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Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Northwood & Wepa Limited

Bridgend Paper Mill
Llangynwyd
Bridgend
CF34 9RS

Permit number
EPR/EP3738NG

Bridgend Paper Mill

Permit number EPR/EP3738NG

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

Northwood & Wepa Limited operates a paper mill and converting facility, a Combined Heat and Power Plant (CHP) and an effluent treatment plant (ETP) at Llangynwyd in the Llynfi Valley in South Wales approximately 5km south of Maesteg and 10km north of Bridgend. Situated in a semi-rural location, papermaking at the installation has been established since 1950. The installation is situated adjacent to the River Llynfi and the Nant Gwyn stream also runs through the site. The nearest area of designated sensitive habitat is the Merthyr Mawr Warren Special Area of Conservation (SAC) which is located approximately 6km south of the installation. The installation is not deemed to have an impact on this site.

The mill uses virgin wood-pulp and broke as raw materials in the production of a range of hygienic paper tissue products. The mill operates a single paper-machine with its own stock preparation and converting lines. The capacity of the installation is approximately 50,000 tonnes of paper product per annum.

Virgin fibre and broke are independently processed through low consistency pulpers, which are designed to disperse the fibres in water and produce stock. Each stock line is then passed through basic cleaning systems prior to being mixed together and fed to the paper-machine. The ratio of virgin pulp to broke is strictly controlled to achieve specific product quality requirements. The mixed paper stock is fed to the papermaking machine which is designed to continuously produce a cohesive web of fibre, forming a wet sheet of paper tissue. Once the initial wet sheet is formed the paper is passed through the drying section which is made up of a series of steam heated cylinders to dry the paper. At the end of the drying process the continuous paper sheet is wound onto a reel. When the reel is full the sheet is spliced onto the next reel so that continuous paper production is achieved without stopping to change from one reel to the next.

The installation includes a CHP Plant with a net thermal input of 48.18MW which supplies the entire steam demand of the papermaking operation and approximately 50% of the electrical power of the mill. The CHP plant is natural gas fired with the capacity for supplementary gas oil firing. The plant comprises of two Gas turbines with a single 37m stack and a shell boiler with a 30m stack.

The plant has been operational since 1995 and is now operated by Northwood & Wepa Limited. The permit was transferred from SCA Hygiene Products Tissue Limited to Northwood and Wepa Limited on 18th June 2013. Emissions to air are strictly controlled, including particulates and oxides of carbon, sulphur and nitrogen.

Freshwater for papermaking is abstracted from the River Llynfi and the Nant Gwyn Stream. The Mill operates a biological treatment plant utilising activated sludge. Water demand for the papermaking operations is supported by a recycling process

at the ETP. All papermaking process wastewater is subject to treatment at the ETP before discharge in to the River Llynfi. The quality of the discharge is strictly controlled with limits for suspended solids, BOD, pH and temperature amongst others.

The stock preparation plant rejects and the ETP generate 7,000 tonnes per annum of paper sludge cake which is spread on local agricultural land as a soil conditioner providing agricultural benefit.

The site has operated an Environmental Management System (EMS) accredited to the ISO14001 standard since 2007 and also operates accredited management systems for Quality Management (ISO9001) and Health & Safety Management (OHSAS18001).

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/BJ5805IX	received 27/02/01	
Response to request for information in 1 st Schedule 4 Notice	Request dated 14/05/01	Response dated 25/06/01.
Response to request for information in 2 nd Schedule 4 Notice	Request dated 18/06/01	Response dated 25/06/01.
Response to request for information in 3 rd Schedule 4 Notice	Request dated 31/07/01	Response dated 03/08/01.
Permit BJ5805IX	Determined 27/11/01	
Application for Variation BR8042	Received 06/03/02	Standard variation – to amend completion dates of improvement condition 9.4 a) and b) EPR/BJ5805IX/V002.
Variation BR8042	Determined 29/04/02 Effective 06/05/02	Introduced sampling on A3 and A4.
Application for variation XP3235SE	22/11/04 and supplementary information dated 14/02/05	EPR/BJ5805IX/V003 – addition of PVA coating to Jupiter paper machine.

Status log of the permit		
Description	Date	Comments
Request by Environment Agency to extend determination date from 18/02/05 to 01/04/05	Request dated 11/02/05	Request accepted 15/02/05.
Request by Operator to extend determination date from 01/04/05 to 09/05/05	Request dated 16/03/05	Request accepted 21/03/05.
Variation XP3235SE	Determined 29/04/05	Introduced 3 improvement conditions (9.12 – 9.14) to assess effect of process on River Llynfi and reduce impact. New VOC emission point (A5) linked to paper-machine modification.
Variation KP3634LB Environment Agency Initiated	Determined 06/06/06	EPR/BJ5805IX/V004 – lowers maximum temperature limit on discharged effluent, further reduce ammonia limit, adds limit for VOC emissions from A5 stack, additional improvement condition (9.24) to install active cooling on effluent discharge.
Transfer application EPR/SP3639KA/T001 (full transfer of base permit EPR/BK6122IE and subsequent variations)	Duly Made 29/05/09	
Transfer EPR/SP3639KA	Determined 23/07/09	
Environment Agency Paper and Pulp Sector Review 2011 Variation determined EPR/BJ5805IX/V005	Determined 28/10/11	Multi-permit consolidation of EPR/BJ5805IX and EPR/SP3639KA. EPR/BJ5805IX is the base permit going forward. Varied and consolidated permit issued in modern condition format.
Application EPR/SP3431CN/T001 (full transfer of consolidated permit EPR/BJ5805IX)	Duly made 16/07/12	Application to transfer the permit in full to SCA Hygiene Products Tissue Limited.
Transfer determined EPR/SP3431CN	19/07/12	Full transfer of permit complete.
Agency variation determined EPR/SP3431CN/V002	25/03/13	Agency variation to implement the changes introduced by IED.

Status log of the permit		
Description	Date	Comments
Application EPR/EP3738NG/T001 (full transfer of permit EPR/SP3431CN)	Duly made 16/05/13	Application to transfer the permit in full to Northwood & Wepa Limited
Transfer determined EPR/EP3738NG	18/06/13	Full transfer of permit complete.
Variation application EPR/EP3738NG/V002	Duly made 02/12/13	Addition of two paper converting lines and IED conditions
Additional Information Received	18/02/14	Updated site plan and plan of air emission point locations (drg 050-BR-081).
Variation determined EPR/EP3738NG/V002	24/02/14	Varied permit issued
Regulation 60(1) Notice of request for information	01/12/14	
Regulation 60(1) response received	27/03/15	Implementation of BAT conclusions under IED
Additional information received	22/03/16	Further information in respect of levels of phosphorus in effluent
Additional information received	31/03/16	Clarification of compliance with BATc 17
Natural Resources Wales Paper, Pulp and Board Sector Review 2015 Permit EPR/EP3728BH Variation issued EPR/EP3738NG/V003	31/03/16	Varied and consolidated permit issued in modern IED condition format.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/EP3738NG

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/EP3738NG/V003 authorising,

Northwood & Wepa Limited ("the operator"),

whose registered office is

**Bridgend Paper Mill
Llangynwyd
Maesteg
Mid Glamorgan
Wales
CF34 9RS**

company registration number **08347876**


to operate a regulated facility at

**Bridgend Paper Mill
Llangynwyd
Bridgend
CF34 9RS**

to the extent authorised by and subject to the conditions of this permit.

Name

Date

	31/03/2016
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Eirian Macdonald

Authorised on behalf of Natural Resources Wales

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1
 - (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.
 - (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by Natural Resources Wales.
- 2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
 - (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
 - (a) point source emissions specified in tables S3.1 and S3.2.
- 3.3.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 3.3.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 and S3.2 unless otherwise agreed in writing by Natural Resources Wales.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.5.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

4 Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

- 4.3.1 (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform Natural Resources Wales,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and
 - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- Where the operator is a corporate body other than a registered company:
- (a) any change in the operator's name or address; and

- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 Natural Resources Wales shall be given at least 14 days' notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, Natural Resources Wales shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made immediately, in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities

Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity
S6.1 A(1)(b)	Producing, in industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day. Production of a range of hygienic paper tissue products from virgin wood-pulp and recycled paper from a single paper-machine.	From receipt of raw materials through specified activities to despatch of finished products including release points into air and controlled waters.
S5.4 A(1)(a)(i)	Biological treatment of more than 50 tonnes per day of process effluent and boiler blow down.	Collection and treatment of Effluent from Paper making Activity and boiler blow down from the CHP plant to discharge to the river Llynfi.
S1.1 A(1)(a)	Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.	Receipt of raw materials and fuel for production of steam and electricity. Effluent discharge to paper mill effluent treatment plant and release of combustion products to air.

Directly Associated Activity

Treatment of water	Treatment of water abstracted from the River Llynfi and the Nant Gwyn Stream for use in permitted installation.	From the treatment of abstracted water to its transfer into the process.
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Table S1.2 Operating techniques

Description	Parts	Date Received
Application BJ5805IX	The response to question 2.3 given in section 2.3 of the application	27/02/01
Application BJ5805IX Response to 1 st schedule 4 Notice	The response to questions in section 2.3 – main activities and abatement of notice dated 14/05/01	25/06/01
Application BK6122IE	The response to question 2.3 given in section 5 of the application.	27/02/01
Application BK6122IE Response to schedule 4 Part 1 Notice	Response to questions in section 5 – Main Activities and Abatement of notice dated 14/05/01	19/06/01
Report on monitoring standards for discharges to surface waters received in response to IC1 issued 9 th January 2012	Full report	29/06/12

Table S1.2 Operating techniques

Description	Parts	Date Received
Information received in support of Natural Resources Wales's Paper, Pulp and Board Sector Review 2015	All parts of operator response to Regulation 60(1) notice	27/03/15
Additional information received in support of Natural Resources Wales's Paper, Pulp and Board Sector Review 2015	Email from operator received 31 st March 2016 indicated compliance with BATc 17	31/03/16

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC 1	<p>The operator shall submit, for approval by Natural Resources Wales, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved, but will be achieved by 1st October 2018. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> 1) Methodology for achieving BAT 2) Associated targets / timelines for reaching compliance by 1st October 2018 3) Any alterations to the initial plan <p>The report shall address the following: BATc: 10</p>	Progress reports to be submitted annually from date of issue of this variation
IC 2	The Operator shall submit a written report detailing the way in which bimonthly monitoring of adsorbable organically bound halogens (AOX) in the effluent discharged through emission point W1 will be carried out, in order to demonstrate compliance with BATc 50.	30 th September 2016

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
IC 3	<p>If storing Priority Hazardous Substances on site, the Operator must carry out the following assessments with reference to the Environment Agency's guidance "<i>How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water.</i>"</p> <ul style="list-style-type: none"> Phase 1 Part A screening tests for mercury, cadmium, nickel, lead, benzene, polyaromatic hydrocarbons and any other relevant substances. Phase 1 Part B screening tests for mercury, cadmium, polyaromatic hydrocarbons and any other relevant priority hazardous substances. For any substance which is not screened out by the Phase 1 Part A or Part B screening tests the Operator will also need to carry out Phase 2 modelling, as described in "<i>How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water.</i>" <p>The Operator must provide Natural Resources Wales with the results of the emissions monitoring, the results from the screening tests and the results from any Phase 2 modelling. The Operator may use the Environment Agency's H1 electronic screening tool to present the emissions data and to carry out the Phase 1 screening tests.</p> <p>Note: With regard to the Phase 1 Part A screening - a full list of relevant substances is provided in Tables 1 and 2 of Appendix 1 of the Environment Agency's guidance "<i>How to carry out a risk assessment if you're applying for a bespoke permit that includes discharging hazardous pollutants to surface water</i>" under the section entitled "<i>Screening test: priority hazardous pollutants</i>". The Operator must review the list and carry out the screening for any substances, in addition to those specified in the notice, that may be present in the installations discharges to surface water. With regard to the Phase 1 Part B screening for priority hazardous pollutants, the section entitled "<i>Screening test: priority hazardous pollutants</i>" provides a full list of relevant priority hazardous substances and their associated annual significant loads.</p>	30 th September 2016
IC 4	The Operator shall submit the written protocol referenced in condition 3.1.3 for the monitoring of soil and groundwater for approval by Natural Resources Wales. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1) (b), 14(1) (e) and 16(2) of the IED. The procedure shall be implemented in accordance with the written approval from Natural Resources Wales.	30 th September 2016
IC 5	The Operator shall submit a report on the baseline conditions of soil and groundwater at the installation. The report shall contain the information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definitive cessation of activities provided for in Article 22(3) of the IED. The report shall contain information, supplementary to that already provided in the application Site Condition Report, needed to meet the information requirements of Article 22(2) of the IED.	30 th September 2016
IC 6	The operator shall submit, for approval by Natural Resources Wales, a report detailing how compliance with the annual limit for total phosphorus will be achieved in order to demonstrate compliance with BATc 50.	30 th September 2016

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels

Raw materials and fuel description	Specification
Virgin Pulp	Shall be Elementally Chlorine Free or Totally Chlorine Free.

Schedule 3 (a) – Emissions and monitoring

Emissions until 29th September 2018

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference ⁽¹⁾ period	Monitoring frequency	Monitoring standard or method
A1 – Gas turbine stack (37m)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine stack – CHP plant	250 mg/m ³	Hourly average	Annually	BS EN 14792
	Sulphur dioxide		50 mg/m ³	Hourly average	Annually	BS EN 14791 / TGN M21
	Particulates		10 mg/m ³	Hourly average	Annually	BS EN 13284-1
	Carbon Monoxide		150 mg/m ³	Hourly average	Annually	BS EN 15058
A2 – Shell boiler Stack (30m)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Shell boiler Stack – CHP plant	250 mg/m ³	Hourly average	Annually	BS EN 14792
	Sulphur dioxide		50 mg/m ³	Hourly average	Annually	BS EN 14791 / TGN M21
	Particulates		10 mg/m ³	Hourly average	Annually	BS EN 13284-1
	Carbon Monoxide		150 mg/m ³	Hourly average	Annually	BS EN 15058
A4 (height 20.3 m) Drawing no IPPC - 06	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Jupiter Machine Hood Exhaust Vent	40 mg/m ³ (natural gas) 100 mg/m ³ (gas oil) ⁽¹⁾	Hourly average	Annually	BS EN 14792
A5 (height 6.2m) As shown on drawing No. 50-GP-114 Rev 1	-	Jupiter PVOH application drum vent	No Limit Set	-	-	-
A6 – CHP plant	-	High pressure natural gas vent (South)	No Limit Set	-	-	-
A7 - CHP plant	-	High pressure natural gas vent (North)	No Limit Set	-	-	-

Note 1: certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

⁽¹⁾ Testing only required if gas oil used as fuel for a minimum of 10 days during any rolling 12 month period

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 Effluent Treatment Plant	pH	Effluent Treatment plant	6.5 – 8.0 ⁽¹⁾	continuous	Daily	BS 6068- 2.50:1995
	Temperature		25 °C ⁽¹⁾	continuous	Daily	Standard temperature sensor
	Daily flow volume		17,500 m ³ /day	continuous	Daily	MCERTS self- monitoring of effluent flow scheme
	Suspended solids monthly maximum (95%ile for continuous)		40 mg/l ⁽¹⁾	Continuous	Daily	BS EN 872:2005, SCA blue book 105 ISBN 011751957X
			25 mg/l ⁽²⁾	Spot	Monthly	
	Suspended solids		25 mg/l	24 hour flow proportional composite sample ⁽⁶⁾	Monthly	BS EN 872:2005, SCA blue book 105 ISBN 011751957X
	Biochemical Oxygen demand ⁽⁴⁾		10 mg/l ⁽¹⁾	Continuous	Daily	BS EN 1899-1 (1998), SCA blue book 130 ISBN 0117522120
	Biochemical Oxygen demand		10 mg/l	24 hour flow proportional composite sample ⁽⁶⁾	Monthly	BS EN 1899-1 (1998), SCA blue book 130 ISBN 0117522120
	Chemical Oxygen Demand		No Limit set	24 hour flow proportional composite samples	Monthly	BS 6068- 2.34:1988, SCA blue book 215
	Pentachlorophen ol		1.0 µg/l ⁽³⁾	24 hour flow proportional composite sample ⁽⁷⁾	Quarterly	As agreed with the Environment Agency
	Tributyltin		0.01 µg/l ⁽³⁾	24 hour flow proportional composite sample ⁽⁷⁾	Quarterly	As agreed with the Environment Agency
	Mercury and its compounds, expressed as mercury (Total Hg)		0.1 µg/l ⁽³⁾	24 hour flow proportional composite sample ⁽⁷⁾	Quarterly	BS EN ISO 17852
Cadmium and its compounds, expressed as cadmium (Total Cd)	0.6 µg/l ⁽³⁾	24 hour flow proportional composite sample ⁽⁷⁾	Quarterly	BS EN ISO 17294 BS EN ISO 5961 BS EN ISO 1185		

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
	Ammoniacal nitrogen		1mg/l ⁽⁵⁾	24-hour flow proportional composite sample ⁽⁷⁾	daily	BS ENISO 11732:2005, SCA blue book 48 ISBN 0117516139
	Total Nitrogen		No limit set	24-hour flow proportional composite sample ⁽⁷⁾	Weekly	BS EN ISO 119505-1, BS 6068-2.62, BS EN12260, BS 6068-2.83
	Total Phosphorus		No limit set	24-hour flow proportional composite sample ⁽⁷⁾	Weekly	BS EN ISO15681, BS 6068
	Priority Hazardous Substances ⁽⁸⁾		No limit set	24-hour flow proportional composite sample ⁽⁷⁾	Annually	GC/MS analysis to be carried out by UKAS accredited laboratory

⁽¹⁾ Daily average based on continuous monitor

⁽²⁾ Rolling 3-month average based on spot sample

⁽³⁾ Dried at 105°C

⁽⁴⁾ Five day test at 20°C

⁽⁵⁾ Rolling weekly average

⁽⁶⁾ To commence on completion of improvement condition IC1

⁽⁷⁾ Spot sample to be taken until completion of improvement condition IC1

⁽⁸⁾ Water Framework Directive Priority Hazardous Substances detailed in Schedule 6 – Interpretation

Where in-house analysis is used for compliance assessment purposes, a duplicate sample shall be sent for external analysis (UKAS/ISO17025) at a six monthly frequency

Schedule 3 (b) – Emissions and monitoring

Emissions from 30th September 2018

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference ⁽¹⁾ period	Monitoring frequency	Monitoring standard or method
A1 – Gas turbine stack (37m)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine stack – CHP plant	250 mg/m ³	Hourly average	Annually	BS EN 14792
	Sulphur dioxide		50 mg/m ³	Hourly average	Annually	BS EN 14791 / TGN M21
	Particulates		10 mg/m ³	Hourly average	Annually	BS EN 13284-1
	Carbon Monoxide		150 mg/m ³	Hourly average	Annually	BS EN 15058
A2 – Shell boiler Stack (30m)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Shell boiler Stack – CHP plant	250 mg/m ³	Hourly average	Annually	BS EN 14792
	Sulphur dioxide		50 mg/m ³	Hourly average	Annually	BS EN 14791 / TGN M21
	Particulates		10 mg/m ³	Hourly average	Annually	BS EN 13284-1
	Carbon Monoxide		150 mg/m ³	Hourly average	Annually	BS EN 15058
A4 (height 20.3 m) Drawing no IPPC - 06	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Jupiter Machine Hood Exhaust Vent	40 mg/m ³ (natural gas) 100 mg/m ³ (gas oil) ⁽¹⁾	Hourly average	Annually	BS EN 14792
A5 (height 6.2m) As shown on drawing No. 50-GP-114 Rev 1	-	Jupiter PVOH application drum vent	No Limit Set	-	-	-
A6 – CHP plant	-	High pressure natural gas vent (South)	No Limit Set	-	-	-
A7 - CHP plant	-	High pressure natural gas vent (North)	No Limit Set	-	-	-

Note 1: certification to the MCERTS performance standards indicates compliance with BS EN 15267-3

⁽¹⁾ Testing only required if gas oil used as fuel for a minimum of 10 days during any rolling 12 month period

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 7 emission to River Llynfi	Effluent Treatment plant	Flow Rate	No limit set	Instantaneous	Continuous	MCERTS self-monitoring of effluent flow scheme
		Maximum Daily Flow	17,500 m ³ /day	24 hours	Daily	MCERTS self-monitoring of effluent flow scheme
		Mean Daily Flow	No limit set	24 hours	Daily	MCERTS self-monitoring of effluent flow scheme
		pH (units)	6.5 (min) 8 (max)	Daily average	Continuous	MCERTS Approved instrumentation or equivalent
		Temperature	25°C	Daily average	Continuous	Standard temperature sensor
		Chemical oxygen demand (COD)	No limit set	24-hour flow proportional sample	Daily	COD: BS ISO 15705 TOC: BS EN 1484
		Biochemical oxygen demand (BOD ₅)	10 mg/l	24-hour flow proportional sample	Weekly (once a week)	BS EN 1899-1
		Total suspended solids (TSS)	25 mg/l	24-hour flow proportional sample	Daily	BS EN 872
		Ammonia as N	1 mg/l	24-hour flow proportional sample	Daily	BS EN ISO 11732 or ISBN 0117516139
		Total nitrogen	No limit set	24-hour flow proportional sample	Weekly (once a week)	BS EN 12260
		Total phosphorus	No limit set	24-hour flow proportional sample	Weekly (once a week)	BS EN ISO 6878 followed by BS EN ISO 15681- 1 Or BS EN ISO 15681- 2
		Mercury and its compounds, expressed as mercury (Total Hg)	0.1µg/l	24 hour flow proportional composite sample	Quarterly	BS EN ISO 17852
		Cadmium and its compounds, expressed as	0.6µg/l	24 hour flow proportional	Quarterly	BS EN ISO 17294

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
		cadmium (Total Cd)		composite sample		BS EN ISO 5961 BS EN ISO 1185
		Other compounds: AOX	No limit set	24-hour flow proportional sample	Once every two months	AOX: BS EN ISO 9562 or other method as agreed in writing with Natural Resources Wales
		Priority Hazardous Substances ^{Note 1}	-	24-hour flow proportional sample	Annually	GCMS analysis at UKAS accredited laboratory
		Individual concentrations of the following metals (total and dissolved) and their compounds: Zn, Cu, Cd, Pb, Hg and Ni	-	24-hour flow proportional sample	Annually	BS EN ISO 15586:2003
		Pentachloro-phenol	1.0µg/l	24-hour flow proportional sample	Quarterly	As agreed with Natural Resources Wales
		Tributyltin	0.01µg/l	24-hour flow proportional sample	Quarterly	As agreed with Natural Resources Wales

Note 1: Water Framework Directive Priority Hazardous Substances detailed in Schedule 6 – Interpretation.

Where in-house analysis is used for compliance assessment purposes, a duplicate sample shall be sent for external analysis (UKAS/ ISO17025) at a six monthly frequency

Table S3.3 Annual limits

Substance	Medium	Limit (including unit)
Chemical Oxygen Demand (COD)	Water	1.5 kg/T
Total suspended solids (TSS)	Water	0.35 kg/T
Total nitrogen	Water	0.15 kg/T
Total phosphorus	Water	0.012 kg/T
Adsorbable organically bound halogens (AOX)	Water	0.05 kg/T

Schedule 4 (a) – Reporting

Reporting until 29th September 2018

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1, A2, A4	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October
Analysis of paper sludge	-	Every 12 months	1 January

Table S4.2 Performance parameters

Parameter	Frequency of assessment	Units
Oxides of Nitrogen ⁽¹⁾	Annually	Tonnes/T
Carbon Dioxide ⁽¹⁾	Annually	Tonnes/T
Biological Oxygen Demand	Annually	Kg/T
Suspended solids	Annually	Kg/T
Nitrogen and Phosphorus	Annually	Kg/T

(1) Assessment may be based on actual monitoring or use of emission factors (fuel consumption)

Table S4.3 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Water	Form water 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Resource efficiency	Form resource efficiency 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	DD/MM/YY

Schedule 4 (b) – Reporting

Reporting from 30th September 2018

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1, A2, A4	Every 12 months	1 January
Emissions to water Parameters as required by condition 3.5.1	W1	Every 12 months	1 January
Analysis of paper sludge	-	Every 12 months	1 January
Adsorbable organically bound halogens (AOX)	W1	Every 12 months	1 January

Table S4.2 Performance parameters

Parameter	Frequency of assessment	Units	Units
Oxides of Nitrogen ^{Note 1}	Annually	Tonnes	Kg/T
Carbon Dioxide ^{Note 1}	Annually	Tonnes	Kg/T
Biological Oxygen Demand (BOD)	Annually	Tonnes	Kg/T
Chemical Oxygen Demand (COD)	Annually	Tonnes	Kg/T
Total suspended solids (TSS)	Annually	Tonnes	Kg/T
Total nitrogen	Annually	Tonnes	Kg/T
Total phosphorus	Annually	Tonnes	Kg/T
Adsorbable organically bound halogens	Annually	Tonnes	Kg/T

Note 1: Assessment may be based on actual monitoring or use of emission factors (fuel consumption)

Table S4.4 Reporting forms

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Water and Land	Form water 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Resource efficiency	Form resource efficiency 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	DD/MM/YY
	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	DD/MM/YY

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment	
To be notified Immediately	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a permit condition	
To be notified immediately	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment:	
To be notified immediately	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 - Interpretation

“accident” means an accident that may result in pollution.

“Annex I” means Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Annex II” means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“AOX” is adsorbable organic halides measured according to the EN ISO:9562 standard method for waste waters.

“disposal” means any of the operations provided for in Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“emissions to land” includes emissions to groundwater.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“background concentration” means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“hazardous property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 No.894, the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138), the List of Wastes (England) Regulations 2005 No.895 and the List of Wastes (Wales) Regulations 2005 No. 1820 (W.148).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“Pests” means Birds, Vermin and Insects.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex IIB to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“*Waste code*” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“*WFD*” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste

“*Water Framework Directive*” Priority Hazardous Substances are Anthracene, Brominated diphenyl ether, Cadmium, C10-13 Chloroalkanes, Endosulphan, Hexachlorobenzene, Hexachlorobutadiene, Hexachloro-cyclohexane, Mercury and its compounds, Nonylphenol (4-Nonylphenol), Pentachlorobenzene, Polycyclic aromatic Hydrocarbons (PAHs), Tributyltin compounds (Tributyltin-cation) “year” means calendar year ending 31 December.

“*year*” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content

The calculation for converting mg/m³ to kg/t can be found in Annex 1 of the Manufacture of Paper, Pulp and Board Best Available Techniques Reference document (BRef) published on 30th September 2014.

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