Natural Resources Wales Permitting Decisions

Sofidel UK Limited (Baglan Paper Mill)

Decision Document

Application for a Normal Variation

The application number is: PAN-26533

The permit variation number is: EPR/BU2489IT/V012

The applicant / operator is: Sofidel UK Limited

The Installation is located at: Baglan Paper Mill, Baglan Energy Park, Brunel Way, Briton Ferry, Neath, United Kingdom, SA11 2FP

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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1. Executive summary

1.1. Application summary

This application is to vary the environmental permit for Baglan Paper Mill to remove the 8MW net rated thermal input waste wood co-incinerator and include a new 9.1MW net rated thermal input virgin woodchip (solid biomass) Medium Combustion Plant (MCP). The change involves the removal of all conditions, monitoring and reporting requirements associated with the co-incineration of waste wood and the inclusion of conditions, monitoring and reporting requirements related to the combustion of biomass in an MCP.

This variation also inserts MCP conditions, monitoring and reporting requirements in relation to the 10.5MWth net rated input natural gas-fired boiler which is already part of the onsite operation. This combustion unit is an existing MCP in the range 5-50MWth. It is a requirement of the MCPD and Schedule 25A of EPR 2016 that:

- Relevant MCPs are included in installations permits by 01/01/2024 and
- subject to appropriate emission limits and monitoring requirements by 01/01/2025.

This variation therefore brings into compliance the 10.5MW boiler.

There are two other combustion units in the installation that fall into the definition of existing MCP in the range 5-50MWth net rated thermal input. These are:

- 2no. 6.3MWth net rated thermal input natural gas-fired paper machine gas hoods.

We have not included MCP conditions, monitoring and reporting requirements in the permit for these combustion plant. This is because they use the products of combustion for direct heating and drying in the Section 6.1 A(1)(b) paper-making

activity. Therefore, as per Article 2(3)(d) of the Medium Combustion Plant Directive[1], they are excluded MCPs. This Article of the MCPD is brought into EPR 2016 via Schedule 25A, Part 1 2(1).

The two combustion plant therefore remain in the permit as Directly Associated Activities (DAA) to the Section 6.1 A(1)(b) paper-making activity and remain subject to the BAT Conclusions associated with the latest version of the Production of Paper, Pulp and Board BRef[2].

It is important to note that the three MCPs (one existing and two existing excluded) are already included in the permit and are an extant part of the operation of the installation. The impacts from these combustion plant were assessed during the permit application process and subsequent applications to vary the permit. These assessments indicated that operation of the units posed no significant risk to human health and the environment. We have therefore not sought to reassess the risk posed by the units as part of this variation.

1.2. Our decision

We are have decided to issue the variation for Baglan Paper Mill operated by Sofidel UK 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.

2. Receipt of the application

The application was accepted as duly made on 14/07/2025**.** This means we considered it was in the correct form and contained sufficient information for us to

[1] DIRECTIVE (EU) 2015/ 2193 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 25 November 2015 - on the limitation of emissions of certain pollutants into the air from medium combustion plants
[2] Production of Pulp, Paper and Board | EU-BRITE

begin our determination, but not that it necessarily contained all the information we would need to complete that determination.

The application was received on 01/08/2024**.** In order for us to be able to consider the application duly made, we needed more information. We requested the following:

- Form Part F1 signed by a Director or Company Secretary
- The Charge Band tool used to calculate the application fee

A letter requesting this information was sent to the applicant on 11/07/2025. Upon receipt of this information, on 15/07/2025, we were able to consider the application duly made. 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.

3. Confidential information

The applicant made a claim for no claim for commercial confidentiality, and we have not received information in relation to the application that appears to be confidential in relation to any party.

4. Legislation

The variation will be issued 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.
- The Medium Combustion Plant Directive

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that the decision on this application 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 issuing the variation a high level of protection will be delivered for the environment and human health through the operation of the Installation 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

As the EPR regulator for Part A1 installations in Wales, NRW are required to determine any duly made Part A1 permit applications. This means that we must decide either to grant, or to refuse the variation based upon an objective assessment of the proposals against the detailed legal requirements of EPR. Our public participation statement[3] gives more information on what can, and cannot, be taken into account when making our permitting decision.

The application, and this decision document, only considers the permitting of the facility under EPR as described throughout the document. We only assess the installation and its impacts and cannot take into consideration indirect impacts which are not as a direct result of activity within the installation boundary.

Any proposed development and wider associated activities will be required to be compliant with all relevant and applicable law, for example, environmental law, health and safety law, planning law. This other legislation acts largely independently of EPR (although they may be inter-related). Such other matters are beyond both the scope of this document, and of our regulatory remit and expertise and are not relevant to our EPR permitting decision. Ensuring compliance with all other regulation and obtaining any required consents (such as planning permission) is the responsibility of those undertaking the development and is regulated by the relevant appropriate authority for each.

[3] Natural Resources Wales / Public participation: how you can take part in our permit and licence consultations

5. Consultation

No consultation has been carried out on this application because it is not a legal requirement for this type of variation, and the site is not a High Public Interest site. This decision was made in accordance the Environment Permitting Regulations (EPR), our statutory Public Participation Statement[4] and our Regulatory Guidance.

6. Requests for information

An informal information request was made via email. This related to clarification of two pieces of information supplied by the Operator in relation to the Regulation 61(1) Notice we sent in July 2023 asking for information on all existing MCPs (in the range 5-50MWth) that are present at the installation.

A copy of the information email requesting further information was placed on our public register as were the responses when received.

7. The Installation

7.1. The permitted activities

The regulated facility is currently an installation which comprises the following activities listed in Part 2 of Schedule 1 to the Environmental Permitting Regulations:

- Section 6.1 Part A(1)(b) Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.

An installation may also comprise “directly associated activities”, which at this Installation includes:

- A4 Combustion plant - Provision of steam for use in the process by burning of natural gas in one boiler with a 10.5 MW thermal input, and 2no. 6.3MW gas-fired paper driers; and

[4] Natural Resources Wales / Public participation: how you can take part in our permit and licence consultations

- A5 Waste wood co-incineration plant for the co-incineration of waste wood and virgin wood for the purposes of generating steam for use in the paper-making process.

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

7.2. Changes to the installation

This application is to vary the environmental permit for Baglan Paper Mill to remove the 8MW net rated thermal input waste wood co-incinerator and include a new 9.1WM net rated thermal input virgin woodchip Medium Combustion Plant (MCP). The change involves the removal of all conditions, monitoring and reporting requirements associated with the co-incineration of waste wood and the inclusion of conditions, monitoring and reporting requirements related to the combustion of biomass in an MCP.

This variation also inserts MCP conditions, monitoring and reporting requirements in relation to the 10.5MWth net rated input natural gas-fired boiler. This combustion unit is an existing MCP in the range 5-50MWth. It is a requirement of the MCPD and Schedule 25A of EPR 2016 that:

- relevant MCPs are included in installations permits by 01/01/2024 and
- subject to appropriate emission limits and monitoring requirements by 01/01/2025.

There are two other combustion units in the installation that fall into the definition of existing MCP in the range 5-50MWth net rated thermal input. These are:

- 2no. 6.3MWth net rated thermal input paper machine gas hoods.

We have not included MCP conditions, monitoring and reporting requirements in the permit for these combustion plant. This is because they use the products of combustion for direct heating and drying in the Section 6.1 A(1)(b) paper-making activity. Therefore, as per Article 2(3)(d) of the Medium Combustion Plant Directive[5],

[5] DIRECTIVE (EU) 2015/ 2193 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 25 November 2015 - on the limitation of emissions of certain pollutants into the air from medium combustion plants

they are excluded MCPs. This Article of the MCPD is brought into EPR 2016 via Schedule 25A, Part 1 2(1).

The two combustion plant therefore remain in the permit as Directly Associated Activities (DAA) to the Section 6.1 A(1)(b) paper-making activity and remain subject to the BAT Conclusions associated with the latest version of the Production of Paper, Pulp and Board BRef[6].

8. Operation of the installation

8.1. Operator competence

The applicant is the sole operator of the Installation. We are satisfied that the applicant is the person who will have control over the operation of the Installation the variation is issued; and that they will be able to operate the Installation so as to comply with the conditions included in the permit. The decision was taken in accordance with EPR RGN 1 Understanding the meaning of operator[7].

8.2. Environmental 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 “How to comply with your environmental permit” guidance[8].

The applicant has an EMS that is accredited to ISO14001:2015 and has submitted a summary of the EMS with their application.

We have reviewed the application and 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.

[6] Production of Pulp, Paper and Board | EU-BRITE
[7] RGN 1 Understanding the meaning of 'operator' (naturalresources.wales)
[8] Natural Resources Wales / Guidance to help you comply with your environmental permit

8.3. Operating techniques

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

9. The site

9.1. Site Plan

The applicant has provided a an updated plan which we consider is satisfactory, showing the extent of the site of the facility and the new emission point.

Emission point A6, originally used at the emission point for the waste wood co-incinerator, remains in the permit and on the site plan and has been retained and used for the virgin woodchip MCP. The location of A6 on the site plan has moved slightly to account for the difference in position of the virgin woodchip MCP.

The updated plan has been included in the permit and the operator will be required to carry on the permitted activities within the site boundary

9.2. Site Condition Report

The proposal does not include the addition of any land and so a Site Condition Report was not required to support this application.

10. Environmental Risk Assessment

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 have been considered during are determination and the relevant risks from this proposal are discussed in this and other sections of this document.

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 ensuring a high level of protection.

In line with our guidance, the applicant has provided an environmental risk assessment with the application which identifies and the sources of key risks from the variation, possible pathways and receptors. This risk assessment and further assessments provided by the applicant and completed by NRW will be discussed in further detail below.

10.1. 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[9]. 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. This represents a slight overestimation of the impacts on air quality as the combustion unit will operate for 8,600 hours per year (98% of the time) due to an annual shut down period.

Emissions to air via gaseous concentration in air and aerial ground deposition are the principal pollutant pathways from the combustion plant stack. Emissions from the stack will be controlled via emission limits and monitoring for oxides of nitrogen (NO_x) and dust. There will also be a requirement for to monitor emissions of carbon monoxide. Emissions to air is the only pollutant source associated with this combustion plant

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

[9] Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk)

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

11. Impact on National Site Network Sites, SSSIs and non-statutory sites

The applicant has used the screening distances presented on the Air emissions risk assessment for your environmental permit[10] page of the gov.uk website (i.e., 10km for National Network Sites and 2km for SSSIs and non-statutory sites) to determine which habitats sites to include in the air emissions risk assessment.

However, NRW has published screening distances specific to MCPs[11], dependent on appliance type, fuel and net rated thermal input. These criteria indicate that, for a 9.1MWth boiler, fired on solid biomass, a screening distance of 1.5km for National Network Sites and SSSIs is appropriate. We have therefore based our assessments on a 1.5km screening distance.

A full assessment of the variation application and its potential to affect the identified sites has been carried out as part of the permit determination process. National Site Network sites, Sites of Special Scientific Interest (SSSI) and non-statutory conservation sites will be discussed separately below.

11.1. The National Site Network

No National Site Network Sites are located within 1.5km of the installation. Therefore, a Habitats Regulations Assessment (HRA) is not required because there is no conceivable impact pathway by virtue of location of the project.

11.2. Sites of Special Scientific Interest (SSSI)

The following SSSIs are located within 1.5km of the installation:

[10] Air emissions risk assessment for your environmental permit - GOV.UK
[11] Natural Resources Wales / What to do before you apply for a standalone Medium Combustion Plant (MCP) less than 50 MW thermal input that is also a Specified Generator (SG) or Part B activity

- Crymlyn Burrows 33WPC – 456m west
- Earlswood Road Cutting and Ferryboat Inn Quarries 33WXN – 1136m north

Earlswood Road Cutting and Ferryboat Inn Quarries SSSI is designated for geological features and therefore is not susceptible to damage from airborne pollution. This section therefore focusses on the impact on Crymlyn Burrows SSSI

Crymlyn Burrows SSSI (33WPC)

Oxides of nitrogen (NO_x)

Emissions of oxides of nitrogen were assessed against a long-term critical level of 30 µg/m^3 (annual) and short term critical level of 75 µg/m^3 (daily).

At Crymlyn Burrows SSSI, the maximum predicted long-term PC was <1 % of the long-term critical level. Therefore, in accordance with the relevant guidance the long-term impacts from oxides of nitrogen can be considered as insignificant.

The maximum predicted short-term PC was <10 % of the short-term critical level. Therefore, in accordance with the relevant guidance the short-term impacts from oxides of nitrogen can be considered insignificant.

The maximum predicted long-term PC was <1 % of the relevant long-term critical load for nutrient nitrogen deposition, as given on the APIS[12] website (i.e. sand dunes: 5kg N/ha/yr). Therefore, in accordance with the relevant guidance the impacts from nutrient nitrogen deposition can be considered as insignificant.

There are no relevant Critical Loads for acid deposition at Crymlyn Burrows SSSI.

Dust

[12] APIS - Air Pollution Information System | APIS

The applicant has not calculated specific PCs for dust at Crymlyn Burrows SSSI. The maximum long-term and short-term PCs for PM_{10} (a size fraction of dust) within the modelled domain are 0.07µg/m^3 and 1µg/m^3, respectively. These are < 1% and 10 % of the respective long-term and short-term Air Quality Standards (AQS) for human health.

In relation to dust, the mechanism for damage to habitats is deposition and subsequent smothering. There are no applicable environmental assessment levels for the impact of dust smothering on habitats sites. However, the IAQM[13] guidance document indicates that impacts on sites that are greater than 1km from the source of dust generated at minerals quarries are negligible and do not need to be assessed.

We therefore consider that the impact of dust on the Crymlyn Burrows SSSI is insignificant for the following reasons:

- The maximum PCs in the modelled domain are below the significance thresholds for long-term and short-term impacts when compared to the AQSs for human health; and
- Although the site is within 1km of the stack (456m), which is below the threshold for detailed assessment given in the IAQM mineral guidance, it is relevant that the mineral guidance is related to dust emissions from quarries. Quarry dust is likely to be emitted in greater concentrations and contain coarser dust fractions when compared to the emission of fine particulate matter from the solid biomass combustion unit. Consequently, the potential for damage from smothering is much lower from combustion units, given the small mass concentration and size fraction of particulate matter.

As such, we consider the that emissions of dust from the combustion unit are insignificant at Crymlyn Burrows SSSI.

As a Section 28G Authority as defined in the Countryside Rights of Way Act 2000 permitting teams within NRW has a legal duty, under Section 28I of the Wildlife and

[13] Guidance on the Assessment of Mineral Dust Impacts for Planning

Countryside Act 2981, to consult with NRW for formal advice when permitting an activity which has been determined to be likely to damage the features of a SSSI.

To determine if consultation is required, a SSSI Assessment was completed. The assessment concluded that the proposed permission is not likely to damage any of the flora, fauna or geological or physiological features which are of special interest. We therefore took the decision not to consult on the assessment.

A copy of the assessment is available to view on the public register, please see here:

11.3. Non-statutory conservation sites

The following relevant non-statutory sites re located within 1.5km of the installation:

- 17no. Local Wildlife Sites (LWS)
- 3no. Ancient Woodlands

The closest of these sites to the combustion plant stack is Baglan Bay LWS (179m north west).

Baglan Bay LWS

Oxides of nitrogen (NO_x)

Emissions of oxides of nitrogen were assessed against a long-term critical level of 30 µg/m^3 (annual) and short term critical level of 75 µg/m^3 (daily).

At Baglan Bay LWS, the maximum predicted long-term PC was 3.7 % of the long-term critical level. Therefore, as this is >1 % and <100 % of the long-term critical level, in accordance with the relevant guidance we consider that there will be no adverse impact from oxides of nitrogen in the long-term.

The maximum predicted short-term PC was <10 % of the short-term critical level. Therefore, in accordance with the relevant guidance the short-term impacts from oxides of nitrogen can be considered insignificant.

There are no site relevant critical loads for Baglan Bay LWS. However, as this is a sand dune / estuary ecosystem, we have assumed a critical load of 5kg N/ha/yr, in line with the relevant critical load for the sand dune features of the nearby Crymlyn Burrows SSSI.

The maximum predicted long-term PC was >1% and <100% of the relevant long-term critical load for nutrient nitrogen deposition. Therefore, in accordance with the relevant guidance the impacts from nutrient nitrogen deposition can be considered as insignificant.

There are no relevant Critical Loads for acid deposition at Baglan Bay LWS.

Dust

The applicant has not calculated specific PCs for dust at Baglan Bay LWS. The maximum long-term and short-term PCs for PM_{10} (a size fraction of dust) within the modelled domain are 0.07µg/m^3 and 1µg/m^3, respectively. These are <1% and 10% of the respective long-term and short-term Air Quality Standards (AQS) for human health.

In relation to dust, the mechanism for damage to habitats is deposition and subsequent smothering. There are no applicable environmental assessment levels for the impact of dust smothering on habitats sites. However, the IAQM[14] guidance document indicates that impacts on sites that are greater than 1km from the source of dust generated at minerals quarries are negligible and do not need to be assessed.

We therefore consider that the impact of dust on Baglan Bay LWS is insignificant for the following reasons:

[14] Guidance on the Assessment of Mineral Dust Impacts for Planning

- The maximum PCs in the modelled domain are below the significance thresholds for long-term and short-term impacts when compared to the AQSs for human health; and
- Although the site is within 1km of the stack (456m), which is below the threshold for detailed assessment given in the IAQM mineral guidance, it is relevant that the mineral guidance is related to dust emissions from quarries. Quarry dust is likely to be emitted in greater concentrations and contain coarser dust fractions when compared to the emission of fine particulate matter from the solid biomass combustion unit. Consequently, the potential for damage from smothering is much lower from combustion units, given the small mass concentration and size fraction of particulate matter.

As such, we consider the that emissions of dust from the combustion unit are insignificant at Baglan Bay LWS SSSI.

Based upon the information in the application we are satisfied that there will be no adverse impact to the non-statutory conservation sites identified.

12. The Permit Conditions

12.1. Emission Limits

We have decided that emission limits should be set for the parameters listed in the permit, as follows:

- 10.5MWth natural gas-fired boiler (Table S1.1 activity reference A5):
  - Oxides of nitrogen (NO and NO_2 expressed as NO_2), 200mg/m^3
- 9.1MWth virgin woodchip (solid biomass)-fired boiler (Table S1.1 activity reference A6)
  - Oxides of nitrogen (NO and NO_2 expressed as NO_2), 300mg/m^3
  - Dust, 30mg/m^3

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, 6 % for solid fuels and 3 % for all other MCPs.

The ELV(s) have been set in line with the requirements specified within Schedule 25A of EPR.

12.2. Monitoring

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. The new monitoring requirements included in the permit are as follows:

- 10.5MWth natural gas-fired boiler (Table S1.1 activity reference A5):
    - Oxides of nitrogen (NO and NO_2 expressed as NO_2), 200mg/m^3, every 3 years from date of acceptance of first monitoring measurements under condition 3.2.3
    - Carbon monoxide, no limit set, every 3 years from date of acceptance of first monitoring measurements under condition 3.2.3
- 9.1MWth virgin woodchip (solid biomass)-fired boiler (Table S1.1 activity reference A6)
    - Oxides of nitrogen (NO and NO_2 expressed as NO_2), 200mg/m^3, periodic, every three years
    - Dust, 30mg/m^3, periodic, every three years
    - Carbon monoxide, no limit set, periodic, every three years

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 of EPR and.

The Operator will carry out monitoring in accordance with the relevant MCERTS methods and the gov.uk web guidance Monitoring stack emissions: low-risk MCPs and specified generators[15]

[15] https://www.gov.uk/government/publications/monitoring-stack-emissions-low-risk-mcps-and-specified-generators/monitoring-stack-emissions-low-risk-mcps-and-specified-generators

These decisions have been made in line with current relevant guidance including TGN M5 and the above referenced web guidance.

12.3. Reporting

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.

13. OPRA

The OPRA score has changed as a result of this variation. The new agreed score is now 102 (was 81). This will form the basis for ongoing subsistence fees.