# Natural Resources Wales permitting decisions

**Variation and consolidation of a bespoke permit**

We have decided to issue a Natural Resources Wales initiated variation for Shotton Paper Mill operated UPM – Kymmene UK Limited.

Thevariation number is EPR/BT4885IT/V013.

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 EU on 30th September 2014. 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 permit 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, which incorporates the requirements of the Industrial Emissions Directive (IED).

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 Pulp, Paper 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 IED template conditions makes the Permit consistent with our current general approach and philosophy and also with other permits issued to installations in this sector. 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 and our determination of substantive issues relating to the new BAT conclusions 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 Operators OPRA score has been 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 the 7th February 2003, 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 Variation and Consolidation Notice (which includes the consolidated permit as Schedule 2) will be issued under Regulation 20 of the Environmental Permitting Regulations 2010. 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 Variation Notice and consolidated Permit, 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 19th November 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:

* Describe 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 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. UPM-Kymmene UK Limited were required to provide a copy of the risk assessment and any consequent baseline report.

The Regulation 60 Notice response from the Operator was received on 26th 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 16th October 2015 and the additional information was received on 1st December 2015.

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 or subsequent additional information 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 UPM-Kymmene 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**

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

Details of the limits can be found in Table S3.4 of the consolidated 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 operator to provide Natural Resources Wales with details that need to be established or confirmed during operations.

Improvement Condition 5 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 guidance “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 above, 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 5 to ensure that the installation meets Water Framework Directive requirements going forward for screening dangerous substances.

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 the written protocol referenced in condition 3.1.5 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 6 has been set with the purpose of defining the procedure by which monitoring of groundwater and soil required by new permit condition 3.1.5 will be conducted. (Permit condition 3.1.5 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 3.1.5 in terms of the monitoring regime to demonstrate continued protection of the soil and groundwater.

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

Improvement Condition 7 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 7 is required to be submitted by 31st March 2017.

**Monitoring and Reporting**

We have used this variation as an opportunity to change the monitoring frequency for oxides of nitrogen (as NO2) releases to air from Boilers 3 and 6 (emission points A15 and A18). These are now standby plant which are only required to operate when Boiler 7 is on a maintenance shut down. In view of this, we have changed the monitoring frequency for oxides of nitrogen (as NO2) from quarterly to annual. This change is in line with the actual planned frequency of use for these boilers and therefore avoids the situation whereby both boilers have to be switched on each quarter just for emissions testing. Table S4.1 in Schedule 4 of the permit and reporting form A9 have also been updated to reflect this change.

We have added resource efficiency tables within the permit. The additional resource efficiency parameters requested have been agreed following consultation with the Confederation of Paper Industries (CPI). A new reporting form (Performance 3) has been added as part of this change.

**Site Specific Updating Changes**

As part of this variation, we have taken the opportunity to include updated conditions relating to Chapter IV of the Industrial Emissions Directive relating to the incineration of waste. These replace references to the Waste Incineration Directive (WID), but do not alter any emission limits or permit requirements.

In addition, the Installation is no longer subject to the special provisions for combustion plants within Chapter III of the Industrial Emission Directive (formerly Large Combustion Plant Directive). As such all conditions relating to this have been removed.

**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 the 30th September 2018.

We believe that we have ensured compliance with all relevant legal requirements in carrying out this review and making our determination on 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). | | | |
|  | BAT is to implement and adhere to an environmental management system (EMS) |  | Currently Compliant |
|  | BAT is to apply the principles of good housekeeping for minimising the environmental impact of the production process |  | Currently Compliant |
|  | | | |
| **General BAT Conclusions– not applicable (3 - 4)** | | | |
|  | 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 |  | Currently Compliant |
|  | BAT is to reduce fuel and energy consumption in pulp and paper mills, |  | Currently Compliant |
|  | BAT is to prevent and reduce the emission of odorous compounds originating from the waste water system, |  | Currently Compliant |
|  | BAT is to monitor the key process parameters |  | Currently Compliant for all |
| **General BAT Conclusions– not applicable (9)** | | | |
|  | BAT is to carry out the monitoring of emissions to water, 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. |  | Currently Compliant |
| **General BAT Conclusions– not applicable (11)** | | | |
|  | BAT is in order to reduce the quantities of wastes sent for disposal, BAT is to implement a waste assessment (including waste inventories) and management system, so as to facilitate waste reuse, or failing that, waste recycling, or failing that, ‘other recovery’, |  | Currently Compliant |
|  | BAT is to substitute chemical additives with high nitrogen and phosphorus contents by additives containing low nitrogen and phosphorus content. |  | Currently Compliant |
|  | BAT is to use both Primary (physio-chemical) and Secondary (biological) treatments to reduce emissions of pollutants into receiving waters. |  | Currently Compliant |
|  | When further removal of organic substances, nitrogen or phosphorus is needed, BAT is to use tertiary treatment |  | Currently Compliant – Tertiary treatment is not a requirement as the plant has been designed to meet urban waste water treatment standards, and all discharge results are within existing permit limits and proposed BAT-AEL’s. |
|  | BAT to reduce emissions of pollutants into receiving waters from biological waste water treatment plants. |  | Currently Compliant |
|  | BAT is to reduce emissions of noise from pulp and paper manufacturing. |  | Currently Compliant |
|  | BAT is to prevent pollution risks when decommissioning a plant |  | Currently Compliant |
| **BAT Conclusions for Kraft Pulping Process – not applicable** **(19 - 41)** | | | |
| 42. | BAT is to reduce the risk of contamination or to prevent contamination of soil and groundwater and to reduce wind drift of paper recycling and diffuse dust emissions from the paper recycling yard. |  | Currently Compliant |
| 43. | BAT is to reduce fresh water use, waste water flow and pollution load. |  | Currently Compliant |
| 44. | In order to maintain advanced water circuit closure in the mills processing paper for recycling and to avoid possible negative effects from the increased recycling of process water. |  | Currently Compliant |
| 45. | BAT is to reduce the pollution load of waste water into receiving waters from the whole mill/ |  | Currently Compliant |
| 46. | BAT is to reduce electrical energy consumption within RCF processing paper mills. |  | Currently Compliant |
| 47. | BAT is to reduce the generation of waste water. |  | Currently Compliant |
| 52. | BAT is to reduce the amount of solid waste to be disposed of. |  | Currently Compliant |
| 53. | BAT is to reduce the consumption of thermal and electrical energy |  | Currently Compliant |