

Natural Resources Wales permitting decisions

Variation and consolidation of a bespoke permit

We have decided to issue an Natural Resources Wales initiated variation for Bridgend Paper Mill operated by Northwood and Wepa Limited.

The variation number is EPR/EP3738NG.

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 is a decision document, which accompanies a variation notice being issued following a review of the permit.

It explains:

- **how** we have carried out our statutory review of the operator's permit;
- **why** we have decided to vary the permit as a result of that review; and
- **why** we have included the specific conditions in the revised permit through the variation notice we are issuing.

It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position.

It explains how we have reviewed and considered the techniques used by the operator in the operation and control of the plant and activities of the installation. This review has been undertaken with reference to the decision made by the European Commission establishing best available techniques (BAT) conclusions ('BAT Conclusions') for the Production of Pulp, Paper and Board, which were published as a Commission Implementing Decision (2014/687/EU) in the Official Journal of the European Union on 30th September 2014. It is our record of our decision-making process and shows how we have taken into account all relevant factors in reaching our position. It also provides a justification for the inclusion of any specific conditions in the permit that are in addition to those included in our generic permit template.

As well as considering the review of the operating techniques used by the operator for the operation of the plant and activities of the installation, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit. It also modernises the entire permit to reflect the conditions contained in our current permit template.

The introduction of the new permit format makes the permit consistent with other permits issued to installations in this sector. Although the wording of some conditions has changed and others have disappeared because of the new regulatory approach, it does not reduce the level of environmental protection achieved by the permit in any way. In this document we address only our determination of substantive issues relating to the new BAT Conclusions.

This variation is considered to be a normal variation because along with the administrative changes i.e. consolidating previous variations and moving to the new template, some detailed technical evaluation is required. This is a more complex variation than the norm, because it is doing three different things at the same time:

- **First**, it gives effect to our decisions following the statutory review of the existing permit, following the implementation of the IED and the publication of BAT Conclusions covering the production of paper, pulp and board. That is what this variation is principally about.
- **Second**, it takes the opportunity to bring earlier variations into an up-to-date, consolidated permit. These changes have already taken place and we are not re-explaining them, but the consolidated permit should be easier to understand and use.
- **Third**, it modernises the entire permit to reflect our current template. The template reflects our modern regulatory permitting philosophy and was introduced because of a change in the governing legislation. This took place when the Pollution Prevention and Control (England and Wales) Regulations 2000 were replaced in 2008 by a new statutory regime under the Environmental Permitting Regulations 2010 (as amended in 2013) to effectively introduce the IED.

The introduction of new template conditions makes the permit consistent with our current general approach and philosophy. Although the wording of some conditions has changed, while others have disappeared because of the new regulatory approach, it does not affect the level of environmental protection achieved by the permit in any way. We therefore explain only the statutory review in this document.

As the variation will not have any negative effects on the environment it is not a substantial variation and so does not require external consultation. A fee for a normal variation based on the operator's OPRA score will be invoiced to the operator.

Structure of this document

- Summary of our decision
- The legal framework
- How we took our decision
- Key issues/Regulation 60 response
- Changes we have made
- Conclusion
- Annex 1 – Decision Checklist regarding relevant BAT Conclusions

1 Our decision

We have issued a variation, which will allow the operator to operate the Installation, subject to the conditions in the varied permit.

The variation does three things:

- it consolidates the original permit to reflect changes made through earlier variations;
- it brings the permit into line with our modern regulatory template; and
- it varies the permit where appropriate to reflect the outcome of our statutory review and incorporate Best Available Techniques (BAT) and associated Emission Limit Values (ELV's).

We consider that, in reaching this decision, we have taken into account all relevant considerations and legal requirements and that the permit will continue to ensure that a high level of protection is provided for the environment and human health.

The original permit, issued on 27th November 2001, ensured that the Installation, employed Best Available Techniques (BAT) and ensured a high level of protection for human health and the environment. We have altered the permit as a result of the statutory review, and we are confident that the new requirements will deliver a superior level of protection to that which was previously achieved.

2 The legal framework

The Consolidated Variation Notice 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 other relevant legislation which also have to be addressed.

We consider that, in issuing the Consolidated Variation Notice, it will ensure that the operation of the installation complies with all relevant legal requirements and that a high level of protection will be delivered for the environment and human health.

We explain how we have addressed specific statutory requirements more fully in the rest of this document.

3 How we reached our decision

Requesting information to demonstrate compliance with BAT Conclusion techniques

We issued a notice under Regulation 60(1) of the Environmental Permitting (England and Wales) Regulations 2010 (a Regulation 60 Notice) on 1st December 2014 requiring the operator to provide information to demonstrate how the operation of their installation currently meets, or will subsequently meet, the revised standards described in the relevant BAT Conclusions document.

The Regulation 60(1) notice required the operator to:

- Describes the techniques that will be implemented before 30th September 2018, which will then ensure that operations meet the revised standard, or
- Justify why standards will not be met by 30th September 2018, and confirmation of the date when the operation of those processes will cease within the installation or an explanation of why the revised BAT standard is not applicable to those processes, or
- Justify why an alternative technique will achieve the same level of environmental protection equivalent to the revised standard described in the BAT Conclusions.
- Where their permitted activity involves the use, production or release of a hazardous substances, as defined in Article 3(18) of the Industrial Emissions Directive, carry out a risk assessment considering the possibility of soil and groundwater contamination at the permitted installation with such substances. Where risk of such contamination is established prepare a baseline report containing information necessary to determine the state of soil and groundwater contamination so as to make a quantified comparison with the state upon definite cessation of the activity. Northwood and Wepa Limited were required to provide a copy of the risk assessment and any consequent baseline report.

Where the operator proposed that they were not intending to meet a BAT standard that also included a BAT Associated Emission Level (BAT AEL) described in the BAT Conclusions Document, the Regulation 60 Notice requested that the operator make a formal request for derogation from compliance with that AEL (as provisioned by Article 15(4) of IED). In this circumstance, the notice identified that any such request for derogation must be supported and justified by sufficient technical and commercial information that would enable us to determine acceptability of the derogation request.

The Regulation 60 Notice response from the operator was received on 27th March 2015. However, we subsequently requested additional information from the operator to support their original Regulation 60(1) response. Specifically we asked the operator to provide clarification on the techniques employed in respect of the BAT 17 conclusion on emissions of noise. This request was sent to the operator on 29th March 2016 and the additional information was received on 31st March 2016.

Upon receipt of the operator's Regulation 60(1) response and the additional information relating to the BAT 17 conclusion on emissions of noise, we considered that the response contained sufficient information for us to commence determination of the permit review. The operator made no claim for commercial confidentiality. We have not received any information in relation to the Regulation 60 Notice response that appears to be confidential in relation to any party.

4 Key issues/Regulation 60 response

BAT Conclusions for the Production of Paper, Pulp and Board were published as a Commission Implementing Decision (2014/687/EU) in the Official Journal of the EU on 30th September 2014. There are 53 BAT Conclusions. Annex 1 provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. Annex 1 should be read in conjunction with the permit / variation notice issued.

A detailed response was received from Northwood and Wepa Limited. Where the operator has concluded that they have achieved BAT, and we are in agreement, no further information / justification has been sought by Natural Resources Wales.

5 Changes we have made

BAT AELs (Associated Emission Limits)

We have added annual emission limits to water as a result of the revised BAT Conclusions:

- Chemical oxygen demand (COD)
- Total suspended solids (TSS)
- Total nitrogen
- Total phosphorus
- Adsorbable organically bound halogens (AOX)

Details of the limits can be found in Table S3.3 of the revised permit.

Improvement Conditions

Based on the information provided in the Regulation 60 response we consider that we need to set improvement conditions. These conditions are set out below. We are using these conditions to require the operators to provide Natural Resources Wales with details that need to be established or confirmed during operations.

Improvement condition 1 requires that:

“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:

- 1) Methodology for achieving BAT
- 2) Associated targets / timelines for reaching compliance by 1st October 2018
- 3) Any alterations to the initial plan

The report shall address the following: BATc: 10”

This improvement condition has been set to require the operator to install a monitor to measure the chemical oxygen demand (the amount of chemically oxidisable organic matter in waste water) in the effluent discharged from the W1 emission point to the River Llynfi.

The operator is required to submit annual reports detailing their progress towards achieving compliance with BAT conclusion 10 commencing one year from the date of issue of this variation.

Improvement condition 2 requires that:

“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.”

The Operator’s response to improvement condition 2 is required to be submitted by 30th September 2016.

Improvement condition 3 requires that:

“If storing Priority Hazardous Substances on site, the Operator must carry out the following assessments with reference to the Environment Agency’s guidance “How to carry out a risk assessment if you’re applying for a bespoke permit that includes discharging hazardous pollutants to surface water”:

- 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 “How to carry out a risk assessment if you’re applying for a bespoke permit that includes discharging hazardous pollutants to surface water”.

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.

Note: With regard to the Phase 1 Part A screening - a full list of relevant substances is provided in the Environment Agency’s “How to carry out a risk assessment if you’re applying for a bespoke permit that includes discharging

hazardous pollutants to surface water” under the section entitled “Screening test: priority hazardous pollutants”. 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 “Screening test: priority hazardous pollutants” provides a full list of relevant priority hazardous substances and their associated annual significant loads.”

We have set Improvement Condition 3 to ensure that the installation meets Water Framework Directive requirements going forward for screening dangerous substances.

The operator’s response to improvement condition 3 is required to be submitted by 30th September 2016.

Improvement condition 4 requires that:

“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.”

Improvement Condition 4 has been set with the purpose of defining the procedure by which monitoring of groundwater and soil required by new permit condition 3.1.3 will be conducted. (Permit condition 3.1.3 has been added to deliver the requirements of the Industrial Emissions Directive). The written protocol developed by the operator will be used to deliver compliance with permit condition 3.1.3 in terms of the monitoring regime to demonstrate continued protection of the soil and groundwater.

The operator’s response to improvement Condition 4 is required to be submitted by 30th September 2016.

Improvement condition 5 requires that:

“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.”

This improvement condition requires information supplementary to that already provided in the application site report, which is needed to meet the information requirements of Article 22(2) of IED. Specifically, any relevant hazardous substances which are used, produced or released by the installation need to be identified and additional baseline monitoring undertaken if relevant hazardous substances are associated with the installation.

The operator's response to Improvement Condition 5 is required to be submitted by 30th September 2016.

Improvement condition 6 requires that:

"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."

This improvement condition has been set to require the operator to provide NRW with a report outlining how they intend to comply with the annual limit for total phosphorus in the effluent discharged to the River Llynfi via the W1 emission point. Although current mass total phosphorus is below the annual limit, concentrations of phosphorus in the water abstracted from the River Llynfi are variable. Nutrient dosing of the water by the operator also influences the phosphorus concentration of the discharge.

The operator's response to Improvement Condition 6 is required to be submitted by 30th September 2016.

Waste

Since the previous variation was issued the legal position regarding broke (off-cuts of paper which are used again in the process) has changed and it is now no longer considered a waste. We have therefore removed conditions 2.3.3, 2.3.4 and 2.3.5, which required the operator to take specific actions with regard to the acceptance and treatment of waste on site, and Table S2.2, which listed the waste types formerly associated with broke.

Listed Activities

We have changed the listed activity reference for the site's combustion plant from Part B(a) to Part A(1)(a). In May 2015 a revised version of Regulatory Guidance Note 2 was published which clarified the the position regarding inclusion of combustion plants for drying purposes in the aggregation rules for determining a site's overall aggregated combustion capacity. Adding the net rated thermal input of the gas-fired drying hoods at Northwood and Wepa to the site's overall net rated thermal capacity takes aggregated capacity above 50MWth, which is the threshold between Part B(a) and Part A(1)(a). The combustion plant at the site do not constitute a large combustion plant (LCP)

as defined by Chapter III of the Industrial Emissions Directive, as the aggregation of individual plant does not fall within the aggregation rules for a LCP.

Monitoring

In relation to emissions and monitoring Table S3.1 that applies until 29th September 2018, we have made the following changes:

We have included a limit of 10mg/l for monthly biochemical oxygen demand at the request of the operator. No limit was set before and this change therefore represents a net environmental benefit.

We have changed the monitoring requirement for chemical oxygen demand from a spot sample to a 24-hour composite sample to take this monitoring requirement in line with other monitoring requirements in Table S3.2. 24-hour composite sampling involves a grab-sampling at regular intervals over a 24-hour period which represents a more comprehensive sampling method. This change therefore represents a net environmental benefit.

We have changed the reference to 'Water Framework Directive Dangerous Substances Screen' to 'Priority Hazardous Substances' as we consider that this reference more accurately describes this parameter.

In relation to emissions and monitoring Table S3.1 that applies from 30th September 2018, for a number of emissions to water parameters we have changed the monitoring frequency references. These changes have been made either to reflect the requirements of the BAT conclusions, or to provide greater clarity. The changes represent a net environmental benefit. In relation to monitoring of the metal content of emissions to water, we have introduced monitoring requirements for zinc, copper, lead and nickel. These monitoring requirements have been included to reflect the requirements of the BAT conclusions.

Reporting

We have removed the references to 'air dried tonnes' in Table S4.2 as this is no longer required. We have added new reporting forms for energy usage and water usage to Table S4.3. We have also added resource efficiency tables to the permit. The additional resource efficiency parameters requested have been agreed following consultation with the Confederation of Paper Industries (CPI). A new reporting form (Resource Efficiency 1) has been added as part of this change.

6 Conclusion

We consider that the Installation already employed what used to be BAT, and that the operator has achieved significant improvements in performance since the permit was originally granted. The revised BRef and its BAT-AELs provide the opportunity to consider further environmental improvements. The sector review has also provided the opportunity to consolidate and modernise the permit. We believe this variation provides a sound basis for ongoing regulation of the Installation and we are satisfied that the operator is currently achieving or will be achieving all relevant BAT by 30th September 2018.

We believe that we have ensured compliance with all relevant legal requirements in carrying out this review and making our determination of the variation.

Annex 1 - Decision Checklist regarding relevant BAT Conclusions.

This checklist provides a record of decisions made in relation to each relevant BAT Conclusion applicable to the installation. This annex should be read in conjunction with the Variation Notice and Consolidated Permit.

All BAT Conclusions arising are listed by number in order below.

BAT Conclusion No	Summary of BAT Conclusion requirement	Page number in Operators Regulation 60 Response	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
General BAT conclusions The BAT mentioned in this section apply to all installations covered by these BAT conclusions (Production of Paper, Pulp and Board).			
1.	BAT is to implement and adhere to an environmental management system (EMS)	2	CC
2.	BAT is to apply the principles of good housekeeping for minimising the environmental impact of the production process	2	CC
General BAT conclusions 3 and 4 – not applicable			
5.	BAT is to reduce fresh water use and generation of waste water, BAT is to close the water system to the degree technically feasible in line with the pulp and paper grade manufactured	2	CC
6.	BAT is to reduce fuel and energy consumption in pulp and paper mills by using technique (a) and a combination of other techniques	3	CC
7.	BAT is to prevent and reduce the emission of odorous compounds originating from the waste water system using a combination of techniques	5	CC
8.	BAT is to monitor the key process parameters according to the table given in the BAT conclusions document	5	CC
General BAT Conclusion 9 – not applicable			
10.	BAT is to carry out the monitoring of emissions to water as indicated in the table included in the BAT conclusions document with the indicated frequency according to EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality	6	FC

BAT Conclusion No	Summary of BAT Conclusion requirement	Page number in Operators Regulation 60 Response	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
General BAT Conclusion 11 – not applicable			
12.	BAT is to implement a waste assessment (including waste inventories) and management system, so as to facilitate waste reuse, of failing that, waste recycling, or failing that, 'other recovery', including a combination of the techniques listed	7-8	CC
13.	In order to reduce nutrient (nitrogen and phosphorus) emissions into receiving waters, BAT is to substitute chemical additives with high nitrogen and phosphorus contents by additives containing low nitrogen and phosphorus contents	9	CC
14.	BAT is to reduce emissions of pollutants into receiving waters	9	CC
General BAT Conclusion 15 – not applicable			
16.	In order to reduce emissions of pollutants into receiving waters from biological waste water treatment plants, BAT is to use all of the techniques given in the table included in the BAT conclusions document	10	CC
17.	In order to reduce the emissions of noise from pulp and paper manufacturing, BAT is to use a combination of the techniques given in the table included in the BAT conclusions document	10	??
18.	In order to prevent pollution risks when decommissioning a plant, BAT is to use the general techniques given in the table in the BAT conclusion documents	10	CC
BAT Conclusions for Kraft Pulping Process 19 – 41 – not applicable			
BAT Conclusions for Processing Paper for Recycling 42 – 46 – not applicable			
BAT Conclusions for Papermaking and Related Processes			
47.	In order to reduce the generation of waste water, BAT is to use a combination of the techniques given in the table included in the BAT conclusions document	11	CC

BAT Conclusion No	Summary of BAT Conclusion requirement	Page number in Operators Regulation 60 Response	Status One of the following: Not Applicable, Currently Compliant, Compliant in the future (within 4 years of publication of BAT conclusions), Not Compliant
BAT Conclusion for Papermaking and Related Processes 48 – 49 – not applicable			
50.	In order to prevent and reduce the pollution load of waste water into receiving waters from the whole mill, BAT is to use a suitable combination of the techniques specified in BAT 13, BAT 14, BAT 15, BAT 47, BAT 48 and BAT 49	12	CC
BAT Conclusion for Papermaking and Related Processes 51 – not applicable			
52.	In order to minimise the amount of solid waste to be disposed of, BAT is to prevent waste generation and to carry out recycling operations by the use of a combination of techniques given in the table included in the BAT conclusions document	12	CC
53.	In order to reduce the consumption of thermal and electrical energy, BAT is to use a combination of techniques given in the table included in the BAT conclusions document	3 and 12	CC