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Decision Document – Viridis 178 Swansea Power Plant, permit variation V002

Bespoke permit Variation

The application number is: [EPR/AB3393CP/V002](#)

The Applicant / Operator is: Viridis 178 Limited

The Installation is located at: Swansea Power Plant, Westfield Industrial Park

We have decided to issue the permit variation for Swansea Power Plant operated by Viridis 178 Limited.

The variation number is [EPR/AB3393/V002](#)

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

Based on the information currently available to us we are currently minded to issue the permit variation to the Applicant. This would, if issued, allow it to operate the Installation, subject to the conditions in the Permit.

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 to operate an installation which is subject principally to the Industrial Emissions Directive (IED).

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 the Environmental Permitting Regulations 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.

2 How we reached our decision

2.1 Receipt of Application

The Application was accepted as duly made on 16 July 2018. 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 **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.

3 The Legal Framework

The Permit/variation will be granted, 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;
- 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.

4 The Installation

4.1 Description of the Installation and related issues

4.1.1 The permitted activities

The Installation is subject to the EPR because it carries out an activity listed in Part 1 of Schedule 1 of the EPR:

The Installation comprises 27 spark ignition engines which will combust natural gas for the purpose of generating electricity. The Installation will supply electricity to the National Grid via a capacity mechanism contract; this contract requires the operator to supply electricity to National Grid on a short-term basis only to meet peak demand within the electricity distribution network.

Due to the nature of this contract and the need to supply electricity to the National Grid in a rapid manner and only during times of peak demand, the engines are able to reach full electricity-generating capacity within two minutes of start-up, and will only operate for a maximum of 1500 hours per year in total. We have also specified that each engine cannot be operated for more than 16 hours in a continuous 24 hour period.

The proposed variation will increase the rated thermal input of each engine from 2.99 MWth to 3.6 MWth.

An installation may also comprise “directly associated activities”, which at this Installation includes none.

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

4.3 Operation of the Installation – general issues

4.3.1 Administrative issues

The Applicant is the sole Operator of the Installation. This variation makes no changes to the operator or installation boundary.

Relevant Convictions

NRW’s COLINS Database has been checked to ensure that all relevant convictions have been declared.

No relevant convictions were found.

4.3.2 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*”. This variation makes no change to the EMS.

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

4.3.7 Operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. This variation adds operating techniques, both as a result of the variation itself, but also through previous changes resulting from the completion of previously set pre-operational conditions.

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.

4.3.7 Energy efficiency

We are satisfied that the Applicant will ensure that energy is used as efficiently as possible.

The Operator is required to report energy usage under table 4.3 and Schedule 4.

5 Minimising the Installation's environmental impact

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 are discussed in this and other sections of this document.

For an installation of this kind, the principal emissions are : NO_x and CO

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 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.

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 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.

We are satisfied that the predicted concentrations for NO_x are lower than those modelled for the existing permitted facility and will be lower at the relevant sensitive receptors. Consequently we are satisfied that emissions of NO₂ from the Installation can be considered insignificant and will not cause an exceedance of the ambient air limit value or air quality standard for this pollutant.

Also with the CO emissions, these are also lower at the relevant sensitive receptors. We are satisfied that emissions of CO from the Installation can be considered insignificant and will not cause an exceedance of the ambient air limit value or air quality standard for this pollutant.

5.2 Assessment of impact to surface and ground water

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent pollution of ground and surface water.

5.4 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.

5.5 Assessment of odour impact

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where not practicable to minimise the effects of odour .

5.6 Noise Assessment

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 the effects of noise.

5.8 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc

The operator submitted an air quality impact assessment of emissions to atmosphere. This included identification of all relevant sensitive receptors and modelling of potential impacts. NRW scrutinised the details of the report and found the conclusions to be correct. This being that the impacts on all sensitive receptors will be reduced following the variation. The modelling for this variation shows emissions of NO_x at half of the concentrations used in the modelling for the installation as presently permitted. This gives substantially lower total emissions as well as lower impacts on each of the sensitive receptors.

European Sites

The Applicant considered the impact of emissions from the Installation on habitats within relevant screening distances of the Installation. The following European habitat

sites (i.e. Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar) are located within 10km of the installation:

- Burry Inlet – SPA / Ramsar;
- Crymlyn Bog / Cors Crymlyn – SAC / Ramsar;
- Carmarthen Bay and Estuaries – SAC;
- Gower Ash Woods – SAC; and
- Gower Commons – SAC.

Due to the findings that the proposed variation will lead to a reduction in impacts on each of these sites we therefore conclude that there is likely to be no significant effect on the features of the European habitats within 10km of the Installation.

SSSI Assessment

There are no SSSI sites within the 2km screening distance. Therefore this assessment was not needed.

Non Statutory Sites Assessment

The following non-statutory sites are located within 2km of the Installation:

- Cadle Heath – Local Nature Reserve;
- Cwmllyn Wood – Local Nature Reserve; and
- 32 ancient woodlands

Due to the findings that the proposed variation will lead to a reduction in impacts on each of these sites we therefore conclude that there is not likely to be any negative impact on these sites.

6 Setting ELVs and other Permit conditions

This variation makes no change to the emission limits specified in the permit.

6.1 Translating BAT into Permit conditions

This variation includes reduction in the number of emission points to collect the exhaust gas from groups of engines and emit through combined stacks. This reflects standard industry practice. This meets the appropriate industry standards in the absence of a specific Best Available Techniques for this type of plant.

6.2 Monitoring

This variation makes no changes to monitoring requirements.

6.4 Reporting

This variation makes no changes to reporting requirements.

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ANNEX 1: Pre-Operational Conditions

The three pre-operational conditions that were in the permit when it was first issued have all been satisfied. This was confirmed in the Compliance Assessment Report dated 13 February 2018. Therefore these have been removed from the permit as part of this variation.

ANNEX 2: Improvement Conditions

This variation makes no change to the existing two improvement conditions

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