



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales

Natural Resources Wales permitting decisions

Dragon Fruit Holdings Limited Decision Document

Rev No1

Bespoke permit

The application number is: PAN-005576

The Applicant / Operator is: Dragon Fruit Holdings Limited

The Facility is located at: Edwards Business Park, Llantrisant, Pontyclun, CF72 8QZ.

We have decided to grant the permit for Edwards Business Park Biomass Boiler operated by Dragon Fruit Holdings 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.

Structure of this document

- Table of contents
- Key issues

Table of Contents

Contents

Bespoke permit	2
Purpose of this document	3
Structure of this document	4
Table of Contents	5
Contents	5
Key issues of the decision	6
1 Our decision	6
2 How we reached our decision	7
2.1 Receipt of Application	7
2.2 Consultation on the Application	7
2.3 Requests for Further Information	7
3 The Legal Framework.....	8
4 The Facility	9
4.1 Description of the Facility and related issues	9
4.2 Operation of the Facility – general issues	10
5 Minimising the Facility’s environmental impact.....	11
5.1 Assessment of Impact on Air Quality	12
5.2 Impact on Habitats sites, SSSIs, non-statutory conservation sites etc.....	13
5.3 European Sites.....	15
Assessment of Likely Significant Effect:	17
Appropriate assessment:	17
HRA Overall conclusion:.....	17
6 Setting ELVs and other Permit conditions	18
6.1 Monitoring.....	18
6.2 Other Permit Conditions.....	19
6.3 Reporting	20
7 MCPD Charges and Subsistence Fees.....	20

Key issues of the decision

1 Our decision

We have decided to grant a permit for Edwards Business Park Biomass Boiler.

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 Medium Combustion Plant Directive (MCPD) 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 the Environmental Permitting Regulations (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.

2 How we reached our decision

2.1 Receipt of Application

The Application was accepted as duly made on **10/07/2019**. 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. We have not accepted the Applicants claim for commercial confidentiality.

2.2 Consultation on the Application

There was no requirement to carry out a consultation on the application.

2.3 Requests for Further Information

In order for us to be able to consider the Application duly made, we needed more information. We requested further information relating to the environmental management system and for application forms to be completed. Upon receipt of this information we were able to consider the application Duly Made.

Further information was also requested by way of a Schedule 5 Notice requiring further details on the air quality assessment. The Schedule 5 Notice was sent on 24/07/2019 with a response date of 21/08/2019. The Applicants response to the Schedule 5 Notice was provided on 05/08/2019. The additional information supplied satisfied the requirements of the Schedule 5 notice issued on 24/07/2019.

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 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 25A covering the Medium Combustion Plant Directive (MCPD) regulations;
- 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 Schedules 25A of the EPR:

- One or more new medium combustion plant (MCP) between 1 and <50MWth but aggregated to <50MWth which will be put into operation after 20/12/2018 at a specific location.

4.1.2 The Site

The development consist of 3 no. 1.335MWTh biomass boilers each with their own air release/emission point. The proposed plant will occupy an area of approximately 396m² and the NGR of the centre of the site is ST 03725 84379. The boilers are located within Edwards Business Park, Llantrisant, Pontyclun, CF72 8QZ.

4.1.3 What the Facility does

The generating plant comprises 3no. 1.335MWTh Hertz Biofire wood chip biomass boilers housed within a building, which will provide heat to the Edwards Business Park. Each boiler has their own air release/emission point. The boilers will be operated continuously and be fuelled by virgin wood chip. The facility will also include 3no. 9 metre flues, 3no. buffer tanks and a Facility Building.

The facility will also have a virgin wood chip storage area. However, this is not included within the Permitted area as it does not fall under the Environmental Permitting Regulations.

4.1.4 Key Issues in the Determination

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

- **Air quality – Oxides of Nitrogen, Sulphur Dioxide and Particulate Matter**

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.

Relevant Convictions

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

No relevant convictions were found.

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

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

The operator has stated that they will implement the following quality assurance techniques and maintenance schedule, in order to for the generators to achieve and retain optimal performance. In order to enable each generator and the power plant in general to achieve and retain optimal performance in both efficiency and emissions, the plant will engage in the following best available operational management techniques.

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes. The proposed techniques/ emission levels for priorities for control are in line with the benchmark levels contained in TGN M5 and we consider them to represent appropriate techniques for the facility. These are specified in the Operating Techniques table in the permit.

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.

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, 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 MCP 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 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 (8760 hours per annum) 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 model outputs have been reviewed by Natural Resources Wales. The output from the model has then been used to inform further assessment of health impacts;

The results indicate that at all locations within the study area the relevant air quality standard, which is the Air Quality Strategy (AQS) objective level for annual mean NO₂ concentrations of 40µg/m³ will be met. The maximum PC arising from the plant is a 5.25% of the objective level. However, when looked at the Predicted Environmental Concentration PEC, the maximum PEC was 36.5% which in accordance with NRW guidance is considered insignificant (the long-term PEC is less than 70% of the long-term environmental standards). In accordance with NRW/EA significance criteria, the impact on annual mean NO₂ concentrations is therefore considered to be insignificant.

The AQS objective level for hourly mean NO₂ concentrations is a concentration of 200µg/m³. This objective level includes 18 allowable exceedances of this level within a year. The maximum PC arising from the plant is 8.85% of the objective level. In accordance with NRW/EA significance criteria, the impact on hourly mean NO₂ concentrations is therefore considered to be insignificant.

Maximum predicted impacts at receptor locations are well within the objective limits for protection of human health for both Particulate Matter (PM₁₀) and Carbon Monoxide (CO).

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

There are two SSSIs within 2km of the site:

- Llantrisant Common and Pastures SSSI approximately 476m to the east

- Rhos Tonyrefail SSSI approximately 668m to the north

As a result, an Appendix 4 form - CRoW Act 2000: Natural Resources Wales application for permission - Formal Notice, has been completed in conjunction with this application.

Detailed air quality modelling impact assessment has been carried out with regards to any potential impact from the biomass facility on the designated SSSI sites within 2km of the facility. The significance criteria provided by the EA/NRW states that for SSSI's the air quality impact can be considered to be insignificant if the long-term process contribution (PC) is less than 1% of the Critical Level. Detailed air quality impact assessment modelling shows that the impact of the operation of Edwards Business Biomass Boiler on the Rhos Tonyrefail SSSI is less than 1% of the Critical Level for daily and annual mean Nitrogen Dioxide concentrations and is therefore considered to be insignificant.

At the Llantrisant Common and Pasture SSSI, the predicted annual mean PC is greater than 1% of the Critical Level. For sites with a PC of greater than 1% of the Critical Level, the relevant guidance recommends that the impact be considered in terms of the total predicted concentration. Impacts can be considered insignificant when the PEC does not exceed 70% of the long-term standard, or 20% of the headroom between short term standard and short-term background concentrations. The maximum PEC at the Llantrisant Common SSSI is predicted to be 13.26 µg/m³ which is 44.2% of the Critical Level. The impact of the operation at the Llantrisant Common and Pastures SSSI is therefore considered to be insignificant as it is below 70% of the objective.

For short-term (24-hour) concentrations the EA/NRW significance criteria states that for SACs and SSSIs the impact can be considered to be insignificant if the PC is less than 10% of the Critical Level. The maximum daily PC NO₂ concentration is 5.21µg/m³ which is 7% of the critical level. Therefore, in accordance with the EA criteria, the impact is considered to be significant.

The significance criteria provided by the EA/NRW states that for SSSI's the air quality impact can be considered to be insignificant if the long-term process contribution (PC) is less than 1% of the Critical Load, in relation to nutrient nitrogen deposition. Detailed air quality impact assessment modelling shows that the maximum impact of the operation of Edwards Business Park Biomass Boiler on the Llantrisant Common and Pastures SSSI is 1% and The Rhos Tonyrefail SSSI is less than 1% of the Critical Load for nutrient nitrogen deposition and is therefore considered to be insignificant.

In conclusion, the impact on airborne NO_x concentrations, and acid and nitrogen deposition at the designated SSSI's was determined to be insignificant.

5.3 European Sites

The following Natura 2000 sites are located within the relevant screening distance (10km) of the main site emission point to air:

- Cardiff Beech Woods SAC – approximately 7.4km east

A 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 Natura 2000 sites listed above.

Detailed air quality modelling has been carried out with regards to the potential impact from the facility. The maximum predicted ground level concentrations of NO_x have been compared with relevant critical level thresholds above which damage may be sustained to sensitive plants and animals. For European sites within 10km, an assessment of deposition impacts has also been completed. Critical loads refer to the threshold beyond which deposition of pollutants to water or land results in measurable damage to vegetation and habitats. Predicted concentrations of NO_x can be used to determine nutrient nitrogen deposition rates, using typical deposition velocities. The maximum predicted deposition rates have been identified with site specific critical loads obtained from APIS.

The significance criteria provided by the EA/NRW for these designated ecological sites states that the impact can be considered to be insignificant if the long-term PC (annual mean) is less than 1% of the annual average Critical Level and 10% of the 24-hour average critical level. Impacts on annual mean NO_x concentrations at the designated sites are below the screening criteria (below 1% of the critical level of 30 µg/m³) at all sites.

At all of the sensitive habitat sites, the impacts are insignificant when compared with the Air Quality Assessment Level (AQAL) with regards to nutrient nitrogen deposition rates. The maximum PC nutrient nitrogen deposition rates arising from the facility are low in comparison to the critical loads. Therefore, it is considered that the impact is insignificant.

This project complies with NRW agreed criteria for ruling out significant effects without conducting a project-specific LSE test. Therefore, this project is considered not likely to have a significant effect on any Natura 2000 sites, either alone or in combination with other plans and projects.

Assessment of Likely Significant Effect:

The project has been screened for likelihood of significant effects and, taking account of the advice received from protected sites advisors, is considered not likely to have a significant effect on any Natura 2000/Ramsar site (As documented in section 3.2 of OGN 200 form 1, or section 5 if applicable).

Appropriate assessment:

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 Natura 2000/Ramsar site, taking into account any conditions or restrictions as applicable, either alone or in-combination with other plans and projects.

HRA Overall conclusion:

In light of the conclusions of the appropriate assessment, it has not been ascertained that the project will not adversely affect the integrity of any Natura 2000/Ramsar site.

Long-term impacts and short term impacts on human receptors are within specified criteria and therefore insignificant.

An assessment of the impact on nearby sensitive ecological sites has also been completed. The impact on airborne NOx concentrations and nitrogen deposition at the sensitive habitats was determined to be insignificant.

In light of the conclusions of the appropriate assessment, it has not been ascertained that the project will not adversely affect the integrity of any Natura 2000/Ramsar site, as documented in section 4 of OGN 200 form 1, and section 5 is applicable.

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 the MCP Directive.

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 MCP Directive.

For a new Medium Combustion Plant, that is fuelled by solid biomass, the monitoring requirements are as follows:

Pollutant	Type of MCP	Fuel Type	Emission Limit Value (mg/Nm ³)	Monitoring Required
NOx	Other medium combustion plant	Solid Biomass	500	Periodic – every 3 years

Dust	Other medium combustion plant	Solid Biomass	50	Periodic – every 3 years
Carbon Monoxide	Other medium combustion plant	Solid Biomass	No limit set	Periodic – every 3 years

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 6% solid fuel-fired boilers.

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 monitoring techniques, personnel and equipment employed by the Operator will have either MCERTS certification or MCERTS accreditation as appropriate.

6.2 Other Permit Conditions

For a Medium Combustion Plant, the facility must adhere to the following operating techniques for MCP:

- (a) Each MCP must be operated in accordance with the manufacturer’s instructions and records must be made and retained to demonstrate this.

- (b) The operator must keep periods of start-up and shut-down of each MCP as short as possible.
- (c) There must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.
- (d) 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 Charges and Subsistence Fees

The type of application regarding MCPD will have an associated charge. The MCPD application type will also form the basis for ongoing subsistence fee's. More information on this can be found in our charging scheme on our website.