

# Natural Resources Wales permitting decisions

## New bespoke permit

**The application number and permit number is: PAN-017822**

**The Applicant / Operator is: GFI73 LTD**

**The Facility is located at: Tregaron Generation, Dewi Road, Tregaron, SY25 6JP**

We have decided to grant the permit for Tregaron Generation operated by GFI73 LTD.

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:

- Highlights key issues in the determination
- Summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals. Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

## Key issues of the decision

Our decision includes but is not limited to the following:

- Air quality

This will be discussed separately in this decision document.

## 1 Our decision

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 a regulated facility which is subject principally to the Environmental Permitting Regulations 2016 (EPR).

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 The Legal Framework

The permit will be granted, 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 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.

The permit will regulate 6No. low-sulphur diesel fuelled compression ignition engines fitted with Selective Catalytic Reduction (SCR) abatement operated for a maximum of 1500 hours per year. The generators are currently considered a combined Tranche A Specified Generator and each an existing Medium Combustion Plant. The Operator is due to sign a new capacity market agreement in February 2023 which will trigger the plant to become a Tranche B SG. As a Tranche A Specified Generator the plant benefits from a transitional arrangement and the relevant compliance date is 01 January 2025, however once the plant becomes a Tranche B this will remove any transitional arrangement and the plant will be required to comply with the SG regulations (including the required ELV) immediately. The permit reflects this and ensures that once the plant becomes a Tranche B SG the compliance date is brought forward from 01/01/2025 to immediately. To ensure NRW are aware when the ELV applies and monitoring period starts, we have included an Improvement Condition in the permit for the Operator to notify NRW when the plant becomes a Tranche B SG.

We have conducted early permitting of the existing MCP, this means we have postdated any MCP conditions in the permit to prevent the need for a future variation to the permit when the relevant MCP compliance date is reached.

During the determination, the Operator requested a change in proposal from the original activity applied for. The Operator originally applied for 8No. 2.5 MWth input diesel fuelled engines with SCR abatement to be operated for a maximum of 2300 hours per year, the Operator changed this to 6No. 2.5 MWth input diesel fuelled engines with SCR abatement to be operated for a maximum of 1500 hours per year. The Operator stated they were no longer able to procure the additional 2No. engines. We agreed to the

change in proposal given it signifies a reduction in air quality impacts, however we requested the Operator provide a revised air quality assessment.

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.

### **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 an EPR permit.

### **3 Air Quality**

For this kind of regulated activity, the principal emissions are emissions to air. There are no permit conditions for water, land, odour 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.

#### **3.1 Assessment of Impact on Air Quality**

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the stacks 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 emissions.

The air impact assessments, and the dispersion modelling has been based on the plant operating for 1500 hours per year at the relevant long-term or short-term emission limit values, i.e. the maximum permitted emission rate. As the assessment has been limited to a maximum of 1500 operational hours per year the permit will contain an operational hours limit to reflect the assessment undertaken.

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 have been reviewed by Natural Resources Wales modelling specialists to establish the robustness of the Applicant's air impact assessment. The output from the model has then been used to inform further assessment of health and environmental impacts.

The applicant has calculated process contributions (PC) and predicted environmental concentrations (PEC) at locations identified as sensitive receptor locations for human health. Modelling isopleths have also been provided to show the locations where the PC is at its maximum over the modelling area. The human health assessment results for NO<sub>x</sub>, particulate matter, sulphur dioxide and ammonia will be discussed separately below. As the fuel is low sulphur diesel we would not normally require assessment of sulphur dioxide as the sulphur emissions are negligible, although as the Applicant has presented it to us we will include our review for completeness. The Applicant has assessed emissions of ammonia due to the use of SCR abatement.

#### **Oxides of nitrogen (NO<sub>x</sub>)**

A long-term critical level of 40 µg/m<sup>3</sup> (annual) and short-term critical level of 200 µg/m<sup>3</sup> (hourly) was applied for NO<sub>x</sub>. At sensitive receptor locations the maximum predicted long-term PC was 4.30 µg/m<sup>3</sup> and >1 % (10.75 %) and the long-term PEC was 7.89 µg/m<sup>3</sup> and <70 % (19.73 %) of the long-term critical level. Therefore in accordance with current guidance the long-term impacts from NO<sub>x</sub> can be considered as insignificant. At sensitive receptor locations the maximum predicted short-term PC was 116.80 µg/m<sup>3</sup> and >10 % (58.40 %) and the short-term PEC was 123.98 µg/m<sup>3</sup> and <100 % (61.99 %) of the short-term critical level. Therefore the emissions are unlikely to lead to an exceedance of the the short-term critical level and the impacts can be considered not significant.

#### **Particulate matter PM<sub>10</sub>**

A long-term critical level of 40 µg/m<sup>3</sup> (annual) and short-term critical level of 50 µg/m<sup>3</sup> (24-hour mean) was applied for PM<sub>10</sub>. At sensitive receptor locations the maximum predicted long-term PC was 0.27 µg/m<sup>3</sup> and <1 % (0.68 %). The maximum long-term PEC predicted was at a different location to the maximum long-term PC and was 17.5 µg/m<sup>3</sup> and <70 % (43.80 %) of the long-term critical level. Therefore in accordance with current guidance the long-term impacts from PM<sub>10</sub> can be considered as insignificant. At sensitive receptor locations the maximum predicted short-term PC was 11.17 µg/m<sup>3</sup> and >10 % (22.34 %) of the short-term critical level. The maximum short-term PEC predicted was at a different location to the maximum short-term PC and was 24.2 µg/m<sup>3</sup> and <100 % (48.40 %) of the short-term critical level. Therefore the emissions are unlikely to lead to an exceedance of the the short-term critical level and the impacts can be considered not significant.

### **Particulate matter PM<sub>2.5</sub>**

A long-term critical level of 20 µg/m<sup>3</sup> (annual) was applied for PM<sub>2.5</sub>, there is no short-term critical level for PM<sub>2.5</sub>. At sensitive receptor locations the maximum predicted long-term PC was 0.30 µg/m<sup>3</sup> and >1 % (1.5 %). The maximum long-term PEC predicted was at a different location to the maximum long-term PC and was 11.52 µg/m<sup>3</sup> and <70 % (57.60 %) of the long-term critical level. Therefore in accordance with current guidance the long-term impacts from PM<sub>2.5</sub> can be considered as insignificant.

### **Ammonia (NH<sub>3</sub>)**

A long-term critical level of 180 µg/m<sup>3</sup> (annual) and short-term critical level of 2500 µg/m<sup>3</sup> (1-hour mean) was applied for ammonia. At sensitive receptor locations the maximum predicted long-term PC was 0.03 µg/m<sup>3</sup> and <1 % (0.02 %) of the long-term critical level. At sensitive receptor locations the maximum predicted short-term PC was 3.19 µg/m<sup>3</sup> and <10 % (0.13 %) of the short-term critical level. Therefore in accordance with current guidance the long-term impacts and short-term impacts from ammonia can be considered insignificant.

### **Sulphur dioxide**

The short-term critical levels were applied for sulphur dioxide: 266 µg/m<sup>3</sup> (15-minute mean); 350 µg/m<sup>3</sup> (1-hour mean) and 125 µg/m<sup>3</sup> (24-hour mean). There are no long-term critical levels for human health assessment of sulphur dioxide. At sensitive receptor locations the maximum predicted short-term PCs (for each time period) were <1 % of the respective short-term critical levels. Therefore in accordance with current guidance the short-term impacts from sulphur dioxide can be considered insignificant.

## **3.2 Impact on Habitats sites, SSSIs, non-statutory conservation sites**

The facility is within the relevant screening distance criteria for protected conservation sites. 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. National Site Network<sup>1</sup>/Ramsar sites, Sites of Special Scientific Interest (SSSIs) and non-statutory conservation sites will be discussed in detail separately below.

### **3.2.1 National Site Network<sup>1</sup>/Ramsar sites**

The following National Site Network<sup>1</sup>/Ramsar sites are located within the relevant screening distance (5 km) of the facility:

- Special Area of Conservation (SAC) UK0012670 Afon Teifi
- SAC UK0014790 and Ramsar Cors Caron

An OGN 200 Form 1 (Habitats Regulation Assessment) was completed to assess the potential to affect the National Site Network<sup>1</sup>/Ramsar sites, this is available to view on the public register. In light of the conclusions of an appropriate assessment, and taking account of the advice received from protected sites advisors, it has been established that the project will not adversely affect the integrity of any National Site Network<sup>1</sup>/Ramsar site, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans and projects.

### **3.2.2 SSSI Assessment**

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<sup>1</sup> As per the amendment to Regulation 3 of the Conservation of Habitats and Species Regulations 2017: [The Conservation of Habitats and Species \(Amendment\) \(EU Exit\) Regulations 2019 \(legislation.gov.uk\)](https://www.legislation.gov.uk) National Site Network means the network of sites in the United Kingdom's territory consisting of such sites as – (a) immediately before exit day formed part of Natura 2000; or (b) at any time on or after exit day are European sites, European marine sites and European offshore marine sites for the purposes of any of the retained transposing regulations.

The following Sites of Special Scientific Interest (SSSI) are located within the relevant screening distance (2 km) of the facility:

- SSSI Afon Teifi – 32WLU
- SSSI Gwaun Ystrad Caron – 32WBK

An Appendix 4 Form was completed to assess the potential to effect the SSSI site, 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 SSSI site.

### 3.2.3 Non-statutory conservation sites

In line with the following guidance: [Specified generators: dispersion modelling assessment - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/specified-generators-dispersion-modelling-assessment) assessment of SAC, SPA, Ramsar sites and SSSIs are required only.

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Duly making	The Application was accepted as duly made on 30 June 2022. 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.
Confidential application	The Applicant made no claim for commercial confidentiality.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Requests for information	<p>In order for us to be able to consider the Application duly made, we needed more information. We requested further information relating to air quality assessment and compliance with MCPD. Upon receipt of this information we were able to consider the application Duly Made.</p> <p>Further information was also requested by way of a Schedule 5 Notice requiring a revised air quality model and confirmation of the revised proposal. The Schedule 5 Notice was sent on 18 August 2022 with a response date of 20 September 2022. The additional information supplied satisfied the requirements of the Schedule 5 notice.</p> <p>A copy of the information notice and e-mails requesting further information were placed on our public register as were the responses when received.</p>
<b>Consultation on the Application</b>	
Consultation on the Application	There was no requirement to carry out a consultation on this application. This decision was taken in accordance with the Environment Permitting Regulations (EPR), our statutory Public Participation Statement (PPS) and our Regulatory Guidance Note RGN6 for

	Determinations involving Sites of High Public Interest.
<b>Operator</b>	
Control of the facility	We are satisfied that the Applicant (now the Operator) is the person who will have control over the operation of the facility after the grant of the permit. We are satisfied that the Applicant will be able to operate the facility so as to comply with the conditions included in the permit. This decision was taken in accordance with current guidance on legal operator for environmental permits.
<b>Operator competence</b>	
Relevant convictions	NRW's COLINS 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. The decision was taken in accordance with RGN 5 on Operator Competence.
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 " <i>How to comply with your environmental permit guidance</i> ".  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.
<b>The facility</b>	
The regulated facility	The regulated facility is subject to EPR because it carries out an activity as described in Schedule 25A and/or Schedule 25B of EPR as well as an activity listed in Part 2 of Schedule 1 of EPR: <ul style="list-style-type: none"> <li>• One combined Tranche A Specified Generator/existing Medium Combustion Plant aggregated to &lt;50MWth at a specified location</li> </ul> The Operator has provided the grid reference for the emission points from the plant and the activity is defined in Table S1.1 of the permit.
Annex I of MCPD	The information contained within Annex I of MCPD has been provided by the Operator and incorporated into the permit in Schedule 7.
<b>The site</b>	
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of nature conservation or habitat.  We have assessed the application and its potential to affect all known sites of nature conservation or habitats identified in the screening as part of the permitting process.

	We have assessed the Operator's air emissions impact modelling report and consider that emissions will not affect any sites of nature conservation or habitats identified. See Key Issues section above.
<b>Environmental risk assessment</b>	
Environmental risk	For this kind of regulated activity, the principal emissions are emissions to air. We have reviewed the Operator's assessment of the environmental risk from the facility. The Operator's risk assessment is satisfactory. See Key Issues section above.
<b>Operating techniques</b>	
Operating techniques	We have specified the operating techniques and the operator must use the operating techniques specified in Table S1.2 in the permit.
<b>Permit conditions</b>	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Emission limits	<p>Emission limit value(s) (ELV) have been set for the following substances:</p> <ul style="list-style-type: none"> <li>Oxides of Nitrogen (NO and NO<sub>2</sub> expressed as NO<sub>2</sub>) – 190 mg/Nm<sup>3</sup></li> </ul> <p>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 O<sub>2</sub> content of 15 % for engines and gas turbines, 6 % for solid fuels and 3 % for all other MCPs.</p> <p>The ELV(s) have been set in line with the requirements specified within Schedule 25B of EPR.</p> <p>As the SG is currently a Tranche A SG it is currently subject to a transitional arrangement, therefore the ELV applies from 01/01/2025 or when the Tranche A SG becomes a Tranche B SG whichever comes first.</p>
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>The monitoring requirements have been imposed in order to the Operator to demonstrate compliance with the emission limits specified in the permit, as per the ELV and monitoring frequency requirements specified within Schedules 25A and/or Schedule 25B of EPR.</p> <p>The Operator indicated that they will not monitor each individual plant and would instead monitor a sample of the engines as they are all identical. However, as per the SG Regulations monitoring</p>

	<p>of each individual engine is required if abatement is fitted therefore this legal requirement is reflected in the permit and the Operator will be required to monitor each individual engine.</p> <p>The Operator has proposed monitoring in line with <a href="http://www.gov.uk">Monitoring stack emissions: low risk MCPs and specified generators - GOV.UK (www.gov.uk)</a>. Due to the intermittent operation of the units and to avoid operation of the units solely for emissions monitoring we consider this is appropriate.</p> <p>These decisions have been made in line with current relevant guidance including TGN M5 and <a href="http://www.gov.uk">Monitoring stack emissions: low risk MCPs and specified generators - GOV.UK (www.gov.uk)</a></p> <p>As the SG is currently a Tranche A SG it is currently subject to a transitional arrangement, therefore the monitoring applies from 01/01/2025 or when the Tranche A SG becomes a Tranche B SG whichever comes first.</p>
Reporting	<p>We have specified the reporting requirements in Schedule 4 of the permit to ensure data is reported to enable timely review by NRW to ensure compliance with permit conditions.</p>
Improvement conditions / pre-operational measures	<p>We have included one Improvement Condition IC1 which requires the Operator to notify NRW when the Tranche A SG becomes a Tranche B SG. The condition has been included so that NRW are aware when the ELVs apply and the monitoring period starts.</p>
MCPD/SG charges and subsistence fees	<p>The type of application regarding MCPD/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.</p>