

Appendix 16A

Telecommunications Impact Study

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# Telecommunications and Aviation Assessment Report

Derrygreenagh Power



**December 2023**

## Executive Summary

Gravis Planning has been instructed by Bord na Móna Powergen Limited to assess potential impacts on telecommunications infrastructure and aviation arising from a Proposed Development of a 710MW power plant (CCGT and OCGT) and grid connection on land located primarily within the Derrygreenagh bog group in Co. Offaly. The assessment has included desktop research to identify relevant infrastructure that could be impacted as well as an extensive consultation process with relevant telecommunications and aviation stakeholder bodies. It has been identified that the Proposed Development will impact on the performance of an existing telecommunications mast located to the south of the proposed Power Plant Area. Communications have been initiated with the affected parties regarding options for potential alternative future locations. With regard to aviation safety considerations, the Irish Aviation Authority (IAA) has advised that, in the event of permission being granted, the applicant should be conditioned to contact the IAA in advance of development commencing to agree an aeronautical warning light specification for the proposed emissions stacks and telecommunications masts, and to notify the Authority in advance of any intention to commence crane operations.

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## 1. Introduction

- 1.1. Bord na Móna Powergen Limited is applying for planning permission to An Bord Pleanála for a Strategic Infrastructure Development comprising a 710MW power plant (CCGT and OCGT) and associated electricity grid connection on land located primarily within the Derrygreenagh bog group in Co. Offaly.
- 1.2. The Proposed Development will include:
  - 710MW Power Plant, comprised of CCGT plant (circa 570MW; Stack height 65m; Stack diameter: 8.2m; Stack co-ordinates: ITM X: 649618.5 Y: 738364.9) and OCGT plant (circa 140MW; Stack height 45m; Stack diameter 3.54m each; Stack co-ordinates: ITM X: 649494.9 Y: 738196.4 and ITM X: 649500.0 Y: 738198.5) with associated buildings and infrastructure.
  - 220kV substation on land to the west of the power plant site (To include 1 no. 36m telecommunications mast).
  - 220kV overhead line/below ground cable (with associated interface compound) connecting to existing 400kV transmission line, c. 7km to the south of the power plant site.
  - 220/400kV substation at entry point to the 400kV transmission line (To include 1 no. 36m telecommunications mast<sup>1</sup>).
- 1.3. There is a clear need for development of this nature, to add resilience to Ireland's electricity network and address forecast capacity shortfalls in the coming years.
- 1.4. The National Development Plan (2021-2030) (NDP) is clear that maintaining security of energy supply is a key national priority for the coming decade and beyond and identifies an urgent requirement to deliver c. 2 GW of new conventional (mainly gas-fired) generation capacity by 2030.
- 1.5. This national priority has been further underlined by the Government's 'Policy Statement on Security of Electricity Supply', published in November 2021, and Eirgrid's 'Ireland Capacity Outlook 2022 – 2031', published in October 2022. The latest Climate Action Plan ('CAP23') also emphasises the need for urgent delivery of new gas-fired generation capacity.
- 1.6. Given the nature and extent of the proposed development, it is recognised that it may have an impact on existing telecommunications networks and will also be of interest to aviation stakeholders.
- 1.7. The purpose of the report is to establish - from desktop analysis and engagement with the relevant telecommunication and aviation stakeholder bodies - whether the Proposed Development may cause disruption to existing infrastructure in the area, and whether it is of interest in terms of aviation safety. It is informed by telecommunications network analysis undertaken on behalf of the applicant as well as direct engagement with relevant stakeholders.

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<sup>1</sup> These masts will be used by the electricity network operator to facilitate data and operational communications and general communications between the electricity grid connection substations and from base stations in the region.

1.8 Engagement by Gravis Planning with relevant stakeholders began during August 2023, following initial EIA consultation letters being issued by Aecom in June 2023<sup>2</sup>.

1.9 The following stakeholders were contacted by Gravis Planning as part of the process:

| ID | Stakeholder Name         | Response Received |
|----|--------------------------|-------------------|
| 1  | Imagine Broadband        | Yes               |
| 2  | Three Ireland            | Yes               |
| 3  | Cellnex Ireland          | Yes               |
| 4  | 2RN                      | Yes               |
| 5  | Tetra Ireland            | No                |
| 6  | An Garda Siochana        | Yes               |
| 7  | Comreg                   | No                |
| 8  | Vodafone Ireland         | Yes               |
| 9  | Eir                      | No                |
| 10 | ESB Networks             | No                |
| 11 | Irish Water              | No                |
| 12 | Virgin Media             | No                |
| 13 | Air Ambulance            | No                |
| 14 | Department of Defence    | No                |
| 15 | Irish Aviation Authority | Yes               |

**Table 1: List of telecommunications and aviation Stakeholders engaged directly by Gravis Planning**

1.10 Detail of the responses received, and follow up communications arising, is set out in full in Appendix D and is summarised in Sections 5 and 6 of this Report.

1.11 The engagement exercise has confirmed that the primary telecommunications impact arising from the Proposed Development will be on an existing mast located to the south of the Power Plant Area. This mast is owned and operated by Cellnex Ireland and is located on land leased from Bord na Móna. Space on the mast is occupied by Imagine Broadband and Three Ireland. The fixed term lease for the mast location expires in October 2024. Communications with the interested parties regarding impact arising from the Proposed Development and potential options for alternative future locations remain ongoing.

1.12 With regard to aviation safety, the Irish Aviation Authority (IAA) has advised that, in the event of permission being granted, the applicant should be conditioned to contact the IAA in advance of development commencing to agree an aeronautical warning light specification for the proposed emissions stacks and telecommunications masts, and to notify the Authority of any intention to commence crane operations, with at least 30 days prior notification of their erection.

<sup>2</sup> See Appendix E

## 2. Site Information

- 2.1 The Proposed Development, comprising the Power Plant Area, grid connection infrastructure and ancillary elements including drainage infrastructure, landscaping, peat deposition areas and so on, is spread across a wide area of land located primarily within the Derrygreenagh bog group in Co. Offaly.
- 2.2 The key elements of the proposal which are of relevance for this assessment are the Power Plant Area and the grid connection infrastructure.
- 2.3 The Power Plant Area is located on the existing 'Derrygreenagh Works' site and measures approx. 28.3 hectares. The site is intersected by the R400 road, with the eastern part of the site (where the power plant is to be located) measuring approx. 19.6 hectares and western part (where the associated 220kV substation is to be located) measuring approx. 8.7 hectares.
- 2.4 The site can be accessed from the R400 Rochfortbridge-Rhode Road and is c. 2.2km to the south-east of Junction 3 on the M6 motorway.
- 2.5 The site was used previously as a base for peat harvesting operations and consists of an office, stores and workshop complex. There is an existing telecommunications mast structure attached to one of the buildings on site (Refer to Fig. 3 below), but this has been decommissioned for some time and is not in use by any provider. It will be removed as part of the demolition process in the event of planning permission being granted for the Proposed Development.
- 2.6 The electricity grid connection, which is the other element of the Proposed Development of relevance for this assessment, comprises a 220kV substation to the west of the R400 road along with c. 5km of overhead line (OHL) and c. 3.3 km of underground cable (UGC) running south toward a new 400kV substation that will connect to the national grid (400 kV Oldstreet-Woodland overhead transmission line) via a loop-in connection.
- 2.7 It has been identified that the linear grid connection infrastructure will cross a number of existing microwave radio links in the wider area<sup>3</sup>, and the operators that may be affected by this have been contacted accordingly.
- 2.8 There is a significant number of telecommunications masts in proximity to the Proposed Development area<sup>4</sup>. The closest, and most likely to be directly affected, is the Cellnex Ireland mast located approx. 150 meters to the south of the proposed Power Plant Area (Refer to Fig 1 and Fig 2 below). Currently this mast provides space for Three Ireland as well as Imagine Broadband. The three organisations with an interest in this mast have all been contacted as part of the engagement process, and communications with them are ongoing. It should be noted that the fixed term lease for this mast location expires in October 2024, well in advance of the Proposed Development's likely completion.

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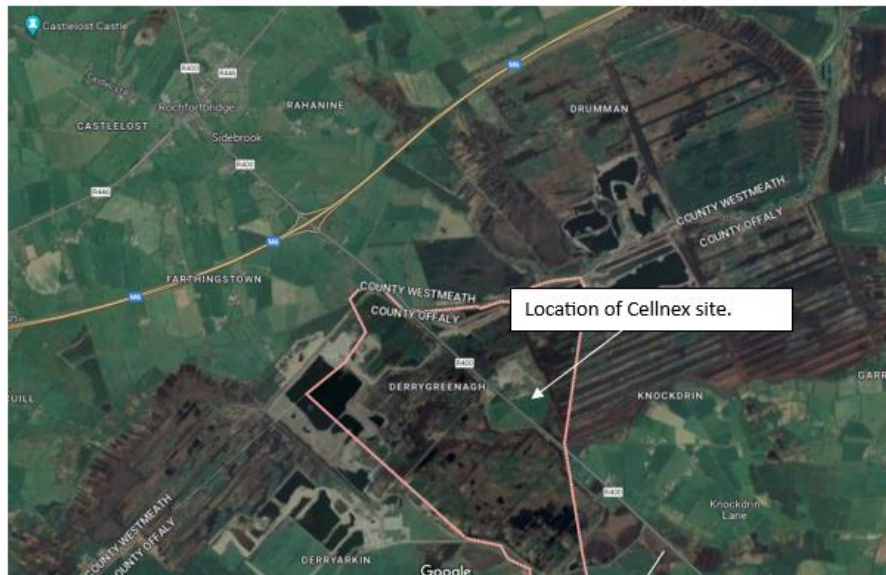
<sup>3</sup> Refer to Section 4 for detail.

<sup>4</sup> Refer to Fig. 5 for an overview of existing telecommunications infrastructure within a c. 10km radius of the proposed development area.





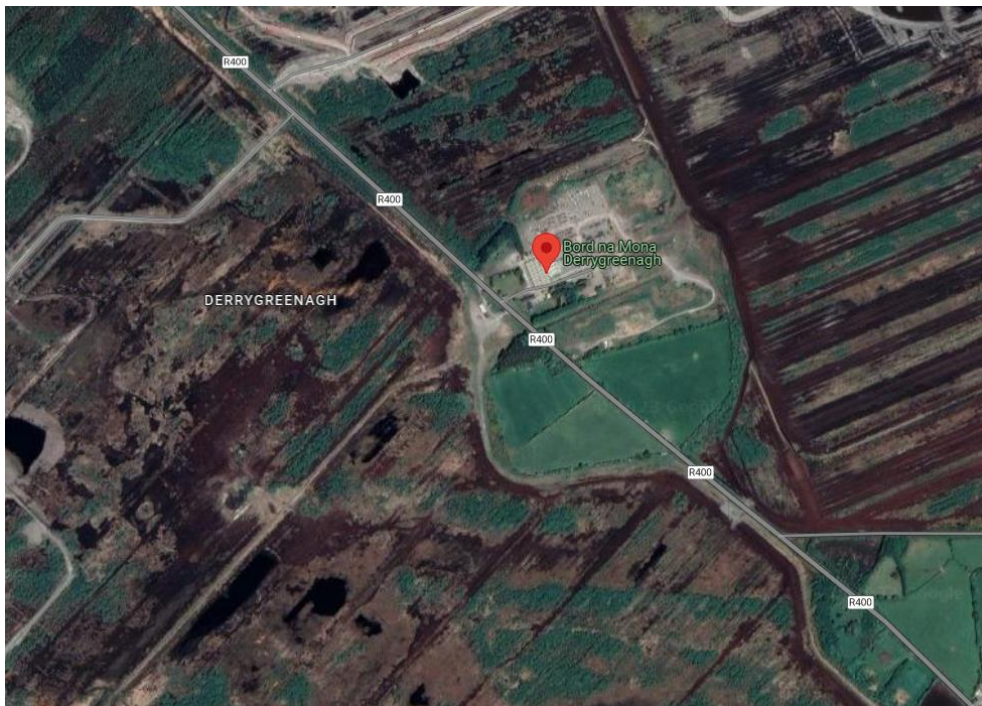
**Fig. 1 - 36 metre lattice structure located at Derrygreenagh ('Cellnex Ireland mast'.**



**Fig. 2 - Overhead view of existing Cellnex Ireland mast location**



**Fig. 3 – Decommissioned Vodafone equipment on site at Bord na Móna Derrygreenagh**



**Fig. 4 – Overhead view of the location of decommissioned Vodafone equipment on site at Bord na Móna Derrygreenagh**

## 3. Methodology

### 3.1 Introduction

3.1.1 This Telecommunications and Aviation Assessment has been conducted with the aim of identifying the extent to which the Proposed Development may impact on telecommunications and aviation interests within the surrounding area. The assessment is based on a mix of desktop analysis and direct stakeholder engagement.

3.1.2 The exercise has 3 stages:

- Desktop Analysis.
- Stakeholder Engagement.
- Assessment and Report Generation.

### 3.2 Desktop Analysis

3.2.1 For the initial Desktop Analysis stage a detailed search of existing telecommunications infrastructure and operators within the surrounding area was conducted using the Commission for Communications Regulation's ('Comreg') online site viewer map<sup>5</sup>. A search radius of c. 10km was applied, which incorporated all major operators. As part of this analysis it was also established which point to point (PTP) microwave radio links could potentially be impacted.

### 3.3 Stakeholder Engagement

3.3.1 Having established the extent of existing telecommunications infrastructure and links within the surrounding area area, a consultation email was issued to all telecommunications industry stakeholders as well as relevant aviation bodies that could potentially be impacted by the Proposed Development. Follow up communication was then undertaken as appropriate and remains ongoing with some key stakeholders.

3.3.2 This process has provided key stakeholders with the opportunity to raise concerns and has assisted the Applicant in understanding the potential impact of the Proposed Development.

### 3.4 Assessment and Report generation.

3.4.1 The final stage of the exercise is compiling the data into report form and presenting the findings and analysis for inclusion as part of the planning application.

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<sup>5</sup> <https://siteviewer.comreg.ie/#explore>

## 4. Desktop Analysis

### 4.1 Introduction

4.1.1 Prior to contacting telecommunications and aviation stakeholders a desktop review was undertaken to understand the number of network operators in the area and nature and extent of infrastructure that may be impacted by the Proposed Development.

4.1.2 The Comreg online site viewer was utilised to identify which operators are active in the surrounding area. Figure 5 below identifies all telecommunications infrastructure sites located within a circa 10km radius of the Proposed Development site. The locations of telecommunications structures are indicated by the green icons on the map below. It must be noted that there are many cases where multiple operators occupy the same mast site (i.e. Infrastructure is placed at different levels of the same mast).

4.1.3 As part of the Desktop Analysis process existing point to point (PTP) microwave radio links that may be impacted were also identified<sup>6</sup>.

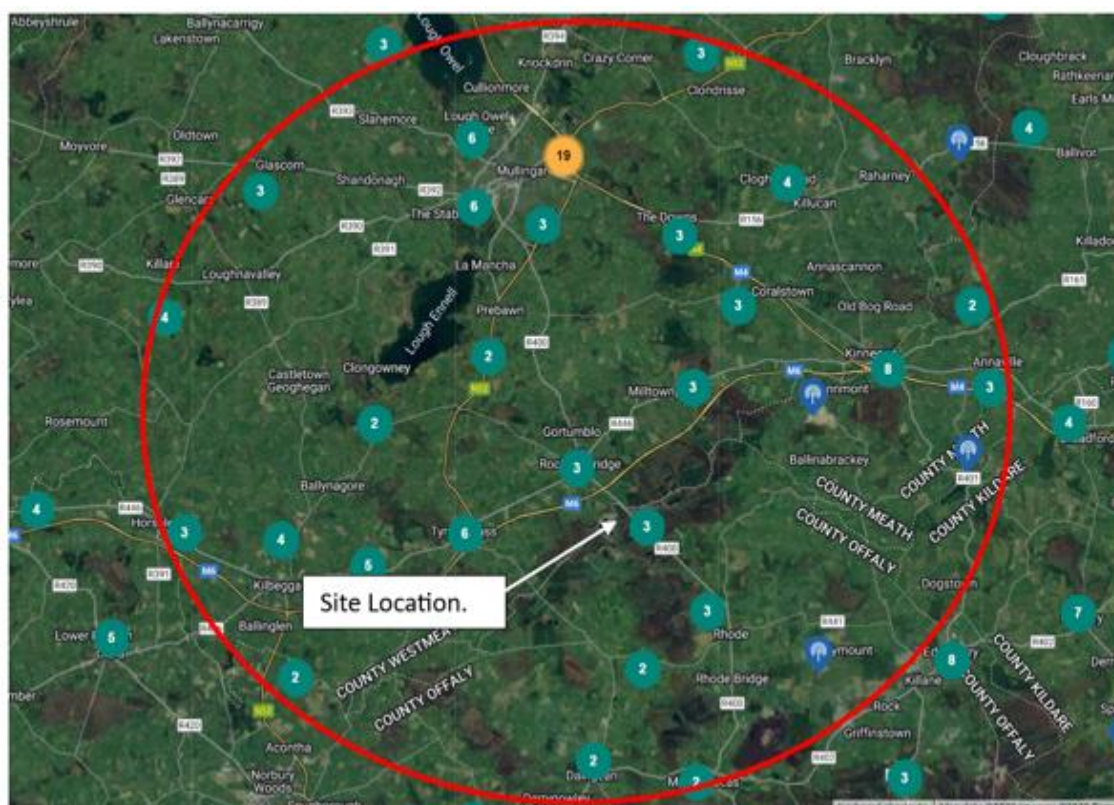


Fig 5 – Search ring demonstrating the presence of telecommunications infrastructure within a 10km radius of the proposed power plant site at Derrygreenagh [Extracted from the Comreg Site Viewer database - <https://siteviewer.comreg.ie/#explore>].

4.1.4 The table below provides detail of each of the sites identified within the search area.

| Name of operator. | Site ID | Type of Infrastructure | Distance from site |
|-------------------|---------|------------------------|--------------------|
| Three             | OF0081  | Mast                   | c.150m             |
| Imagine           | OY029   | Mast                   | c.150m             |

<sup>6</sup> With reference to radio planning/modelling undertaken on behalf of the Applicant by Ai Bridges Ltd.

|          |        |      |          |
|----------|--------|------|----------|
| Vodafone | OY0006 | Mast | c.10.5km |
| Three    | OF0112 | Mast | c.10.5km |
| Eir      | OY2479 | Mast | c.10.5km |
| Three    | OF0061 | Mast | c.10.5km |
| Eir      | OY2227 | Mast | c7.5km   |
| Vodafone | OY033  | Mast | c.6.5km  |
| Eir      | OY4219 | Mast | c.6.5km  |
| Three    | OF0111 | Mast | c.6.5km  |
| Three    | WM0109 | Mast | 3.6km    |
| Vodafone | WH060  | Mast | 3.4km    |
| Eir      | WH2006 | Mast | 3.7km    |
| Three    | WM0108 | Mast | 5.8KM    |
| Eir      | WH2005 | Mast | 5.8KM    |
| Vodafone | WH015  | Mast | 5.8KM    |
| Eir      | WH4212 | Mast | 8.5KM    |
| Vodafone | WH083  | Mast | 9.8km    |
| Three    | WM0113 | Mast | 9.8km    |

**Table 2: Telecommunications operators within a c10km radius of the site**

4.1.5 It is clear that all of the main network mobile operators and broadband providers are active within the 10km search area.

4.1.6 Further detail of the identified telecommunications operators and infrastructure, as well as the relevant Aviation bodies, is set out below.

## 4.2 Overview of Relevant Stakeholders

### *Imagine Broadband*

4.2.1 Imagine Broadband currently occupy space on a mast owned Cellnex Ireland which is located approximately 150 meters to the south of the proposed Power Plant Area. There is 1no. Imagine Broadband point to point radio link that could potentially be impacted by the Proposed Development, within the area where Imagine Broadband site OY029 connects to WM0108. The position of these sites is indicated in Fig. 6 below.

| Link ID <sup>7</sup> | Link Description  | Link Description  |
|----------------------|-------------------|---|
| OY029 to WM0108      | Imagine Broadband | PTP Microwave radio link from Derrygreenagh to Mount Lucas. |

**Table 3: Imagine Broadband sites and radio links within the search area.**

<sup>7</sup> Comreg mast references provided where available

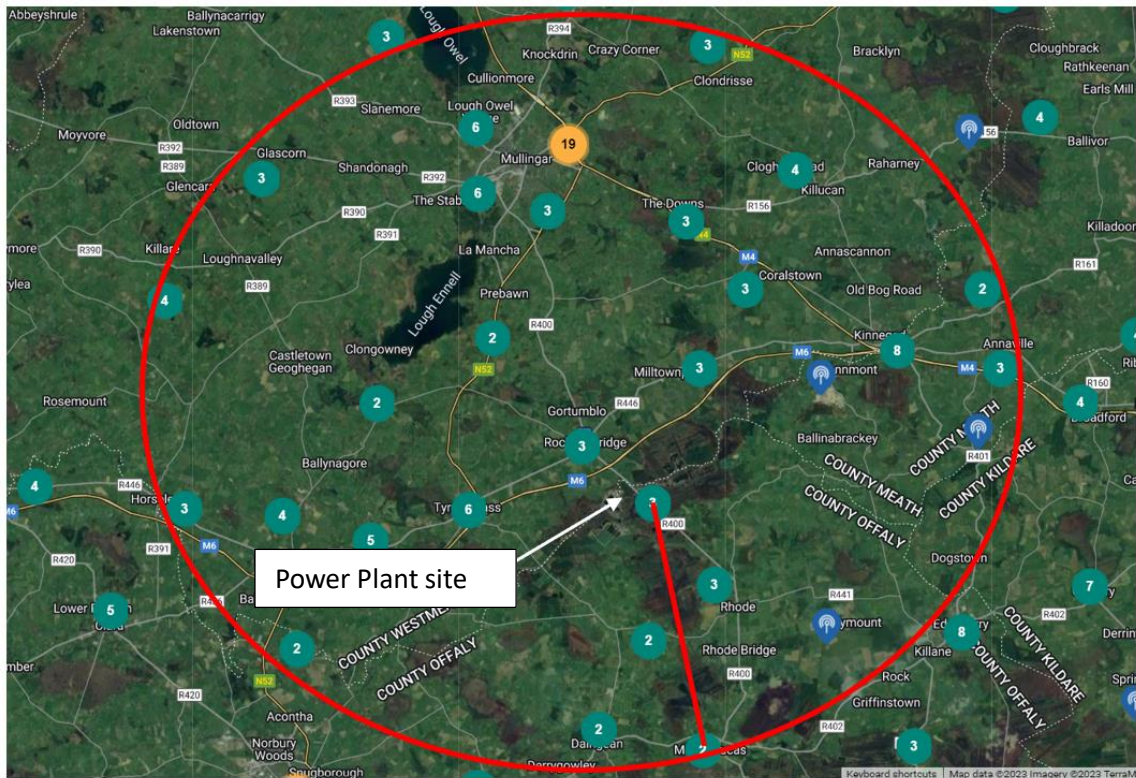


Fig. 6 – location of imagine broadband infrastructure and microwave radio link within the 10km search area

### Three Ireland

4.2.2 Three Ireland currently occupies space on the same mast as Imagine Broadband, located to the south of the Proposed Power Plant Area. Based on the Desktop Analysis undertaken, they have a total of 5 masts within the search area, providing 4 radio links. The relevant masts and links are indicated in Table 4 and Fig. 7 below:

| Link ID            | Operator      | Link Description   |
|--------------------|---------------|--|
| OF00112 to WM0089  | Three Ireland | PTP Microwave radio link from Derrygreenagh to Newdown.            |
| OF0112 to MT0135   | Three Ireland | PTP microwave radio link from Derrygreenagh to Rathcore            |
| OF0112 to OY033    | Three Ireland | PTP microwave radio link from Derrygreenagh to Rhode power Station |
| OF-0112 to OF0111  | Three Ireland | PTP microwave radio link from Derrygreenagh to Laurencetown        |
| OF-0112 to WM-0109 | Three Ireland | PTP microwave radio link from Derrygreenagh to Rochforthbridge.    |

Table 4: Three Ireland sites and radio links within the search area

4.2.3 It should be noted that Three Ireland has advised that its own radio engineers are undertaking survey work to establish the potential for disruption to its network arising from the Proposed Development, which will inform any submission that it makes to the planning application.

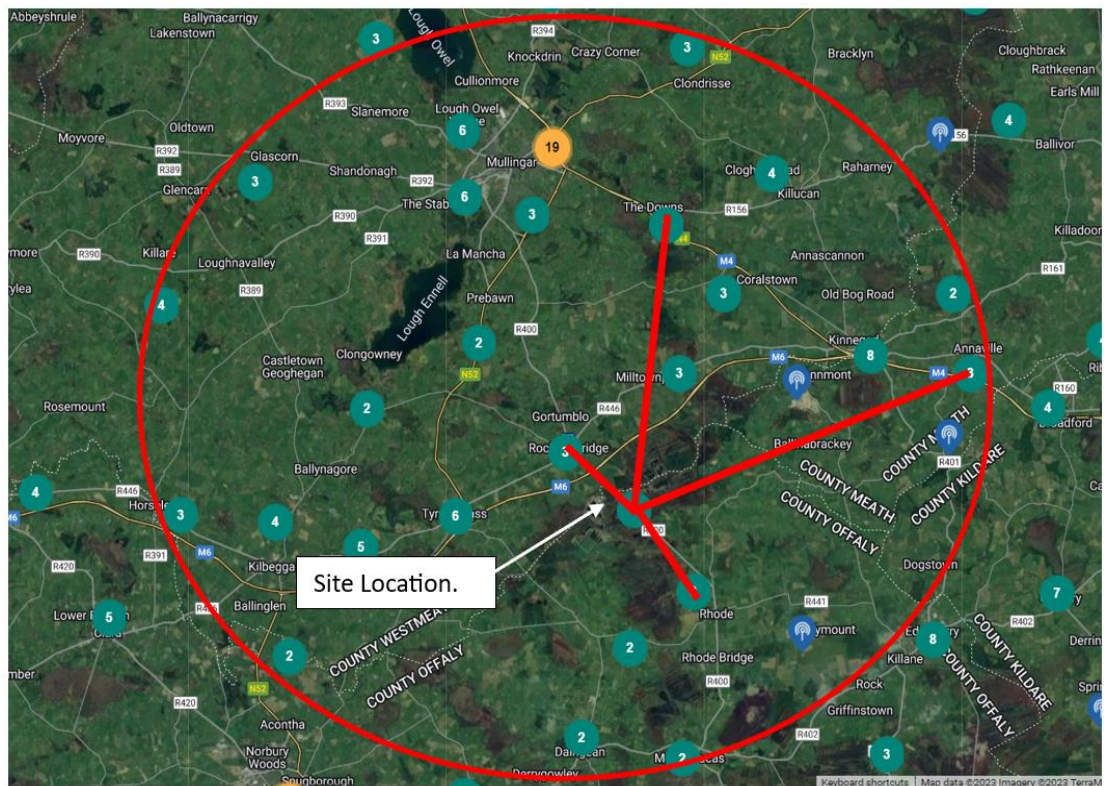


Fig. 7 location of Three Ireland infrastructure and microwave radio links within the 10km search area

**Vodafone**

4.2.4 It has been established that Vodafone has 3 mast sites within the search area and 2 PTP radio links. These are indicated in Table 5 and Fig. 8 below.

| Link ID        | Operator | Link Description  |
|----------------|----------|---|
| WH015 to OY008 | Vodafone | PTP Microwave radio link from the Pass of Kilbride to Togher. |
| OY008 to OY033 | Vodafone | PTP Microwave radio link from Togher to Rhode.                |

Table 5: Vodafone sites and radio links located within the search area

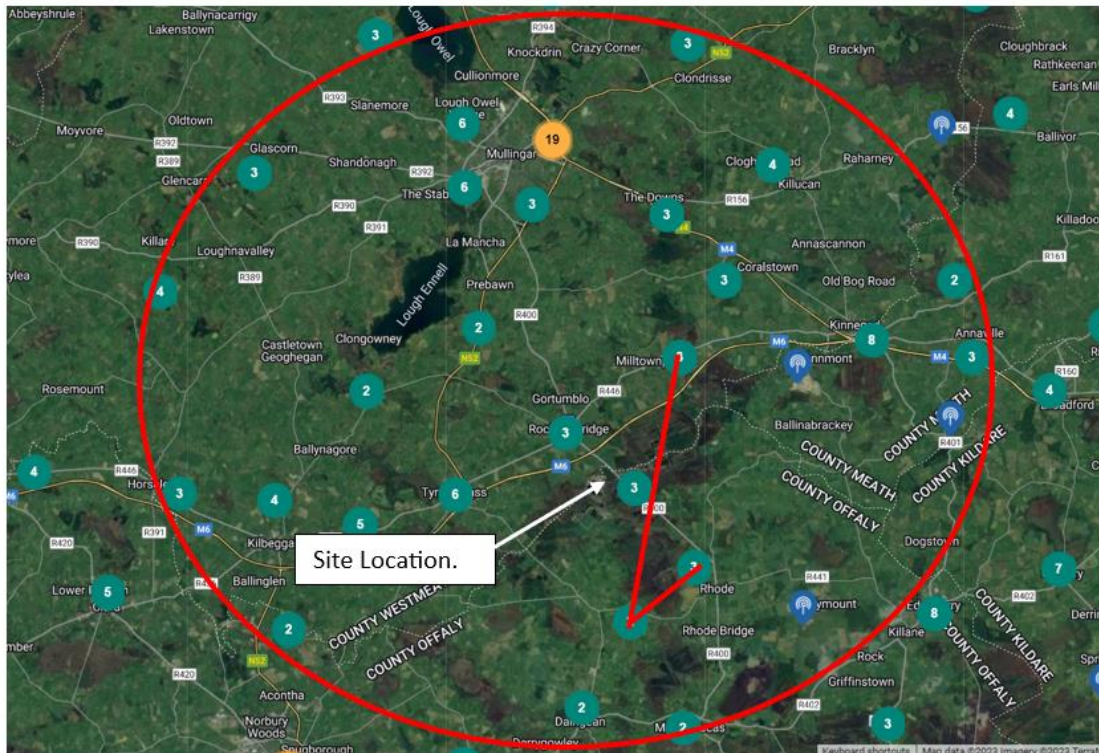


Fig. 8 – location of Vodafone infrastructure and microwave radio links within the 10km search area

**Eir/Meteor**

4.2.5 The Eir network within the vicinity of the Proposed Development consists of 3 mast sites and 2 PTP microwave radio links. These are indicated in Table 6 and Fig 9 below.

| Link ID           | Link Description | Link Description   |
|-------------------|------------------|--|
| WH2005 to OY2227  | Eir              | PTP microwave radio link from Pass-of-Kilbride to Laurencetown, Rhode. |
| OY2227 to WH-2006 | Eir              | PTP microwave radio link from Laurencetown to Farhingstown.            |

Table 6: Eir sites and radio links located within the search area.



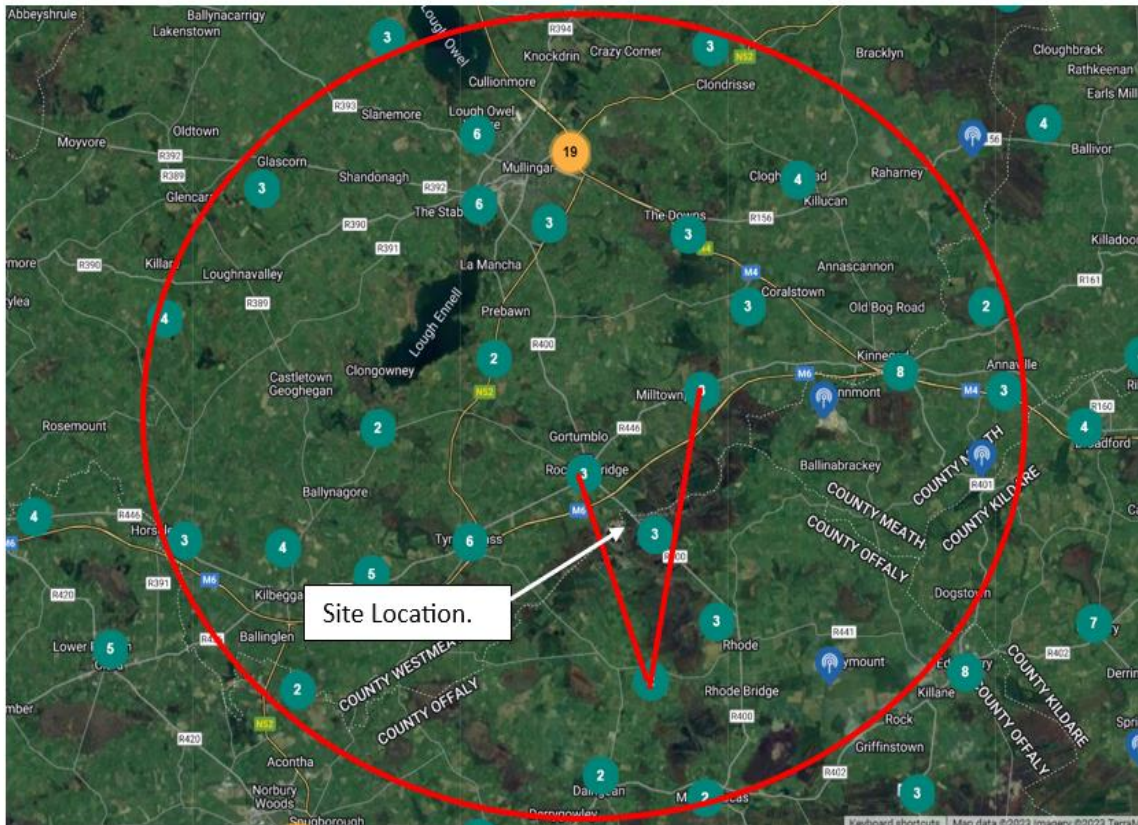


Fig. 9 – location of Eir/Meteor infrastructure and microwave radio links within the 10km search area

### ESB Networks

4.2.6 From our assessment of the area it was found that ESB Networks has infrastructure within the vicinity of the Proposed Development at Derryiron as well as at Mount Lucas and Slieve Boom, with radio links from Derryiron to Slieve Bloom and from Derryiron to Mount Lucas.

| Link ID | Link Description | Link Description  |
|---------|------------------|---|
| 1.      | ESB              | PTP microwave radio link from Derryiron to Slieve Bloom (7 GHz) |
| 2.      | ESB              | PTP microwave radio link from Derryiron to Mount Lucas          |
| 3.      | ESB              | PMP radio link from Derryiron to Slieve Bloom (458 MHz).        |

Table 7: ESB sites and radio links located within the search area.

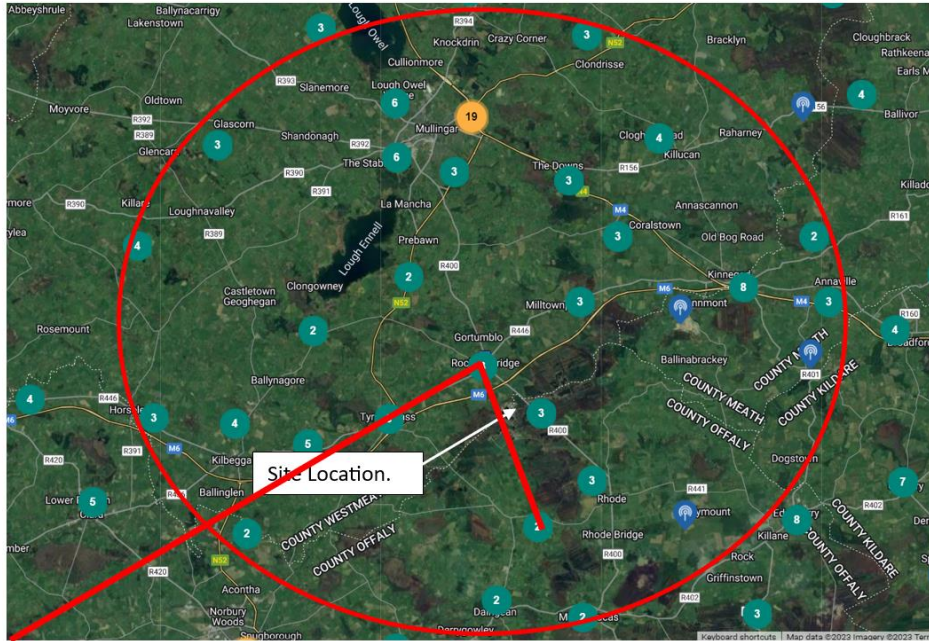


Fig. 10 – location of ESB infrastructure and microwave radio links within the 10km search area

**Virgin Media**

4.2.7 It was established that Virgin Media has telecommunications infrastructure at Rochfortbridge convent which is linked to Dunmurry Hill. While this infrastructure is not within close proximity to the proposed development, the fact that the microwave link appears to run close to proposed Power Plant Area meant it was considered appropriate to include them in the consultation process.

| Link ID | Link Description | Link Description                       |
|---------|------------------|--|
| 1A.     | Virgin Media     | Rochfortbridge Convent – Dunmurry Hill |

Table 8: Virgin Media sites and radio link located within the search area

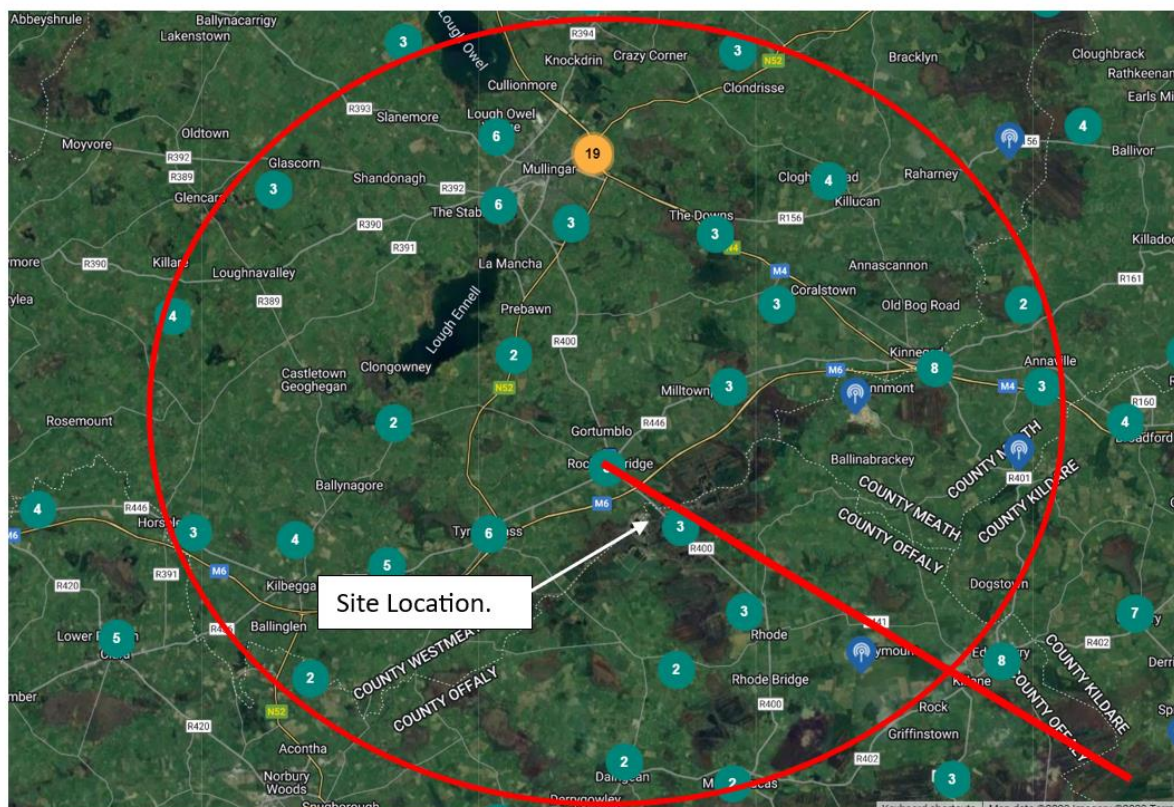


Fig. 11 Location of Virgin Media infrastructure and microwave radio links within the 10km search area

**2RN**

4.2.8 2RN do not appear to have infrastructure within the study area but, given that they are responsible for running Ireland’s principal digital terrestrial television and radio broadcast networks it was considered appropriate that they be contacted as part of the process.

**Tetra Ireland**

4.2.9 It was unclear from the study whether Tetra Ireland, who are the body responsible for emergency services telecommunications infrastructure, had infrastructure in the area. Given the importance of this telecommunications service however, it was considered appropriate that they were contacted as part of the process.

**Cellnex Ireland**

4.2.10 While not a telecommunications operator as such, Cellnex Ireland is one of the leading providers of telecommunications infrastructure in the country. It has a significant portfolio of telecommunications masts. They are currently leasing land to the south of the proposed Power Plant Area on which an existing mast is located.

**Irish Water**

4.2.11 Given that there is a significant amount of telecommunications equipment located on Irish Water infrastructure throughout the country it was considered appropriate that they be included in the stakeholder engagement process.

***An Garda Siochana***

- 4.2.12 An Garda Siochana telecommunications infrastructure is part of the Tetra network referred to above. Given the importance of this network it was considered appropriate to include An Garda Siochana in the stakeholder engagement process.

***Comreg***

- 4.2.13 Comreg acts as the regulator for telecommunications within the Republic of Ireland and it was therefore considered appropriate to include them in the stakeholder engagement process.

***IAA***

- 4.2.14 The Irish Aviation Authority (IAA) is responsible for the regulation of a range of operational aviation functions, and ensures that Irish civil aviation operates to international and European safety standards in accordance with international agreements. Given the height of some elements of the Proposed Development, in particular the CCGT emissions stack, it was considered appropriate that they be contacted as part of the stakeholder engagement process.

***Department of Defence***

- 4.2.15 It was also considered appropriate to consult the Department of Defence given that the Defence Forces may use airspace in and around the Proposed Development site (Including in its role in the provision of a national Helicopter Emergency Medical Service (HEMS)).

## 5 Telecommunications Consultation & Assessment

### 5.1 Introduction

5.1.1 To establish the level of impact that the proposed development may have on telecommunications operators in the area, detailed consultation has taken place in the form of email correspondence as well as telephone conversations with the relevant persons within the various organisations. Below is a summary of the consultation process to date.

### 5.2 Imagine Broadband

5.2.1 Gravis Planning furnished Imagine Broadband with a consultation email on 18/08/2023<sup>8</sup>. There has been considerable dialogue between Imagine and Gravis Planning since then.

5.2.2 Imagine Broadband currently occupies space on the Cellnex mast referred to earlier in this report, which is located approximately 150 metres to the south of the proposed Power Plant Area. The head of Network Deployment at Imagine Broadband has, further to a request, been furnished with additional elevations and drawings of the proposed development. After review of draft elevations for the proposed emission stacks and telecommunications structures, detailed in appendices B and C, concern has been expressed that the Proposed Development may cause disruption to the Imagine Broadband network in the area. Dialogue is ongoing between Gravis Planning and Imagine Broadband, with Imagine's own radio engineers undertaking an assessment as to the level impact that may arise.

### 5.3 Three Ireland

5.3.1 Gravis Planning furnished Three Ireland with a consultation email on 18/08/2023. As with Imagine, Three occupies space on the Cellnex mast referred to above and has expressed concern that the proposed development may cause disruption to its network in the area. Draft elevations of the Proposed Development, as detailed in appendices X and X, were sent to the Transmission Manager for Three on 08/09/2023. Following review of these elevations, Three has advised that there may be a requirement to relocate certain equipment in the event of planning permission being granted, in order to continue the provision of an effective network in the area. Survey work is to be undertaken by Three's radio engineers in order to understand the nature and extent of any impact, and dialogue remains open between Three and Gravis Planning accordingly.

### 5.4 Cellnex Ireland

5.4.1 Gravis Planning furnished Cellnex Ireland with a consultation email to on 18/08/2023. Cellnex Ireland are currently leasing the land on which the telecommunications structure to the south of the proposed Power Plant Area is located. This lease is due to expire in October 2024. Cellnex currently provide space on this mast for Three Ireland and Imagine Broadband. In the course of engagement with Gravis Planning, the Operations Manager for Cellnex Ireland has queried the future use of the proposed telecommunications masts to be located within the two substations that form part of the Proposed Development. Gravis Planning, on behalf of Bord na Móna Powergen Limited, has confirmed the following in this regard:

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<sup>8</sup> Refer to Appendix A for detail of the initial consultation email issued to stakeholders

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*“A suitably sized telecommunication mast shall be constructed and transferred to ESB Telecoms once operational. These telecommunications towers are used to provide telecommunication services to the Substation. These services include Protection and Remote Management of the Substation equipment. These services are necessary for the safe operation of the Station and the wider Transmission System. ESB Telecoms operates a portfolio of towers nationwide, delivering flexibility of location and a future-proofed service for mobile and wireless communications operators to utilise where possible.”*

5.4.2 Cellnex has advised that it will await for the results of the respective surveys being undertaken by Three Ireland and Imagine Broadband before making any further observation on this matter.

## **5.5 Vodafone**

5.5.1 Gravis Planning furnished Vodafone with a consultation email to on 18/08/2023. Vodafone provided a response through its Transmission Planning and Design Engineer. It has been noted Vodafone originally had a mast on the grounds of the Bord na Mona Derrygreenagh Works site (i.e. the proposed Power Plant Area) which has since been decommissioned. They then moved to a pylon site approximately 0.5km south of Rochfortbridge. This site is unlikely to be impacted as a result of the Proposed Development. Regarding the existing link route from The Pass of Kilbride to Togher and on to Rhode, Vodafone has advised that would examine whether this route would be disrupted by the pylons which are being proposed as part of the Proposed Development however, as of 04/12/2023 no further updated has been received on this matter.

## **5.6 2RN**

5.6.1 Gravis Planning furnished 2RN with a consultation email on 18/08/2023. 2RN is the trading name of the RTE transmission network, which is responsible for running Ireland’s principal digital terrestrial television and radio broadcast networks. 2RN advised that they do not have infrastructure in the immediate area of the proposed development but have requested that, should the application progress, they are consulted on it. As with all of the identified stakeholders in this report, Gravis Planning will advise 2RN directly of the application being submitted to An Bord Pleanála.

## **5.7 An Garda Siochana**

5.7.1 Gravis Planning sent a consultation email to An Garda Siochana on 18/08/2023. Acknowledgement of this correspondence was received from An Garda Siochana press office on 31/08/2023. They requested that the matter be referred to Tullamore Garda Station for consideration. The consultation material was forwarded to Tullamore Garda Station accordingly. Follow up emails were sent on 14/09/2023 and 28/09/2023, but no response has been received.

## **5.8 Eir**

5.8.1 Gravis Planning sent a consultation email to Eir on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023, but no responses has been received.

## **5.9 ESB Networks**

5.9.1 Gravis Planning sent a consultation email to ESB Networks on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023 but no response has been received.

## **5.10 Irish Water**

5.10.1 Gravis Planning sent Irish Water a consultation email on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023 but no response has been received.

## **5.11 Virgin Media**

5.11.1 Gravis Planning sent a consultation email to Virgin Media on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023 but no response has been received.

## **5.12 Tetra Ireland**

5.12.1 Gravis Planning sent a consultation email to Tetra Ireland on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023 but no response has been received.

## **5.13 Comreg**

5.13.1 Gravis Planning sent a consultation email to Comreg on 18/08/2023. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023 but no response has been received.

## **5.14 Assessment**

5.14.1 The purpose of the stakeholder engagement that has been summarised in this section was to establish the likelihood of the Proposed Development, based on review by the relevant parties, causing disruption to their individual networks.

5.14.2 The feedback received has confirmed our initial assessment, based on desktop analysis, that the mast location most likely to be negatively affected by the Proposed Development is the Cellnex Ireland mast located to the south of the proposed Power Plant Area. Dialogue remains open with the relevant parties that have an interest in this mast, namely Cellnex Ireland Ltd., Imagine Broadband and Three Ireland, as to the likely extent of any impact.

5.14.3 The location of the Cellnex Ireland mast is subject to a lease agreement between Bord na Móna and Cellnex Ireland that expires in October 2024. Discussions have been initiated between the two parties as to the future of the existing mast and potential alternative locations in the event of planning permission being granted.

## 6. Aviation Assessment

### 6.1 Irish Aviation Authority

6.1.1 Gravis Planning sent a consultation email to the IAA on 18/08/2023. A response was received on 22/08/2023. The IAA's Operations Manager requested a copy of elevations for the telecommunication structures proposed as part of the development. Having reviewed these elevations they advised that they do not have any objection in principle to the proposed development. They have noted that, should they be consulted by the planning authority during the formal planning process, they would likely advise that a condition be attached to the planning permission requiring the developer to *"contact the Irish Aviation Authority to agree an aeronautical obstacle warning light specification for the stacks / telecoms masts and to notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection"*.

### 6.2 Department of Defence

6.2.1 Gravis Planning sent a consultation email to the Department of Defence on 18/08/2023. They have acknowledged this email. They have advised that the information has been referred to experts within the Defence Forces and that they would advise of any comments or concerns in due course. Follow up emails were sent on 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023, but no response has been received to date.

### 6.3 Assessment

6.3.1 On the basis of the feedback received we do not consider that the Proposed Development will generate any significant aviation impact. The comments of the IAA are noted, and the detail of aviation warning lights to be affixed to the structures will be agreed with the Authority in advance of development commencing.



## 7 Conclusion

- 7.1 The purpose of this report is to assess whether the Proposed Development will generate any significant negative impacts for relevant telecommunications or aviation bodies that have infrastructure/operations in the wider area.
- 7.2 A considerable level of engagement has taken place between relevant stakeholder bodies and Gravis Planning in order to inform the assessment.
- 7.3 From consultation responses received to date it appears that no significant concerns arise for aviation bodies.
- 7.4 Some concern has been expressed by telecommunications network operators regarding the impact of the Proposed Development, namely Three Ireland, Imagine Broadband and Vodafone. All three have advised that they will undertake their own surveys as to the nature and extent of any potential impact. No further feedback has been received from these operators to date. The Applicant will continue to liaise with all relevant stakeholders as the project progresses through the planning process.
- 7.5 In addition, Cellnex Ireland, who own the existing mast<sup>9</sup> that is located to the south of the proposed Power Plant Area, have expressed concern regarding the potential impact of the Proposed Development. The location of the Cellnex Ireland mast is subject to a lease agreement between Bord na Móna and Cellnex Ireland that expires in October 2024. Discussions have been initiated between the two parties as to the future of the existing mast and potential alternative locations in the event of planning permission being granted.
- 7.6 It is considered that the level of impact that the level of impact that may arise on telecommunications and aviation interests as a result of the Proposed Development, and can be appropriately managed through appropriate planning conditions and ongoing engagement between the relevant parties.

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<sup>9</sup> On which both Imagine Broadband and Three Ireland occupy space at present.

## Appendices

## **Appendix A**

### **Text of email sent to all relevant telecommunications and aviation stakeholder bodies during August 2023:**

*Dear Sir/Madam,*

*By way of introduction my name is Seamus Carey from Gravis Planning, acting on behalf of Bord na Móna Powergen Limited.*

*I contact you as a relevant stakeholder in relation to a proposed Power Station development at Derrygreenagh, Co. Offaly, for which a planning application is being prepared at present. The main area of development is the existing Derrygreenagh Works site, where the proposed power plant will be located. In addition, there will be a 220kV substation to the west of this (on the other side of the R400), an overhead line/below ground cable connection to the 400kV electricity transmission line to the south, and a 220/400kV substation at the entry point to the transmission line.*

*The project will also require a connection to the existing high pressure gas transmission line, c. 8km to the north. This will be subject to a separate consent by Gas Networks Ireland under Section 39A of the Gas Act.*

*The main details of the proposed development for the forthcoming planning application are as follows:*

- *710MW Power Plant, comprised of CCGT (circa 570MW; Stack height 65m; Stack diameter: 8.2m; Stack co-ordinates: ITM X: 649618.5 Y: 738364.9) and OCGT (circa 140MW; Stack height 45m; Stack diameter 3.54m each; Stack co-ordinates: ITM X: 649494.9 Y: 738196.4 and ITM X: 649500.0 Y: 738198.5).*
- *220kV substation on land to the west of the R400 (To include 2 no. telecommunications masts).*
- *220kV overhead line/below ground cable (with associated interface compound) connecting to existing 400kV transmission line, c. 7km to the south.*
- *220/400kV substation at entry point to the 400kV transmission line (To include 2 no. telecommunications masts).*

*I have attached a more detailed overview of the key project elements, a composite layout plan which includes the site boundary, grid connection and gas line corridor, and an indicative layout plan of the main power plant area.*

*I would be grateful if you could review the proposal and advise as to whether it is likely to have any impact on the interests you are charged with safeguarding.*

*If you require any further information or clarification, please don't hesitate to get in touch.*

*Kind regards,*

*Seamus Carey*

### A.1 – Description of the key project elements

The table below provides an overview of the key project elements. This information was circulated as part of an attachment to the email sent to the various Telecommunications and Aviation stakeholders.

| Proposed Elements  | Description of Elements  |
|--|--|
| <p><b>Power Plant Area</b><br/><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 <b>Power Plant Area</b> (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"> <li>○ Combined Cycle Gas Turbine (CCGT) Unit which includes a CCGT Turbine Hall and buildings and Heat Recovery Steam Generator (HRSG) and emission stack</li> <li>○ Open Cycle Gas Turbine (OCGT) Plant and emission stack</li> <li>○ Secondary Fuel Storage and Unloading Facility</li> <li>○ Gas Connection Above Ground Installation (AGI) Compound and associated gas connection corridor and site entrance onto R400</li> <li>○ Administration, stores, workshop buildings and car parks</li> <li>○ Maintenance Compounds</li> <li>○ Water Storage Tanks</li> <li>○ Water Treatment Plant</li> <li>○ Surface water drainage and attenuation</li> <li>○ The Proposed Development will require demolition works of existing buildings, the BnM Derrygreenagh Works including</li> </ul> | <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><b>Electricity Grid Connection</b><br/><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"> <li>o 220kV underground Cable connection to the Power station site;</li> <li>o 220kV substation (west of R400 road);</li> <li>o 220kV Overhead Line;</li> <li>o 200kV Interface Compound;</li> <li>o 220kV Underground Cable Connection;</li> <li>o 400kV substation at entry point to the transmission network;</li> <li>o 2 no telecommunication masts at each of the substation sites.</li> </ul>                                    | <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><b>Temporary Construction Work</b><br/><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"> <li>o Demolition of the existing Derrygreenagh Works site buildings;</li> <li>o Temporary Construction Compounds, facilities, security cabins and stores;</li> <li>o Temporary site access points and car parks;</li> <li>o Temporary traffic management measures;</li> <li>o Temporary Signage, crossing points and road markings;</li> <li>o Temporary lighting;</li> <li>o Peat and spoil management.</li> </ul> | <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> |

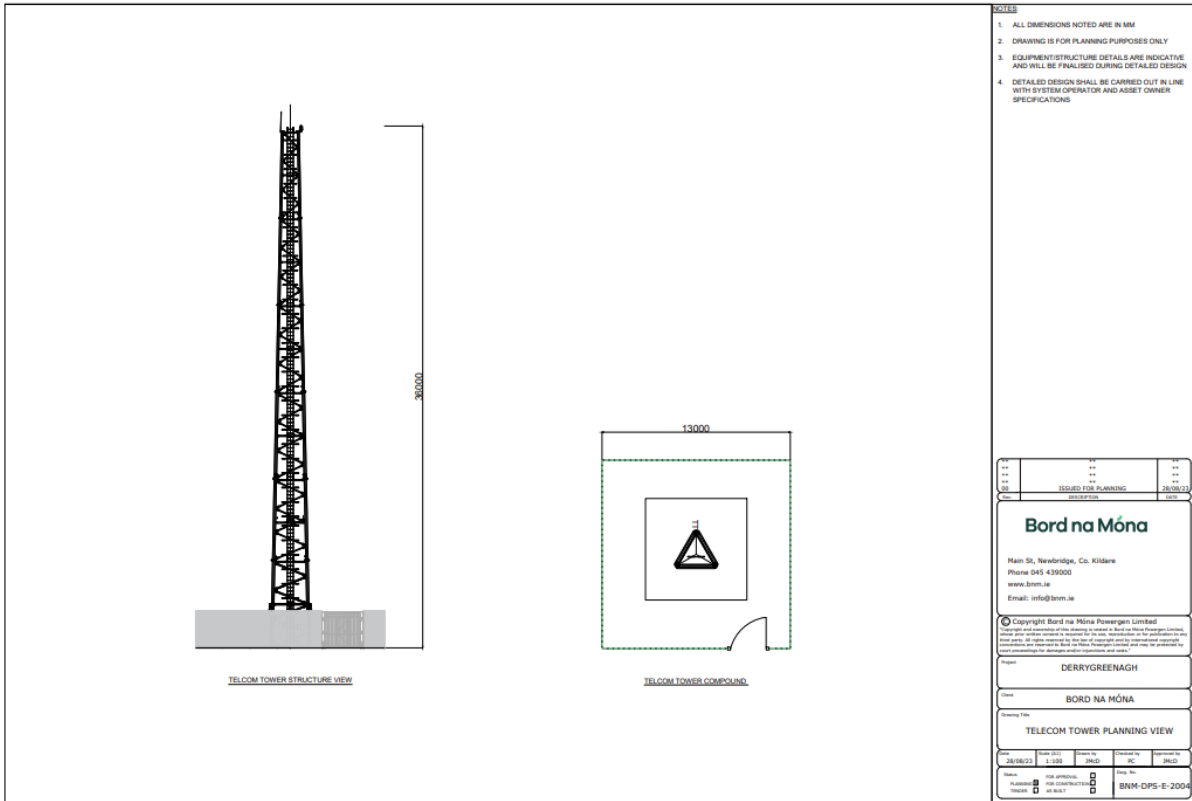
## A.2 – Composite Layout Plan

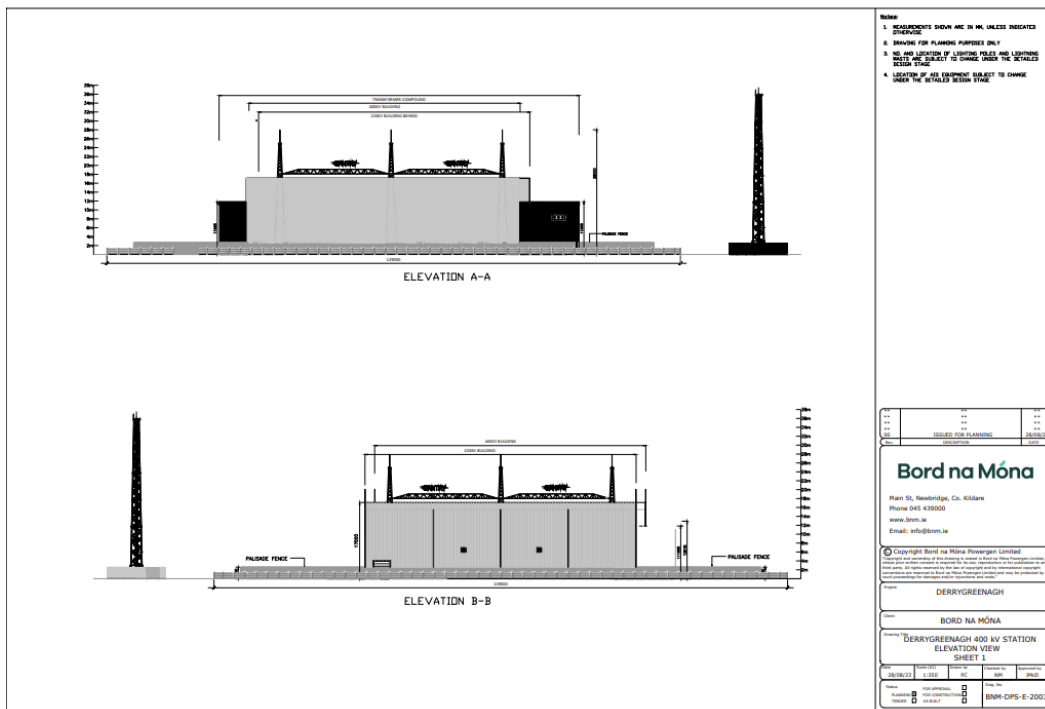
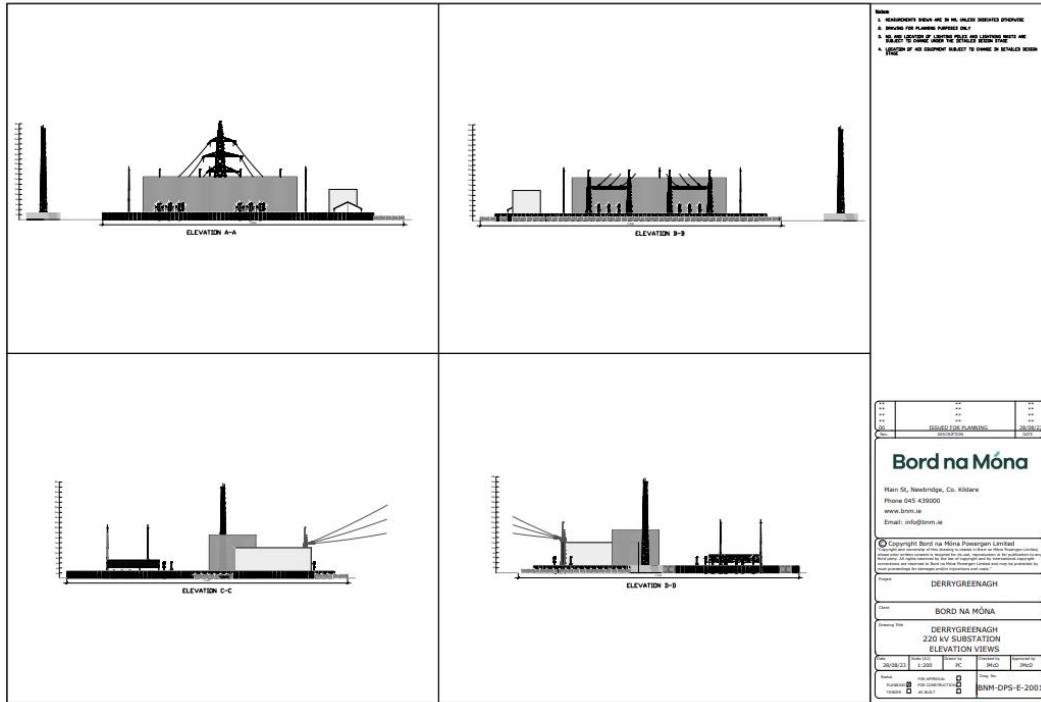


**Appendix B – Elevations of proposed telecommunications masts**

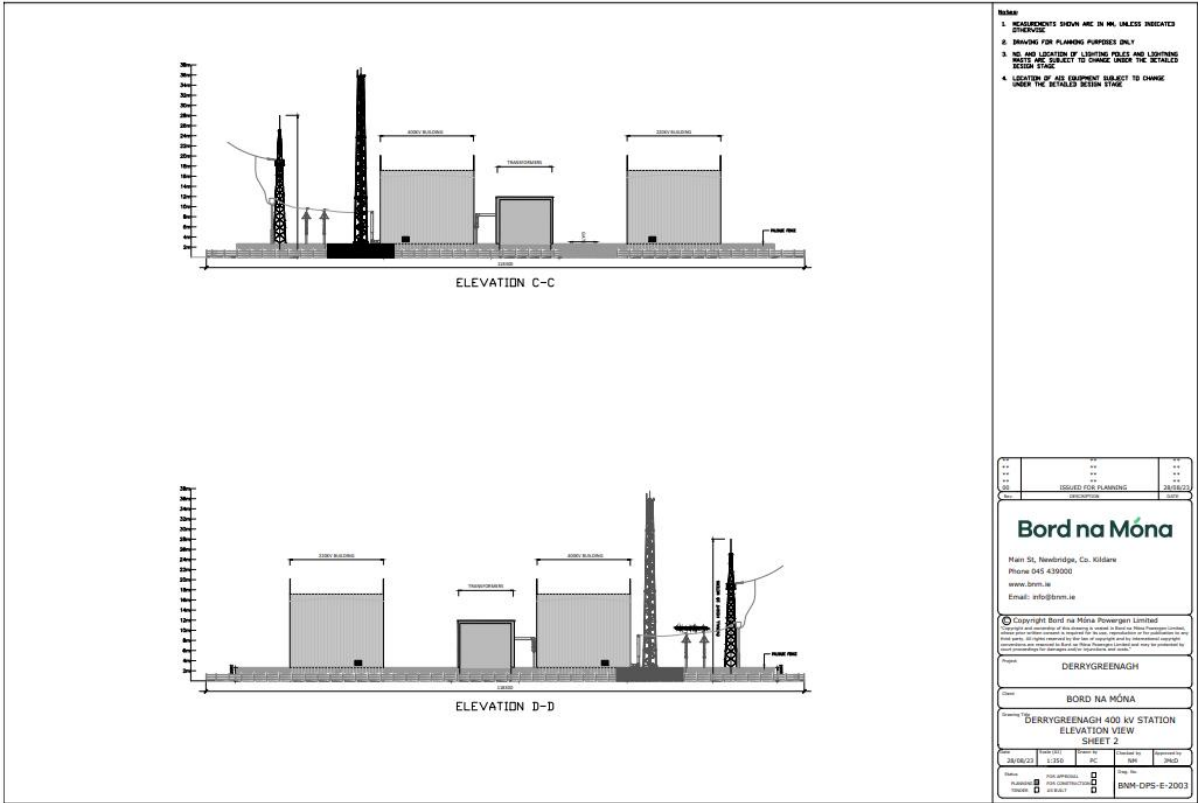
As a response to the consultation process IAA requested elevations of the proposed Telecommunications structures. These were circulated to the operations manager of the IAA.

Drawing ref: BNM-DPS-E-2001, BNM-DPS-E-2003, BNM-DPS-E-2004.







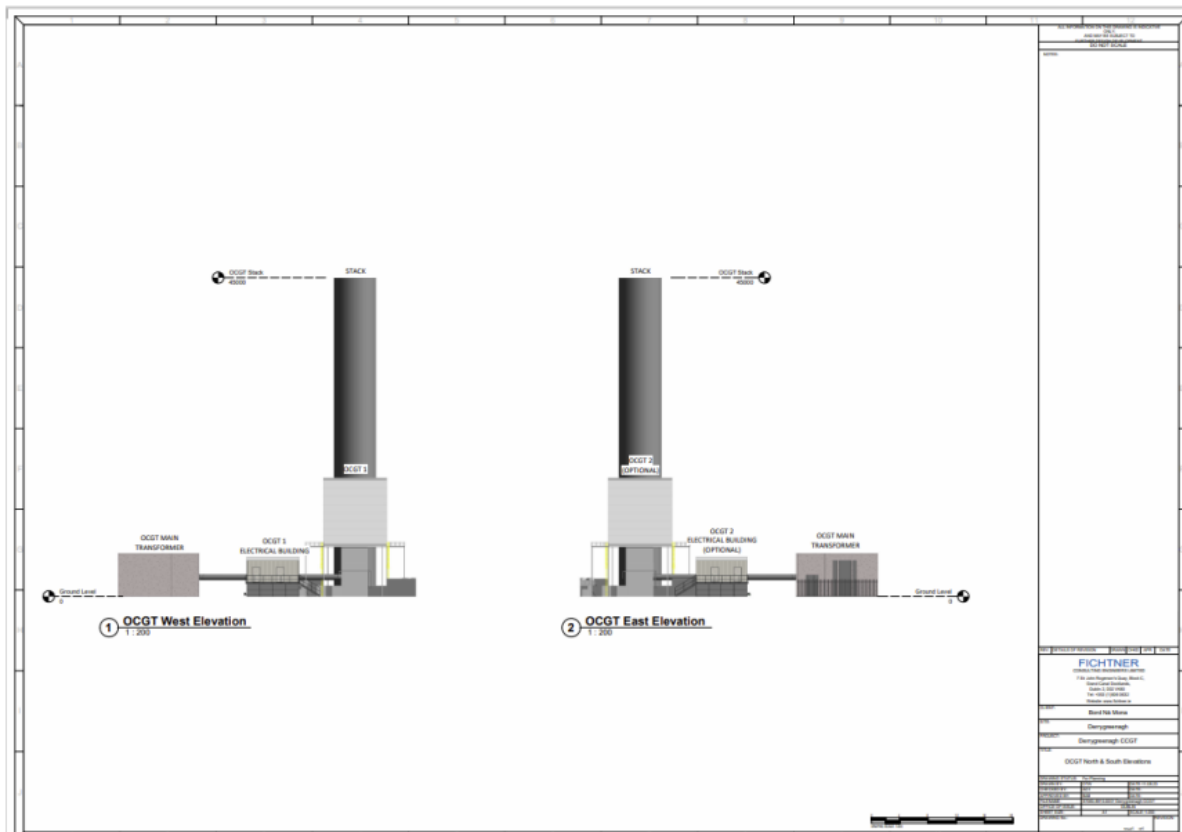


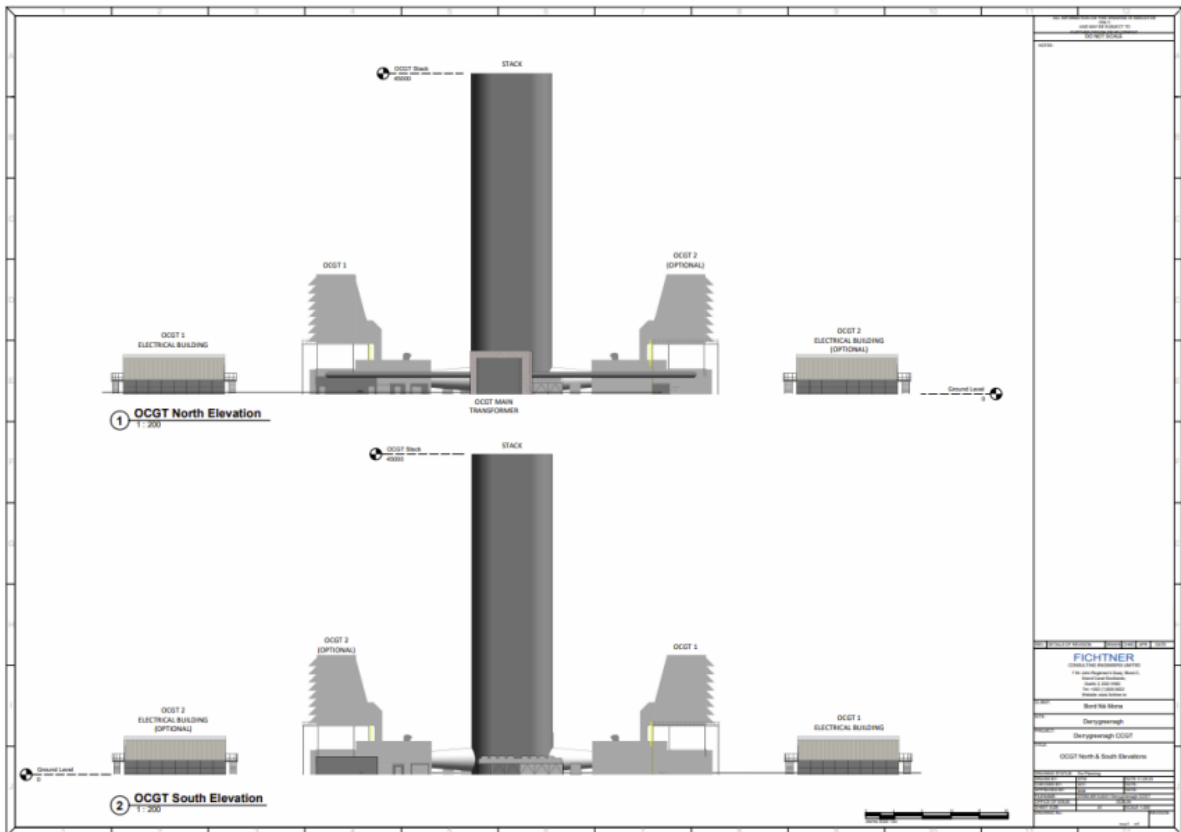
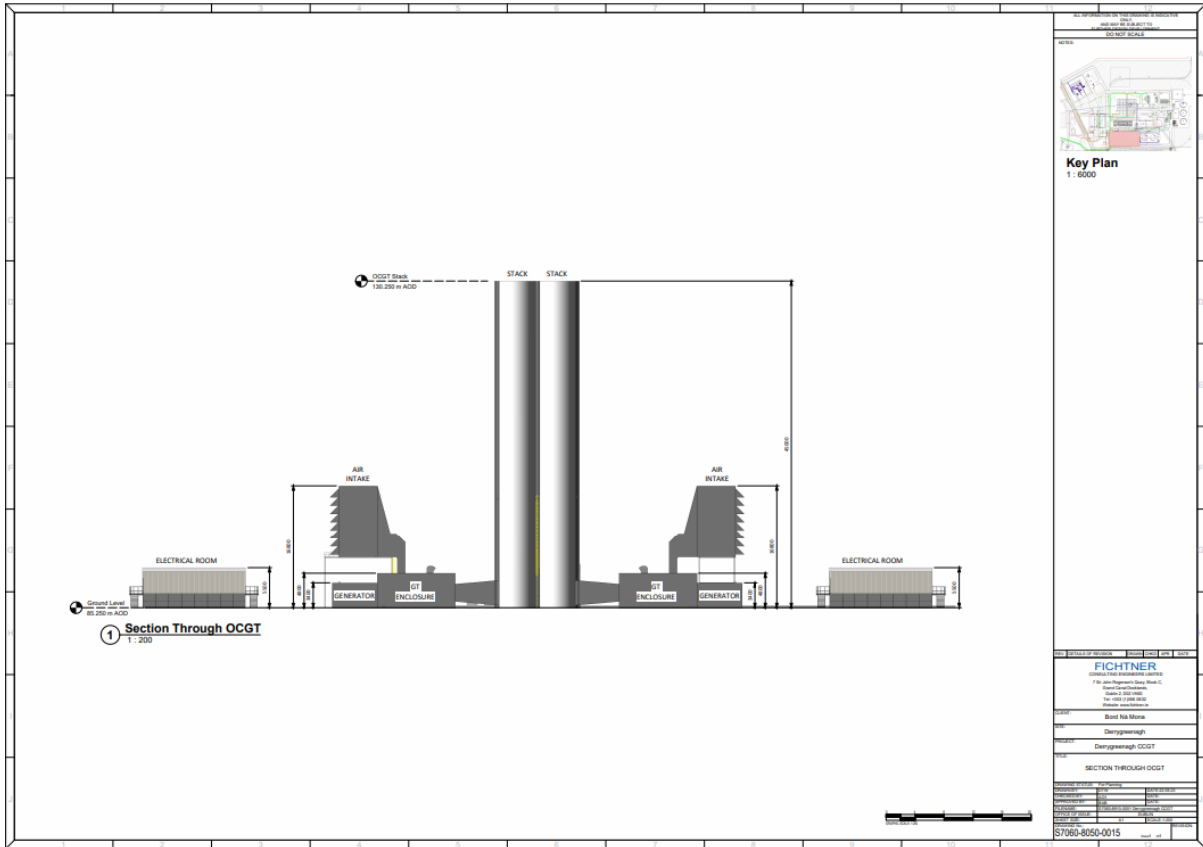
### **Appendix C – Elevations of Proposed Emissions Stacks**

In response to the consultation process, Imagine Broadband and Three Ireland requested copies of elevations of the proposed chimney stacks. These were circulated upon request.

The elevations are included in drawing reference: S7060-8050-0013, S7060-8050-0014 and S7060-8050-0015.

It should be noted that these drawings have been updated in advance of submission.





**Appendix D – Log of consultation responses**

| Stakeholder Name         | Response received from stakeholder (Yes/No) | Consultation Emails sent to Stakeholder | Date Response Received | Follow up emails sent                 | Issues raised/Summary of Engagement   |
|--------------------------|---|---|------------------------|---------------------------------------|---|
| Imagine Broadband        | Yes   | 18/08/2023                              | 09/10/2023             | 10/10/2023                            | The head of Network Deployment at Imagine Broadband has, further to a request, been furnished with additional elevations and drawings of the proposed development. Concern has been expressed that the Proposed Development may cause disruption to the Imagine Broadband network in the area. Dialogue remains ongoing between Gravis Planning and Imagine Broadband - via email and telephone - with Imagine's own radio engineers undertaking assessment as to the level impact that may arise.  |
| Three Ireland            | Yes   | 18/08/2023                              | 31/08/2023             | 08/09/2023                            | Three occupies space on the Cellnex mast located to the south of the Power Plant Area and has expressed concern that the proposed development may cause disruption to its network. Draft elevations of the Proposed Development were sent to the Transmission Manager for Three on 08/09/2023. Following review of these elevations, Three has advised that there may be a requirement to relocate certain equipment in the event of planning permission being granted, in order to continue the provision of an effective network in the area. Survey work is to be undertaken by Three's radio engineers in order to understand the nature and extent of any impact, and dialogue remains open between Three and Gravis Planning accordingly. |
| Cellnex Ireland          | Yes   | 18/08/2023                              | 05/09/2023             | 05/09/2023, 10/10/2023                | Cellnex Ireland are the owners of the existing mast to the south of the Power Plant Area. They have advised that Imagine Broadband, who are renting space on the mast from Cellnex, have raised concerns over the impact of the proposed development. They also requested clarification on the use of the new masts that are proposed within the substation areas. The intended use of the proposed masts has been confirmed and dialogue remains ongoing, with Cellnex awaiting the detail of surveys being undertaken by Three and Imagine Broadband.   |
| Vodafone Ireland         | Yes   | 18/08/2023                              | 18/10/2023             | 18/10/2023, 19/10/2023                | Vodafone advised that the proposed development may lead to some disruption to their radio links due to the proposed pylons to be built as part of the electricity grid connection, and that they would examine the route and likelihood of impact further. No subsequent update has been received.  |
| Irish Aviation Authority | Yes   | 18/08/2023                              | 22/08/2023,            | 12/09/2023                            | No concerns raised by IAA, however they requested confirmation of the height of the proposed telecommunications structures and stacks as part of the proposed development. They have advised that they would recommend that a condition be attached to any planning permission requiring the developer to "contact the Irish Aviation Authority to agree an aeronautical obstacle warning light specification for the stacks / telecoms masts and to notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection".  |
| 2RN                      | Yes   | 18/08/2023                              | 21/08/2023             | 23/08/2023                            | Request for protocol to be signed by BNM should the development progress post-planning.   |
| An Garda Siochana        | Yes   | 18/08/2023                              | 31/08/2023             | 14/09/2023, 28/09/2023 and 20/12/2023 | No issue raised. Press office in An Garda Siochana advised that we should refer our communications to the Tullamore district of An Garda Siochana, which was done. No response received from Tullamore branch.  |

|                        |     |             |            |   |  |
|------------------------|-----|-------------|------------|---|--|
| Comreg                 | Yes | 18/08/2023  | 18/08/2023 | 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023, 20/12/2023 | No issue raised, just acknowledgement of receipt of correspondence. Numerous follow-up emails sent. No further response. |
| Department of Defence  | Yes | 18/08/2023  | 26/08/2023 | 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023             | No issue raised. Consultation email acknowledged. Follow up emails sent. No further response.                            |
| Eir                    | No  | 18/08/2023  |            | 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023             | No acknowledgement received  |
| ESB Networks           | No  | 18/08/2023  |            | 14/09/2023, 28/09/2023, 24/10/2023 and 22/11/2023, 20/12/2023 | No acknowledgement received  |
| Irish Water            | No  | 18/08/2023, |            | 28/09/2023, 24/10/2023, 22/11/2023, 20/12/2023                | No acknowledgement received  |
| Tetra Ireland          | No  | 18/08/2023  |            | 14/09/2023, 28/09/2023, 24/10/2023 22/11/2023 and 20/12/2023  | No acknowledgement received  |
| Virgin Media           | No  | 18/08/2023  |            | 14/09/2023, 28/09/2023, 24/10/2023 22/11/2023 and 20/12/2023  | No acknowledgement received  |
| Air Navigation Ireland | No  | 25/10/2023  |            | 22/11/2023 and 20/11/2023                                     | No acknowledgement received  |

## Appendix E – EIA Consultation Letter



AECOM  
4th Floor, Adelphi Plaza  
Georges Street Upper  
Dun Laoghaire  
Co. Dublin  
A96 T927

T: +353 (0) 1 238 3100  
aecom.com

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.

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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 Rochforbridge-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, Derryron, 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><b>Power Plant Area</b><br/>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.</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"> <li>o Combined Cycle Gas Turbine (CCGT) Unit which includes a CCGT Turbine Hall and buildings and Heat Recovery Steam Generator (HRSG) and emission stack</li> <li>o Open Cycle Gas Turbine (OCGT) Plant and emission stack</li> <li>o Secondary Fuel Storage and Unloading Facility</li> <li>o Gas Connection Above Ground Installation (AGI) Compound and associated gas connection corridor and site entrance onto R400</li> <li>o Administration, stores, workshop buildings and car parks</li> <li>o Maintenance Compounds</li> <li>o Water Storage Tanks</li> <li>o Water Treatment Plant</li> <li>o Surface water drainage and attenuation</li> <li>o The Proposed Development will require demolition works of existing buildings, the BnM Derrygreenagh Works including offices, workshops and associated buildings.</li> </ul> | <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> <p>Based on the general use of the Proposed Development, there will be foul water treatment and surface water management in advance</p> |



| Proposed Elements  | Description of Elements  |
|--|--|
| <ul style="list-style-type: none"> <li>○</li> </ul>  | <p>of discharge. The processes used in abstraction and treatment will comply with the relevant Water Framework Directive Objectives.</p>   |
| <p><b>Electricity Grid Connection</b><br/>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.</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"> <li>○ 220kV underground Cable connection to the Power station site;</li> <li>○ 220kV substation (west of R400 road);</li> <li>○ 220kV Overhead Line;</li> <li>○ 200kV Interface Compound;</li> <li>○ 220kV Underground Cable Connection;</li> <li>○ 400-220kV substation at entry point to the transmission network;</li> <li>○ 2 no telecommunication masts at each of the substation sites.</li> </ul>   | <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><b>Gas Connection Corridor</b><br/>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.</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"> <li>○ 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;</li> <li>○ Connection will be via a tie-in location through an AGI to provide the connection to the BGE/77 Transmission Pipeline;</li> <li>○ A cathodic protection (CP) system;</li> <li>○ Aerial gas pipeline identification marker posts and CP test posts;</li> <li>○ Surface water drainage systems including channelling, culverting, crossings and works to existing drainage ditches and systems.</li> </ul> | <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. The 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 the 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 Rochforbridge 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> <p>The Gas Connection Route Corridor has been determined following the identification of technical and environmental constraints. In order to ensure a robust assessment of the likely significant environmental effects of the Proposed Development and the Overall Project, the assessment has been undertaken for the Gas Connection Route Corridor which is 1km wide.</p> |

| Proposed Elements  | Description of Elements  |
|--|--|
| <b>Temporary Construction Work</b><br><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>The following will be required to facilitate the Proposed Development and Overall Project and will be assessed in the EIA:</p> <ul style="list-style-type: none"> <li>o Demolition of the existing Derrygreenagh Works site buildings;</li> <li>o Temporary Construction Compounds, facilities, security cabins and stores;</li> <li>o Temporary site access points and car parks;</li> <li>o Temporary traffic management measures;</li> <li>o Temporary Signage, crossing points and road markings;</li> <li>o Temporary lighting;</li> <li>o Peat and spoil management.</li> </ul> | <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 BrM 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 EIA. 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> |

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 [derygreenagh@aecom.com](mailto:derygreenagh@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
- Site Layout

[aecom.com](http://aecom.com)

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