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Natural Resources Wales permitting decisions

Aneurin Bevan University Health Board

New bespoke permit

The application number is: PAN-012070

The Applicant / Operator is: Aneurin Bevan University Health Board

The Facility is located at: The Grange University Hospital, Caerleon Road, Llanfrecfa Grange, Cwmbran, NP44 8YN

We have decided to grant the permit for The Grange University Hospital operated by Aneurin Bevan University Health Board.

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.

Structure of this document

- Table of contents
- Key issues

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Key issues of the decision

1 Our decision

We have decided to issue a permit to Aneurin Bevan University Health Board.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is subject principally to the Environmental Permitting Regulations 2016 (EPR), Medium Combustion Plant Directive (MCPD) and Specified Generator (SG) regulations.

The permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of EPR and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate.

This document should be read in conjunction with the application and supporting information and permit.

2 How we reached our decision

2.1 Receipt of Application

The Application was accepted as duly made on **27/05/21**. 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.

The Applicant made a claim for **no claim for commercial confidentiality**. We **have not** received information in relation to the Application that appears to be confidential in relation to any party.

2.3 Consultation on the Application

There was no requirement to carry out a consultation on the Application, the plant is not located within an AQMA.

2.3 Requests for Further Information

Further information was also requested by way of a Schedule 5 Notice requiring the applicant to provide additional information on the common stack, monitoring of emissions and relevant O₂ % content to achieve NO_x Emissions of 80 mg/Nm³. The Schedule 5 Notice was sent on 18/06/21 with a response date of 16/07/21. The Applicants response to the Schedule 5 Notice was provided on 15/07/21.

A copy of the information notice and e-mails requesting further information were placed on our public register as were the responses when received.

3 The Legal Framework

The permit will be issued, under Regulation **13** 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:

- plant as described by Schedule 25A and Schedule 25B covering the Medium Combustion Plant Directive (MCPD) and Specified Generator (SG) regulations respectively;
- 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 this decision 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. In particular, NRW acknowledges that it is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in granting the Permit a high level of protection will be delivered for the environment and human health through the operation of the Facility in accordance with the permit conditions. 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.

4 The Facility

4.1 Description of the Facility and related issues

4.1.1 The permitted activities

The Facility is subject to the EPR because it carries out an activity as described in Schedule 25A and Schedule 25B of the EPR:

- One combined Tranche B Specified Generator/new Medium Combustion Plant aggregated to <50 MWth at a specified location

A Generator means any combustion plant generating electricity. The regulations use the term ‘specified generator’ to encompass both individual generators and multiple generators at the same location or site, operated by the same Operator and for the same purpose. The “same purpose” means that having a different function does not stop individual generators being treated as part of a specified generator, e.g. generators with a capacity market agreement or providing a balancing service whether they are under the same contract or not would be classed as operating for the “same purpose” as they generate electricity. Similarly, generators with different fuels or technologies are also classed as operating for the “same purpose”.

The specified generator permit will apply to the site, rather than its constituent individual generators. All specified generators equal to or more than 1 MWth will also be Medium Combustion Plant (MCP) and must also meet the requirements of the MCP Directive, the specified generator is also a new MCP as put into operation after 20 December 2018, therefore the MCPD requirements apply now.

Specified Generators are also divided into Tranche A and Tranche B sites, which will determine the relevant permitting date. A site is a Tranche A site if it meets the following criteria:

- It came into operation before 1 December 2016, or
- It is the subject of a capacity agreement arising from the 2014 or 2015 capacity auctions

A generator with a rated thermal input of less than 1MWth will be classed as Tranche A if:

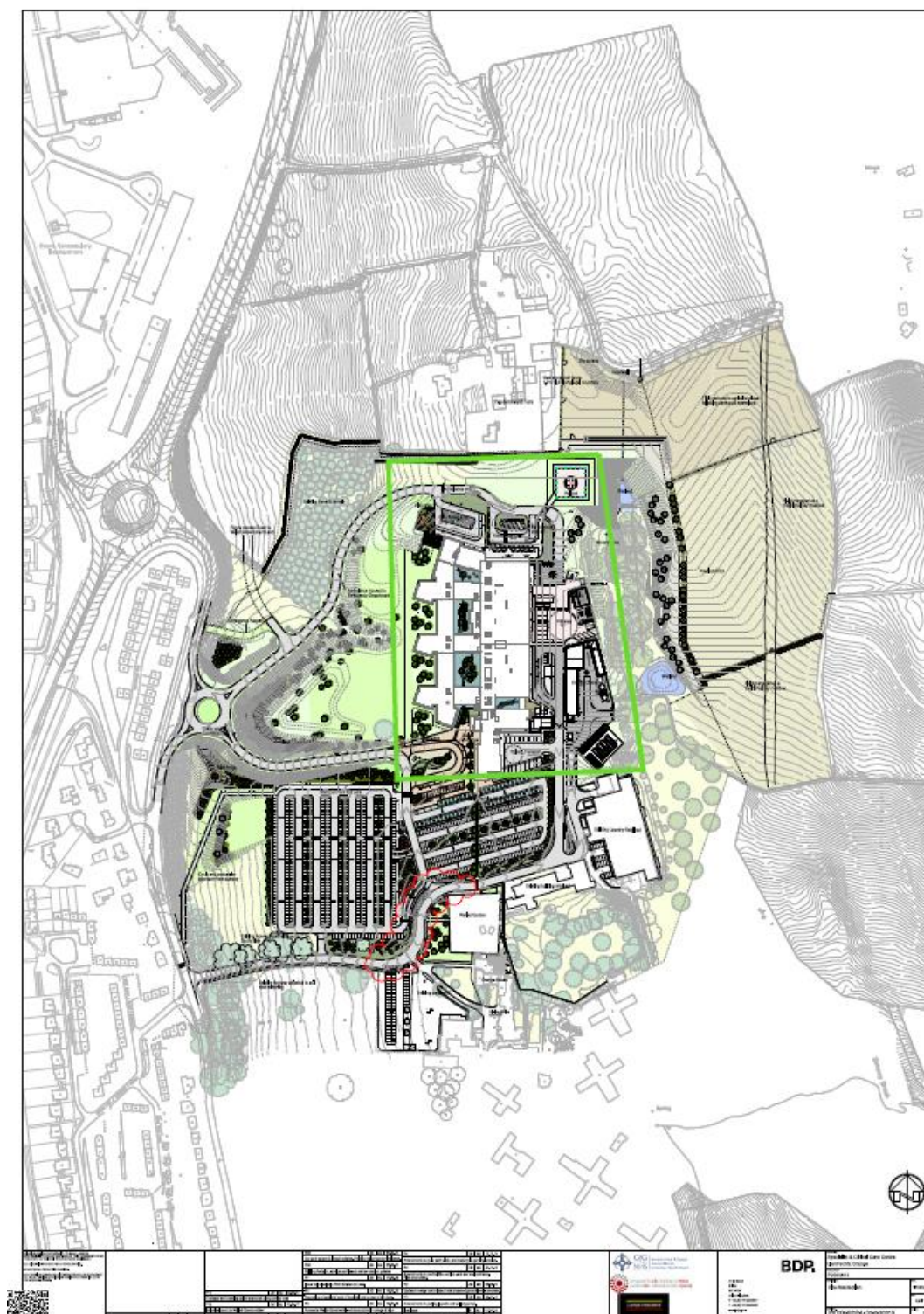
- It is the subject of a capacity agreement arising from the 2014, 2015 or 2016 capacity auctions, or
- A FiT preliminary accreditation application was received by OfGEM before 1 December 2017, or
- Is the subject of an agreement to provide balancing services entered into before 31 October 2017.

Tranche B generators are all those that are not Tranche A.

Aneurin Bevan University Health Board operates one 1.514 MWth natural gas Combined Heat and Power (CHP) unit and four 1.5 MWth natural gas powered hoval boilers (one 7.514 MWth input Specified Generator) which are used for the purpose of electricity generation and supplying domestic hot water and heating. The facility at Grange University Hospital is classified as a Tranche B Specified Generator and a new MCP.

4.1.2 The Site

Grange University Hospital is a 560-bed new build hospital providing complex specialist and critical care treatment for over 600,000 people in South-East Wales and include a 24-hour acute Assessment Unit and Emergency Department.



4.1.3 What the Facility does

The hospital will be served by one 1.514 MWth CHP and four 4x 1.5 MWth hoval boilers to provide hot water for space heating and to supply domestic hot water services. Each unit will be discharged from a single emission point via a combined flue.

4.1.4 Key Issues in the Determination

The key environmental and human health issues considered during the determination were:

- **Air quality – Oxides of Nitrogen (NO and NO₂ expressed as NO₂)**
- **Air quality – Carbon monoxide (CO)**

This will be discussed separately in this decision document.

4.2 Operation of the Facility – general issues

4.2.1 Administrative issues

The Applicant is the sole Operator of the Facility. We are satisfied that the Applicant is the person who will have control over the operation of the Facility if the Permit were to be granted; and that the Applicant will be able to operate the Facility so as to comply with the conditions included in the Permit, if issued.

Financial Provision

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

4.2.2 Management

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 guidance*”. The Applicant submitted a summary of the EMS with their application. The applicant has an EMS which is externally certified to ISO14001.

We are satisfied that appropriate management systems and management structures will be in place for this Facility, and that sufficient resources are available to the Operator to ensure compliance with all the Permit conditions.

4.2.3 Operating techniques

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

- Technical Guidance Note (TGN) M5: Monitoring of stack emissions from medium combustion plants and specified generators

Monitoring of point source emissions to air will be carried out in line with the monitoring requirements contained within TGN M5.

We have reviewed the techniques used by the Operator and compared these with the relevant guidance notes. The proposed techniques are in line with benchmark techniques contained within the relevant guidance notes.

5 Minimising the Facility's environmental impact

For this kind of regulated activity, the principal emissions are emissions to air. There are no permit conditions for water, land, energy efficiency or noise and BAT does not apply.

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

We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.

We will discuss the operators risk assessment in more detail as follows:

5.1 Assessment of Impact on Air Quality

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

The Applicant has assessed the Facility'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 Facility's stack emission(s).

The Applicant has applied using the Specified Generator Tranche B screening tool and based upon the information submitted the air quality risk is considered to be low. This simple bespoke application does not require any detailed air impact assessment to be submitted as it has screened out at this initial stage.

5.2 Impact on Habitats sites, SSSIs, non-statutory conservation sites

There are no SSSIs located within 2 km of the site and thus no further assessment was required.

5.3 Natura 2000/Ramsar sites

One Natura 2000 is located within 5 km of the site (relevant screening distance used). River Usk / Afon Wysg (SAC – UK0013007) is situated approximately 4.36 km away from the proposed site.

An OGN200 Form 1 has been completed with regards to a Habitats Regulations Assessment (HRA). This is required because there is a conceivable impact pathway to the SAC. The HRA is available to view on the public register a summary of the conclusions given herein. The project was screened in for likely significant effects as there is an impact pathway. It was concluded that the project will not adversely affect the integrity of any Natura 2000 site.

6 Setting ELVs and other Permit conditions

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 Schedule 25A and Schedule 25B of EPR.

6.1 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 EPR Schedule 25A and Schedule 25B Regulations.

For Tranche B Specified Generator that is a new MCP, that is an engine fuelled on natural gas, the monitoring requirements are as follows:

Pollutant	Type of Specified Generator	Fuel Type	Emission Limit Value (mg/Nm³)	Monitoring Required
NO _x	Emission Point A1a – Combined Heat and Power Engine	Natural Gas	95*	Within 4 months of the start of operations and then every 3 years
CO			No limit set	
NO _x	Emission Point A1b – Hoval Boiler 1	Natural Gas	100*	Within 4 months of the start of operations and then every 3 years
CO			No limit set	
NO _x	Emission Point A1c – Hoval Boiler 2	Natural Gas	100*	Within 4 months of the start of operations and then every 3 years
CO			No limit set	
NO _x	Emission Point A1d – Hoval Boiler 3	Natural Gas	100*	Within 4 months of the start of operations
CO			No limit set	

				and then every 3 years
NOx	Emission Point	Natural Gas	100*	Within 4 months of the start of operations and then every 3 years
CO	A1e – Hoval Boiler 4		No limit set	

*380 mg/Nm³ for dual fuel engines in gas mode.

Emission limit values are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases and at a standardised O₂ content of 15 % for engines and gas turbines and 3 % for all other MCPs.

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.

6.2 Other Permit Conditions

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 Specified Generator, the site must adhere to the following operating techniques specific for Specified Generator:

- Each generator must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this.
- The operator must keep periods of start-up and shut down of the generators 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.
- Where secondary abatement is required to ensure compliance with the NO_x ELV it must be met within 10 minutes from when the generator commences operation or within 20 minutes when the generator was a Tranche A and is now a Tranche B generator.
- The stack must be vertical and unimpeded by cowls or caps.

6.3 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.

7 MCPD/SG Charges and Subsistence Fees

The type of application regarding MCPD and SG will have an associated charge. The MCPD/SG application type and number of plant will also form the basis for ongoing subsistence fees. More information on this can be found in our charging scheme on our website.