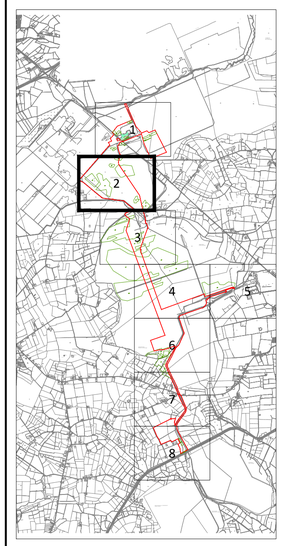
NORTH

NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

KEY MAP:



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NORTH

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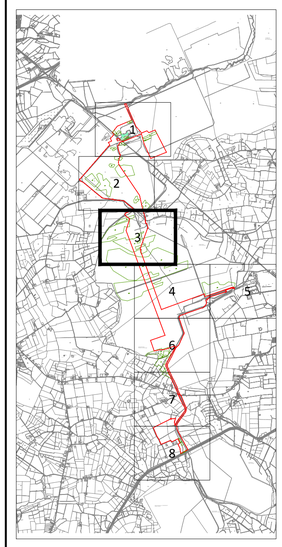
NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

KEY MAP:



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NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

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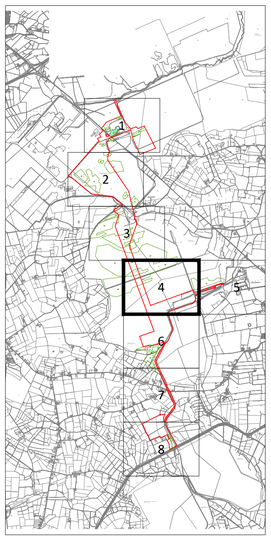

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NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

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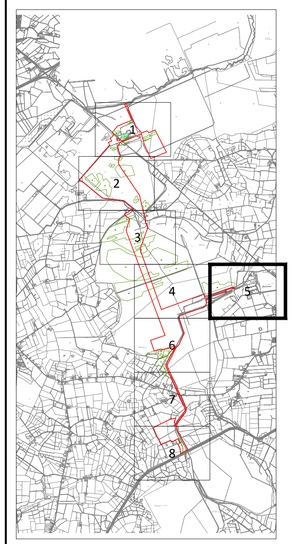

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NORTH

BARRYSBROOK
Sruthán an Bharraigh

Killaragh

NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

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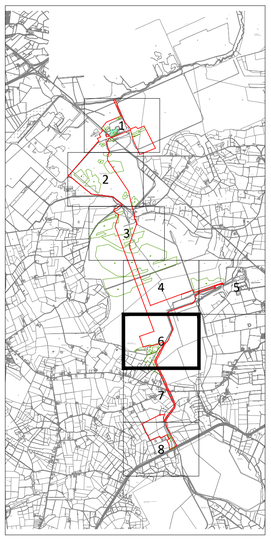

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NORTH

NOTES:

RED LINE BOUNDARY

TREE STANDS & MATURE VEGETATION

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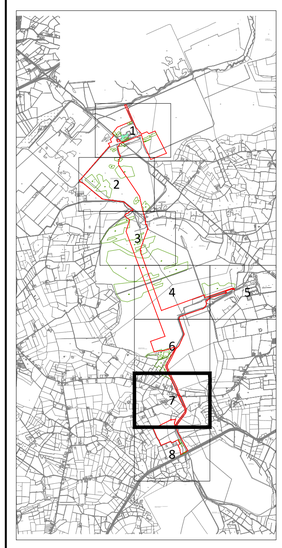

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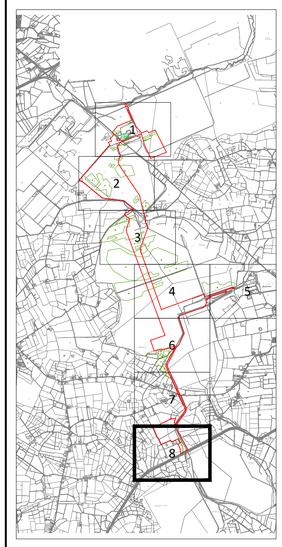
NOTES:

- RED LINE BOUNDARY
- TREE STANDS & MATURE VEGETATION

KEY MAP:



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