

Natural Resources Wales permitting decisions

Infinite Renewables Group Limited (Royal Mint Combined Heat and Power Facility) Decision Document

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New bespoke permit

The application number/the permit: PAN-014743

The applicant /operator is: Infinite Renewables Group Limited

The Installation is located at: Royal Mint Combined Heat and Power Facility, The Royal Mint, Llantrisant, Pontyclun, CF72 8YT

Infinite Renewables Group Limited have applied for a new “Directly Associated Activity (DAA) permit to operate a combined heat and power (CHP) facility located at the Royal Mint in Llantrisant. The CHP has a thermal input of 4.28 MWth and is fuelled by natural gas (supplied by the Royal Mint). It is therefore subject to the Medium Combustion Plant Directive (MCPD) as a new MCP (post 2018). The CHP will supply electricity and steam solely to the Royal Mint and therefore has been permitted as a directly associated activity (DAA) permit to the Royal Mint’s Installation (permit number EPR/KP3135KV originally issued in 2005).

We have decided to grant the permit for Royal Mint Combined Heat and Power Facility operated by Infinite Renewables Group 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.

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
- justifies the specific conditions in the permit other than those in our generic permit template.

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

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Key issues of the decision

Receipt of application

The application was received on the 19/07/2021. A request for more information was sent out on the 17/11/2021 and the application was duly made on the 08/12/2021.

Confidential information

No claim for commercial or industrial confidentiality had been made.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential. The decision was taken in accordance with our guidance on commercial confidentiality.

Consultation

The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.

A copy of the application and all other documents relevant to our determination (see below) are available for the public to view. Anyone wishing to see these documents could arrange for copies to be made.

We sent copies of the Application to the following bodies, which includes those with whom we have “Working Together Agreements”:

- **Health and Safety Executive**
- **Public Health Wales**
- **Rhondda Cynon Taf Borough Council - Planning Department**
- **Rhondda Cynon Taf Borough Council Environmental Health**

These are bodies whose expertise, democratic accountability and/or local knowledge make it appropriate for us to seek their views directly.

The consultation started on **08/12/2021** and ended on **12/01/2022**.

An advert was also placed on our website.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 1. We have taken all relevant responses into consideration in reaching our determination.

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of part of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator.

The facility

The regulated facility is an “Directly Associated Activity (DAA)” installation which comprises the following DAA:

- Combined Heat and Power Facility 4.28MWth – Environmental permitting regulations Schedule 25A - Medium Combustion Plants: Medium Combustion Plant Directive

The installation is not subject to Schedule 25B of EPR – Specified Generator, as the CHP engine is classed as an excluded generator as it is part of an installation as defined in Chapter II of the Industrial Emissions Directive.

This permit applies to only one part of the installation – A Combined Heat and Power facility. The names and permit numbers of the operators of other parts of the installation are detailed in the permit's introductory note.

Legislation

NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources

All applicable European directives have been considered in the determination of the application.

The site

The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility including the location of the part of the installation to which this permit applies on that site. The plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.

The permitted activity will be operated as part of a multi-operator installation. The site plan includes the boundaries of this installation and the main installation.

Site condition report

The operator has provided a description of the condition of the site.

The area which the CHP is to occupy had been used as an overflow carpark (since the 1970s) but had also been reported to have used for the storage of redundant equipment. This area of land, although owned by the Royal Mint, was not within the installation's permitted boundary and there has been no reported activities taking place in this area. Soil analysis showed that none of the containments were present in concentrations above the generic assessment criteria (GAC). Ground water analysis showed a slight exceedance in cyanide and mercury compared to the general assessment criteria. All other substances in the ground water analysis showed no exceedance over the general assessment criteria. These results are contained within the applicant's site condition report available on the public register.

We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

Biodiversity, Heritage, Landscape and Nature Conservation

The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. A full assessment of the application and its potential to affect any of the sites has been carried out as part of the permit determination process. Natura 2000/Ramsar sites, Sites of Special Scientific Interest (SSSI) and non-statutory conservation sites will be discussed in detail separately below.

Nature 2000/Ramsar sites

There are no Natura 2000/Ramsar sites within the 5 km of the site which is the relevant screening distance for this type of facility in line with current NRW guidance. As such there was no requirement to undertake a Habitat Regulatory Assessment (HRA) as there is no conceivable impact pathway to any Natura 2000/Ramsar site.

SSSI

An Appendix 4 has been completed for the following SSSIs located within 2 km of the site:

- Rhos Tonyrefail SSSI
- Llantrisant Common Pastures SSSI

An Appendix 4 Form was completed to assess the potential of this permission to effect the SSSIs, this is available to view on the public register. The assessment concluded the facility is not likely to damage any of the features of the SSSIs.

Non-statutory Conservation Sites

The following local wildlife sites were identified as being within the risk screening distance of 2 km from the location of the CHP:

- Y Graig
- Llantrisant Common
- Garth Grabben Slopes
- Rhiwfeilin Fawr
- Nant Muchudd 1
- Coedcae-mawr 1
- Pant-y-ddraenen
- Crofft-yr-haidd Marshy Grassland
- Llantrisant Forest and Craig Melyn Woodland
- River Ely

There were also seven ancient woodlands identified within the risk screening of 2 km from the site. There were no local nature reserves or national nature reserve identified within the 2 km risk screening distance from the site.

The applicant provided air dispersion modelling which assessed the impact of air emissions associated with the proposal on the non-statutory sites identified. This information was requested from the applicant prior to the application being duly made. The process contribution (PC) was shown to be below 100% of the relevant critical level at all sites, with the highest long term PC (at Nant Muchudd site) being 2.9% of the long term critical level and the highest short term being 9.7% of the critical level (at a set of ancient wood lands located 350 meters to the north west of the emission point). In line with the current guidance, as the long term and short term PC is less than 100% of the relevant critical level, emissions can therefore be regarded as insignificant.

Environmental Risk Assessment

Air

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the stack and its impact on local air quality.

The Applicant has assessed the Installation's potential emissions to air against the relevant air quality standards, and the potential impact upon human health. These assessments predict the potential effects on local air quality from the Installation's stack emission.

The air impact assessments, and the dispersion modelling has been based on the Installation operating continuously at the relevant long-term or short-term emission limit values, i.e. the maximum permitted emission rate.

We are in agreement with this approach. The assumptions underpinning the model have been checked and are reasonably precautionary. The way in which the Applicant used dispersion models, its selection of input data, use of background data and the assumptions it made.

Impact on Human Health

The applicant has calculated process contributions (PC) and predicted environmental concentrations (PEC) at locations within the immediate vicinity and all identified

sensitive receptor locations. The modelling results for NO_x will be discussed separately below.

Emissions of carbon monoxide (CO) were assessed by the applicant using the H1 tool. The short term process contribution (PC) was 1.31 mg/m³, which is more than 10% (13.1%) of the short term environmental standard 10 mg/m³. The predicted environmental concentration (PEC) for CO was 1.56 mg/m³, which is less than 20% of the environmental standard minus twice the background concentration, therefore in line with the current guidance, emissions of CO were screened out as insignificant and no further assessment was required.

The site is not situated in or near either an air quality monitoring area or in an area identified in the Clean Air Plan for Wales.

Oxides of nitrogen (NO_x)

A long term critical level of 40 µg/m³ (annual) and short term critical level of 200 µg/m³ (hourly) was assumed for NO_x. At sensitive receptor locations the maximum predicted long-term process contribution (PC) was more than 1 % (0.39 µg/m³ rounded up to 1% of the long term annual mean of 40 µg/m³) which means these emissions do not screen out as insignificant at this stage. However, long-term PEC was less than 70% (30.4%) of the long-term critical level. Therefore, in accordance with current guidance the long-term impacts from NO_x can be considered as insignificant.

At sensitive receptor locations the maximum predicted short-term PC was <10% (3.7%) of the short-term critical level. Therefore in accordance with the guidance, the short term-term impacts from NO_x can be considered as insignificant.

Air Impact on designate site

The details on the predicted worst case impacts from the air emissions from proposal on the SSSIs, including impacts on from process contribution on the critical levels, critical loads and acidity at the sites are outlined in full details in the Appendix 4 assessment which is available on the public register.

Emission limits

We have decided that emission limits should be set for the parameters listed in the permit.

We have decided that emission limits should be set for the parameters listed in the permit. Emissions Limit Values (ELVs) are in line with those set out in the MCP Directive.

Substance	ELV
Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	95 mg/Nm ³

It is considered that the ELVs/ equivalent parameters or technical measures described above will ensure that significant pollution of the environment is prevented and a high level of protection for the environment secured.

Water

There are no discharges to either surface or ground water associated with this activity.

Soil

The operator has provided a description of the condition of the site.

We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports – guidance and templates (H5).

The operator will not be storing any bulk substances on site. The CHP housing is designed to provide secondary containment in the event of an oil or coolant leak.

Odour

We do not consider the activities carried out at the site have the potential to cause odour issues as this is combustion of natural gas.

Noise

We do not consider the activities carried out at the site have the potential to cause noise and/or vibration that might cause disturbance. The applicant did a noise risk

assessment demonstrating that the unit will not have an impact through noise due to design of the unit and regular maintenance. We have agreed with this assessment.

Fugitive emissions

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise fugitive emissions and to prevent pollution from fugitive emissions.

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, as per the ELV and monitoring frequency requirements specified within the MCP Directive.

For emissions to air, the methods for continuous and periodic monitoring are in accordance with the Environment Agency's Technical Guidance Note M5 for monitoring of stack gas emissions from medium combustion plants and specified generators.

Based on the information in the application and the requirements set in the conditions of the permit, we are satisfied that the operator's techniques, personnel and equipment employed by the Operator have either MCERTS certification or MCERTS accreditation as appropriate.

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

Operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The relevant guidance for this plant are:

- Technical guidance note (TGN) M5: Monitoring of stack emissions from medium combustion plants and specified generators
- BAT conclusions Reference BRef document for energy efficiency

The proposed techniques/ emission levels for priorities for control are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility.

As a new Medium Combustion Plant, the site must adhere to the following operating techniques specific for MCP:

- Each MCP must be operated in accordance with the manufacturer's instruction and records must be made and retained to demonstrate this.
- The operator must keep periods of start-up and shut down of each MCP as short as possible.
- There must be no persistent emission of 'dark smoke' as defined in Section 3(1) of the Clean Air Act 1993.

As a directly associated activity to an installation, the applicant had supplied a summary of additional best available techniques (BAT) form energy efficiency BAT reference (BRef) document and what was applicable to their site. The applicant has applied the emission limit for the appropriate MCP of 95 mg/Nm³. We are satisfy that the application of the relevant BAT will minimise the impact from the site.

We consider that the emission limits included in the permit reflect the BAT for the installation.

We have specified the operating techniques and the operator must use the operating techniques specified Tables S1.2 and S1.2A

The permit conditions

Raw materials

We have not specified limits and controls on the use of raw materials and fuels.

Conditions where the consent of another person is needed.

As this permit is part of a multi-operator installation we have imposed conditions (1.5) in order to ensure that when there is a notification to Natural Resources Wales under condition 4.3.1 (a) or 4.3.1 (c), the operator also informs the other operator of the installation.

Incorporating the application

We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process.

These descriptions are specified in the Operating Techniques table (Table S1.2) in the permit.

Operator Competence

Environment management system

There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.

Relevant convictions

Our Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.

Financial provision

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.

Charges and Subsistence Fees

The type of application regarding directly associated activity (DAA) will have an associated charge. The DAA application will also form the basis for ongoing

subsistence fees. More information on this can be found in our charging scheme on our website.

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ANNEX 1: Consultation Responses

A) Advertising and Consultation on the Application

The Application has been advertised and consulted upon in accordance with Natural Resources Wales Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our draft decision is summarised in this Annex. Copies of all consultation responses have been placed on Natural Resources Wales public register.

1) Consultation Responses from Statutory and Non-Statutory Bodies

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered
Public Health Wales -Are satisfied with the application on the basis that BAT is applied	MCP usually are not subject to BAT. However as a directly associated activity to an installation the applicant assessed and applied provisional BAT. We have assess these as satisfactory in running the site. The site will meet the required ELVs for this type of MCP.

2) Consultation Responses from Members of the Public and Community Organisations

a) Representations from Local MP, Assembly Member (AM), Councillors and Parish / Town / Community Councils

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered

b) Representations from Community and Other Organisations

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered

c) Representations from Individual Members of the Public

Response Received from	
Brief summary of issues raised:	Summary of action taken / how this has been covered