

Natural Resources Wales Permitting Decisions

**Drax Power Limited (Hirwaun
OCGT Plant)**

Decision Document

Application for a Normal Variation of an Environmental Permit

The application number is: PAN-026981

The permit variation number is: EPR/BB3297CG/V002

The applicant / operator is: Drax Power Limited

The Installation is located at: Main Avenue, Hirwaun Industrial Estate, Hirwaun, Aberdare, Rhondda Cynon Taf, CF44 9UP

Purpose of this document

This decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

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1. Executive summary

1.1. Application summary

The permit currently allows the operation of a single open cycle gas turbine (OCGT) that is natural gas-fired. The OCGT has a net rated thermal input of 760MW and exhaust gases from it are discharged through a single stack.

The operation of the OCGT is therefore permitted under the following listed activity in the Environmental Permitting (England and Wales) Regulations (EPR) 2016:

- Section 1.1 A(1)(a): Burning fuel in an appliance with a rated thermal input of 50 megawatts or more,

and it is a Large Combustion Plant (LCP) as defined in Chapter III of the Industrial Emissions Directive (IED).

The permit allows the operation of the OCGT for a maximum of 1500 hours per year as a rolling average over a period of five years. Emissions of NO_x from the OCGT are controlled via dry low-NO_x burners.

The permit also allows the operation of two Medium Combustion Plant (MCP) – MCP1 and MCP2:

- MCP1 is for the emergency operation of a diesel-fuelled generator during times of failure of electricity supply to the site to allow the safe shutdown of the power plant and to provide electricity to essential building systems. MCP1 has a net rated thermal input of <2MW; and
- MCP2 is for the operation of a diesel-fuelled fire water pump. MCP2 has a net rated thermal input of <2MW.

MCP1 and MCP2 are each permitted to operate for <50 hours per year. They fall under the definition of new MCP given in the Medium Combustion Plant Directive (MCPD). Due to the limited amount of hours they are permitted to operate, they were originally permitted with no associated emission limits and monitoring requirements. However, since the permit was issued, it has become apparent that they should be subject to

carbon monoxide periodic monitoring, with no associated emission limit. We have amended the Emissions to Air monitoring table accordingly to reflect this change.

MCP1 generates electricity and is used solely for the emergency provision of electricity, and therefore, it is also an 'excluded generator' as defined in Schedule 25B of EPR (which deals with Specified Generators), and means that MCP1 is also exempt from the Specified Generator emission limits and monitoring requirements.

The permit also permits the carrying on of several Directly Associated Activities (DAA), as follows:

- Gas reception facility
- Main cooling system
- Raw materials storage
- Waste tanks
- Surface water drainage.

The site is non-operational and the OCGT, MCPs and infrastructure associated with the DAAs have not yet been constructed.

The operator has applied for a normal variation to add 2no. MCPs for the purpose of heating water to warm the incoming natural gas that will be fed into the OCGT. The MCPs will each have a net rated thermal input of 4.144MW and will be fired on natural gas. They are permitted to operate exclusively of each other, with one being used as the duty plant and the other as a standby plant. We have named these MCPs 'MCP 3' and 'MCP 4', respectively, and assigned the emission points associated with them the references 'A1a' and 'A1b', respectively.

They are also permitted to operate for a combined total of a maximum of 1,500 hours per year as a rolling average over a period of five years. As the flue gases from them are not mixed with the flue gases generated by the LCP, and the missed gases are not subsequently discharged via the LCP stack, MCPs 3 and 4 are not classed as part of the LCP for the purposes of determining whether or not the Large Combustion Plant

(LCP) BAT Conclusions¹ apply to them, in line with the Joint Environmental Programme's IED Compliance Protocol². As such, they are not subject to LCP BAT and the requirements of the Medium Combustion Plant Directive (MCPD) apply to them as minimum standards, in line with the IED Compliance Protocol and NRW internal guidance. We have applied an emission limit value of 100mg/m³ for oxides of nitrogen, subject to three-yearly periodic monitoring, and three-yearly periodic monitoring for carbon monoxide (with no associated emission limit), in line with the MCPD.

The operator is, however, required to aggregate their net rated thermal input into the overall net rated thermal input of the LCP for inventory reporting purposes.

Finally, MCPs 3 and 4 do not generate electricity and therefore are not Specified Generators (excluded or otherwise).

1.2. Our decision

We have decided to issue the variation for Hirwaun OCGT Plant operated by Drax Power Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

2. Receipt of the application

The application was received on 20/09/2024. In order for us to be able to consider the application duly made, we needed more information. We requested the following:

- Revised application form Part F1 with a valid signed declaration
- A site plan showing the locations of all existing and proposed emission points with the installation boundary depicted in green

¹ [Publications Office](#)

² [IEDComplianceProtocolLCPBREFUpdate2022.pdf](#)

- A summary of the ISO14001:2015 Environmental Management System
- A technical specification document for the proposed boiler type
- Justification for the use of the stated NO_x emission rate included in the SCAL assessment.

A letter requesting this information was sent to the applicant on 11/04/2025. We received responses to our letter, which we deemed satisfactory, on 15/04/2025 and 17/04/2025. Upon receipt of this information we were able to consider the application duly made. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

3. Confidential information

The applicant made no claim for commercial confidentiality, and we have not received information in relation to the application that appears to be confidential in relation to any party.

4. Legislation

The variation will be issued, under Regulation 20 of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- an *installation* as described by the IED; and
- subject to aspects of the Well-Being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 which also have to be addressed.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that the decision on this application is consistent with its general purpose of pursuing the sustainable management of natural resources (SMNR) in relation to Wales and applying the principles of SMNR.

Environment Wales Act 2016 – Biodiversity and resilience of ecosystems duty

Section 6 of the Environment Wales Act 2016 requires that we seek to maintain and enhance biodiversity in the exercise of our functions, and in so doing promote the

resilience of ecosystems, in a manner that is consistent with the proper exercise of our functions. NRW is satisfied that in this case we have taken into account and had due regard to this duty in so far as it is consistent with the function of determining an application for a variation to an EPR permit.

As the EPR regulator for Part A1 installations in Wales, NRW are required to determine any duly made Part A1 permit applications. This means that we must decide either to grant, or to refuse the variation based upon an objective assessment of the proposals against the detailed legal requirements of EPR. Our public participation statement³ gives more information on what can, and cannot, be taken into account when making our permitting decision.

The application, and this decision document, only considers the permitting of the facility under EPR as described throughout the document. We only assess the installation and its impacts and cannot take into consideration indirect impacts which are not as a direct result of activity within the installation boundary.

Any proposed development and wider associated activities will be required to be compliant with all relevant and applicable law, for example, environmental law, health and safety law, planning law. This other legislation acts largely independently of EPR (although they may be inter-related). Such other matters are beyond both the scope of this document, and of our regulatory remit and expertise and are not relevant to our EPR permitting decision. Ensuring compliance with all other regulation and obtaining any required consents (such as planning permission) is the responsibility of those undertaking the development and is regulated by the relevant appropriate authority for each.

5. Consultation

No consultation has been carried out on this application because it is not required for this type of variation application. This decision was made in accordance the

³ [Natural Resources Wales / Public participation: how you can take part in our permit and licence consultations](#)

Environment Permitting Regulations (EPR), our statutory Public Participation Statement and our Regulatory Guidance.

6. The Installation

6.1. The permitted activities

The permit currently allows the operation of a single open cycle gas turbine (OCGT) that is natural gas-fired. The OCGT has a net rated thermal input of 760MW and exhaust gases from it are discharged through a single stack.

The operation of the OCGT is therefore permitted under the following listed activity in the Environmental Permitting (England and Wales) Regulations (EPR) 2016:

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The permit also allows the operation of two Medium Combustion Plant (MCP) – MCP1 and MCP2:

- MCP1 is for the emergency operation of a diesel-fuelled generator during times of failure of electricity supply to the site to allow the safe shutdown of the power plant and to provide electricity to essential building systems. MCP1 has a net rated thermal input of <2MW
- MCP2 is for the operation of a diesel-fuelled fire water pump. MCP2 has a net rated thermal input of <2MW.

MCP1 and MCP2 are each permitted to operate for <50 hours per year. They fall under the definition of new MCP given in the Medium Combustion Plant Directive (MCPD). Due to the limited amount of hours they are permitted to operate, they were originally permitted with no associated emission limits and monitoring requirements. However, since the permit was issued, it has become apparent that they should be subject to

carbon monoxide periodic monitoring, with no associated emission limit. We have amended the Emissions to Air monitoring table accordingly to reflect this change.

As MCP1 generates electricity and is used solely for the emergency provision of electricity, is also an 'excluded generator' as defined in Schedule 25B of EPR (which deals with Specified Generators). This means that MCP1 is also exempt from the Specified Generator emission limits and monitoring requirements.

Together, these listed and directly associated activities comprise the Installation.

6.2. Changes to the installation

The operator has applied for a normal variation to add 2no. MCPs for the purpose of heating water to warm the incoming natural gas that will be fed into the OCGT. The MCPs will each have a net rated thermal input of 4.144MW and will be fired on natural gas. They are permitted to operate exclusively of each other, with one being used as the duty plant and the other as a standby plant. We have named these MCPs 'MCP 3' and 'MCP 4', respectively, and assigned the emission points associated with them the references 'A1a' and 'A1b', respectively.

They are also permitted to operate for a combined total of a maximum of 1,500 hours per year as a rolling average over a period of five years. They are also permitted to operate for a combined total of a maximum of 1,500 hours per year as a rolling average over a period of five years.

As the flue gases from them are not mixed with the flue gases generated by the LCP, and the missed gases are not subsequently discharged via the LCP stack, MCPs 3 and 4 are not classed as part of the LCP for the purposes of determining whether or not the Large Combustion Plant (LCP) BAT Conclusions⁴ apply to them, in line with the Joint Environmental Programme's IED Compliance Protocol⁵.

⁴ [Publications Office](#)

⁵ [IEDComplianceProtocolLCPBREFUpdate2022.pdf](#)

As such, MCPs 3 and 4 are not subject to LCP BAT and the requirements of the Medium Combustion Plant Directive (MCPD) apply to them as minimum standards, in line with the IED Compliance Protocol and NRW internal guidance. We have therefore included MCPs 3 and 4 in the permit as Directly Associated Activities (DAAs).

The operator is, however, required to aggregate their net rated thermal input into the overall net rated thermal input of the LCP for inventory reporting purposes. We have changed the LCP reporting requirements in the permit to accommodate this.

Finally, MCPs 3 and 4 do not generate electricity and therefore are not Specified Generators (excluded or otherwise).

7. Operation of the installation

7.1 Operator competence

The applicant is the sole operator of the Installation. We are satisfied that the applicant is the person who will have control over the operation of the Installation after the variation is issued; and that they will be able to operate the Installation so as to comply with the conditions included in the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator⁶.

7.2. Environmental Management System

The applicant has stated in the application that they will implement an Environmental Management System (EMS) that will meet the requirements for an EMS in our “How to comply with your environmental permit” guidance⁷. The applicant’s EMS is certified to ISO14001:2015 standard.

The applicant has submitted a summary of the EMS with their application.

We have reviewed the application and are satisfied that appropriate management systems and management structures will be in place for this Installation, and that

⁶ [RGN 1 Understanding the meaning of 'operator' \(naturalresources.wales\)](#)

⁷ [Natural Resources Wales / Guidance to help you comply with your environmental permit](#)

sufficient resources are available to the Operator to ensure compliance with all the Permit conditions.

7.3. Operating techniques

Installation activities and assessment of Best Available Techniques

As described above in Section 6.2, the MCPs do not form part of the larger, existing LCP activity and are therefore not subject to any BAT conclusions. MCPD applies as minimum standards, and we have therefore assessed the operation in accordance with the requirements of MCPD and Schedule 25A of EPR 2016.

8. The site

8.1. Site Plan

The applicant has provided an updated plan which we consider is satisfactory, showing the extent of the site of the facility and its emission points.

We have renamed the existing emission points A2 (emergency diesel generator) and A3 (diesel fire pump), and added the new emission points for the water heaters on the site plan, as follows:

Existing emission points	New emission points
A2– changed from 'point 5' to 'A2'	A1a (duty water heater)
A3– changed from 'point 6' to 'A3'	A1b (standby water heater)

Emission point A1 remains named as 'A1' on the site plan.

The updated plan will be included in the permit and the operator will be required to carry on the permitted activities within the site boundary.

8.2. Site Condition Report

The proposal does not include the addition of any land and so a Site Condition Report was not required to support this application.

9. Environmental Risk Assessment

Regulated activities can present different types of risk to the environment, these include odour, noise and vibration; accidents, fugitive emissions to air and water; as well as point source releases to air, water, sewer and discharges to ground or groundwater, global warming potential and generation of waste. All these factors have been considered during our determination and the relevant risks from this proposal are discussed in this and other sections of this document.

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of emissions from the Installation on human health and the environment and what measures we are requiring ensuring a high level of protection.

In line with our guidance, the applicant has provided an environmental risk assessment with the application which identifies the sources of key risks from the variation, possible pathways and receptors. This risk assessment and further assessments provided by the applicant and/or completed by NRW will be discussed in further detail below.

9.1. Assessment of impact on air quality

As per the requirements of Schedule 25A of EPA 2016 (i.e., the MCPs are not located within an Air Quality Management Area or area identified within the Clean Air Plan for Wales, we have not assessed the impact of emissions from MCPs 3 and 4 on human health in the vicinity of the installation.

Emission limits

We have included emission limits for MCPs 3 and 4 in the permit, as follows:

- MCP 3 – Oxides of nitrogen – 100mg/m³
- MCP 4 - Oxides of nitrogen – 100mg/m³

Based upon the information in the application and the measures that will be imposed by the permit we are satisfied that the appropriate measures will be in place to protect air quality for the environment and human health.

10. Impact on National Site Network Sites, SSSIs and non-statutory sites

The applicant has used the relevant screening distance criteria to identify relevant protected conservation sites which could be at risk from the proposal. For Medium Combustion Plant in the range 2-5MWth input, the screening distance for National Site Network Sites and Sites of Special Scientific Interest (SSSI) is 1000m. We are in agreement with the screening distances used.

A full assessment of the variation application and its potential to affect the identified sites identified has been carried out as part of the permit determination process. National Site Network sites, SSSI and non-statutory conservation sites will be discussed separately below.

10.1. The National Site Network

The following National Site Network sites are located within 1 km of the installation:

- Blaen Cynon SAC (UK0030092).

A Habitat Regulations Assessment (HRA) was completed to assess the potential to affect any of the sites identified. The project was screened for likelihood of significant effects and is considered not likely to have a significant effect on any National Site Network site (as documented in section 3.2 of OGN 200 Form 1). Consultation with the Appropriate Nature Conservation Body was not considered necessary given the level of conservatism built into the SCAIL screening tool with regard to calculation of the process contributions and use of the site relevant critical loads. The full assessment is available to view on our online public register.

10.2. Sites of Special Scientific Interest (SSSI)

The following SSSIs are located within 1 km of the installation:

- Cors Bryn-yr-Gaer SSSI (33WBN)

As a Section 28G Authority as defined in the Countryside Rights of Way Act 2000 permitting teams within NRW have a legal duty, under Section 28I of the Wildlife and Countryside Act 1981, to consult with NRW for formal advice when permitting an activity which has been determined to be likely to damage the features of a SSSI.

To determine if consultation is required, a SSSI Assessment was completed. The assessment concluded that the proposed permission is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest. Therefore, no consultation with NRW's protected sites advisors is required.

A copy of the assessment is available to view on our online public register.

10.3. Non-statutory conservation sites

In line with the guidance on Specified Generators published on the GOV.UK website⁸, we do not undertake assessment of the impact of emissions on non-statutory conservation sites for variation involving the addition of MCPs to environmental permits.

11. The Permit Conditions

11.1. Incorporating the variation

We have specified that the applicant must operate the permit in accordance with descriptions in the application.

These descriptions have been specified in the Operating Techniques table in the permit.

11.2 Emission Limits

⁸ [Specified generators: dispersion modelling assessment - GOV.UK](#)

We have set an emission limit of 100mg/m³ for oxides of nitrogen for MCP 3 and MCP 4. This is in line with the requirements of the MCPD.

11.3 Monitoring

We have decided that monitoring should be carried out for the parameters listed in Schedule 3 of the permit using the methods and to the frequencies specified in those tables. These monitoring requirements have been imposed in order to demonstrate compliance with the emissions limits in the permit.

For emissions to air, the methods for periodic monitoring are in accordance with the requirements of the MCPD.

11.4 Reporting

We have specified the reporting requirements in Schedule 4 of the Permit to ensure data is reported to enable timely review by Natural Resources Wales to ensure compliance with permit conditions and to monitor the efficiency of material use and waste recovery at the installation.

We have updated Reporting Form IED HR1 to take into account the addition of the new MCPs to the permit.

12. OPRA

The OPRA score has not been changed as a result of this variation and remains as 122. This will form the basis for ongoing subsistence fees.

