

## Permitting Decisions - Environment Agency Initiated Variation

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We have issued an Environment Agency initiated variation for Widnes IBA Facility operated by Blue Phoenix Limited following a review of the permit in accordance with Environmental Permitting (England and Wales) Regulations 2016, regulation 34(1).

The variation number is EPR/DP3631WQ/V004.

We consider in reaching this 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.

### Permit Review

This Environment Agency has a duty, under the Environmental Permitting (England and Wales) Regulations 2016 (EPR), regulation 34(1), to periodically review permits.

Article 21(3) of the Industrial Emissions Directive (IED) also requires the Environment Agency to review conditions in permits to ensure that they deliver compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

We have reviewed the permit for this activity and varied the notice to make a number of changes to reflect relevant standards and current best practice. These changes principally relate to the implementation of our technical guidance Non-hazardous and inert waste: appropriate measures for permitted facilities and the relevant requirements of the BAT Conclusions for Waste Incineration, which have been incorporated into our guidance.

In this decision document, we set out the reasoning for the variation notice that we have issued.

It explains how we have reviewed and considered the techniques used by the operator against our technical guidance.

As well as considering the review of the operating techniques used by the operator, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issue.

## Purpose of this document

This decision document provides a record of the decision-making process. It:

- explains how the Environment Agency initiated variation has been determined;
- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account;
- highlights key issues in the determination.

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit and the variation notice.

## Key issues of the decision

### Environment Agency led variation – permit review

We have carried out an Environment Agency initiated variation to the permit following a permit review as required by legislation to ensure that permit conditions deliver compliance with relevant legislative requirements and appropriate standards to protect the environment and human health.

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires us to review conditions in permits issued and to ensure that the permit delivers compliance with relevant standards. This must be within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions.

The BAT Conclusions for Waste Incineration (the BATC) was published on 12 November 2019 following a European Union wide review of BAT, implementing decision (EU) 2019/2010. Relevant existing facilities must be in compliance with the BAT Conclusions within 4 years.

Our technical guidance Non-hazardous and inert waste: appropriate measures for permitted facilities explains the standards that are relevant for regulated facilities with an environmental permit to treat or transfer non-hazardous wastes.

We issued a notice under regulation 61(1) of the Environmental Permitting (England and Wales) Regulations 2016 (a Regulation 61 Notice) on 12/04/2023. The notice required the operator to provide information to confirm that the operation of their facility currently meets, or how it will subsequently meet, the standards in the Waste Incineration BAT Conclusions.

The notice required the operator to:

1. Confirm whether or not they are currently complying with the standards described in the relevant BAT Conclusion reference document providing a description of how they are meeting the standard.
2. Describe how and when they intend to comply with those standards that they are not meeting, as identified in paragraph 1, to ensure that they are fully compliant with relevant BAT Conclusions by 03/12/2023, being the date, referred to as the 'compliance date'.
3. Confirm:
  - a) If they intend to cease operating any activity which would be in breach of the relevant new BAT Conclusion (BATC) after the compliance date, and the date by which they intend to cease operation;  
or,
  - b) if they intend to continue operating in a manner which would fail to comply with the relevant new BAT Conclusion after the compliance date, what their justification for being allowed to do so is; and by what date they intend to come into full compliance, or a description of alternative measures to be adopted that will provide equivalent environmental protection.
  - c) Where there is a BAT-Associated Emission Level (BAT-AEL) specified in the BAT conclusion, with which they will not comply with by the compliance date and they wish to continue operating, they should request a derogation. To do that, they must provide sufficient technical and commercial information to demonstrate that achieving these emissions levels would lead to disproportionately higher costs, compared to the environmental benefits, due to:
    - i. the geographical location of their installation; or
    - ii. the local environmental conditions around their installation; or
    - iii. the technical characteristics of their installation.The operator is required to explain which of these criteria is relevant and why, refer to the relevant Defra's published guidance. Their justification of cost and benefits should use a methodology equivalent to that outlined in the Environment Agency Guidance risk assessment guidance.
4. Complete the WI BATCs operator returns spreadsheet and the accompanying tab titled "IBA AMs".

The Non-hazardous and inert waste: appropriate measures for permitted facilities guidance was published on 12 July 2021. This technical guidance explains the standards that are relevant to regulated facilities with an environmental permit to store, treat or transfer non-hazardous waste, providing relevant standards (appropriate measures) for those sites. The operators were notified about the new guidance and were advised to consider them in their submissions.

The standards described in our technical guidance are split into chapters:

- General management appropriate measures
- Waste pre-acceptance, acceptance and tracking appropriate measures
- Waste storage, segregation and handling appropriate measures
- Waste treatment appropriate measures
- Emissions control appropriate measures
- Emissions monitoring and limits appropriate measures
- Process efficiency appropriate measures

Our assessment of the responses received from the operator are summarised in Table 1.

The Regulation 61 Notice required the operator to confirm whether they could comply with the standards described in BAT Conclusions for Waste Incineration. Table 1 below provides a summary of the response received and our assessment of it. The overall status of compliance with the standards (appropriate measures) is indicated in the table as:

NA – Not Applicable

CC – Currently Compliant

FC – Compliant in the future (through improvement conditions set in permit)

NC – Not Compliant; Improvement/New Condition included.

### **Regulation 61 Response**

The Regulation 61 notice response from the operator was received on 13/07/2023.

### **Changes to the permit conditions**

An assessment of the information provided by the operator in response to the Regulation 61 Notice, summarised in Table 1 and a review of permit variation EPR/DP3631WQ/V005 have been undertaken. The variation has been issued since the Regulation 61 Notice response, which meant that this also needed to be taken into consideration. We have made the following changes to the permit conditions:

Condition	Reason
Conditions 2.5.1 added	Pre operational condition added to the permit
Table S1.1 as referenced by condition 2.1.1	To clearly define the activities that are undertaken at the site and to apply relevant limits to them
Table S1.3 as referenced by condition 2.4.1	Amended to include new Improvement Conditions IC2a, IC2b IC3a and IC3b.
Table S1.4 as referenced by condition 2.5.1	Pre operation conditions added
Table S3.2 as referenced in condition 3.5.1	To include modern permit requirement
Table S3.3 as referenced in condition 3.5.1	To include new monitoring standard

**Table 1 – Summary of our assessment of the operator’s Reg 61 response**

Appropriate measures	Compliance status	Assessment of the installation’s compliance with relevant standards (appropriate measures) and any alternative techniques proposed by the operator
<p><b>General management appropriate measures and brief non-technical description of the regulated facility</b></p>	<p>CC</p>	<p>The operator confirmed that they are compliant with BAT 1 and the site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain standards.</p> <p>The site activities include:</p> <ul style="list-style-type: none"> <li>▪ S5.4 A(1) (b) (iii) - Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving treatment of slags and ashes.</li> <li>▪ Storage of waste prior to treatment.</li> <li>▪ Storage of recovered IBAA and residual waste after treatment</li> <li>▪ Blending of IBAA fractions with virgin/primary aggregate.</li> <li>▪ Collection of uncontaminated surface water in tanks for reuse or transfer to onsite storage lagoons</li> <li>▪ Collection and storage of contaminated water in a lagoon for re-use on site or discharge to surface water .</li> </ul> <p>The Widnes IBA Processing facility is located at Johnsons Lane, Widnes at grid reference SJ 53577 85868. The facility is bordered to the North by a sewage sludge treatment plant and to the South by undeveloped grassland. To the east by a disused railway embankment, and to the west by undeveloped grassland, a community waste collection site and industrial units / waste storage treatment sites.</p> <p>Predominantly the treatment activities are undertaken inside a processing building but there are screening treatment and storage activities that are happening outside. There are no channelled emissions to air or discharges to foul sewer.</p> <p>The site is equipped with an impermeable surface and a sealed drainage system. The collected water is used for dust suppression or discharged to surface water if excessive rainfall results in an exceedance of the storage capacity of the lagoons.</p>
<p><b>Waste pre-acceptance, acceptance and tracking appropriate measures</b></p>	<p>CC</p>	<p>The operator provided a waste acceptance procedure. This procedure outlined that they follow the voluntary industry protocol to provide reliable classification and assessment of the incinerator bottom ash and material will only be accepted on site if there is sufficient storage capacity.</p>

		<p>The stocks of IBA that are waiting for classification results are stockpiled in separate batches according to the sample dates and by material source. Batch signs will be posted indicating the stockpile position and ID.</p> <p>The EFW plant will inform Blue Phoenix when it is going to take the sample from its raw ash. Once a sample is taken by the EFW and the raw ash is delivered to the Blue Phoenix; a new batch will be started, and its location and name added to the site ESA Protocol Board. A new batch will only be started when the EFW take a new sample of raw ash.</p>
<b>Waste storage, segregation and handling appropriate measures</b>	FC	<p>The operator has provided a storage and handling procedure “<i>BPL QMS P002 Storage and Handling of IBA-IBAA</i>”. It describes the segregation of coarse IBAA, Fine IBAA, blends etc.</p> <p>This also shows that IBA is stored separately in batches pending test results. These are signposted with stockpile position and ID. If test results classify the waste as hazardous this is removed from the site by the EFW and taken to a suitably authorised facility.</p> <p>Unprocessed IBA is stored outside for 3 to 6 weeks prior to treatment. IBAA is also stored outside for 4 to 30 weeks after treatment. The operator confirmed that waste will only be accepted on site if there is sufficient storage capacity. Currently, IBA and IBAA stored outside are not protected from prevailing winds on all sides and therefore there is potential risk of dust generation.</p> <p>There is also a screening operation that is taking place outside according to the reg 61 response. Given this, we have added an improvement condition IC3 which requires the operator to review the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions.</p>
<b>Waste treatment appropriate measures</b>	FC	<p>The treatment processes involve the receipt of raw unprocessed incinerator bottom ash (IBA), separation of ferrous and non-ferrous metals from the IBA, production of different fractions of IBAA (coarse IBAA 40mm and fine IBAA 14mm) and blending of IBAA fractions with aggregates.</p> <p>The moisture content of the IBA will need to be optimal to enable efficient and effective processing. The optimal range of moisture content will be reviewed and updated in the DEMP so that it can be managed going forward. This is being implemented through IC1 which was added during variation V005.</p> <p>The waste is tested to ensure that it complies with WM3 and the permitted waste codes, as detailed in document “<i>BPL QMS P002 Storage and Handling of IBA-IBAA</i>”.</p> <p>The operator has identified the emissions and measures they are taking to control them. They have a processing shed for treatment which contains vibrating screens and magnetic separation. One of the screeners is operated outside and there isn't protection from prevailing winds on all sides for the</p>

		<p>stockpiles stored outside. IC3 requires the operator to review these activities and put in place recommendations that can be implemented.</p> <p>There is a direct emission to surface water from the treatment when the capacity of the lagoons is exceeded. The permit requires monitoring of this discharge under table S3.1.</p>
<b>Emissions control appropriate measures</b>	FC	<p>The operator has indicated there are no channelled emissions to air. The site does have a direct discharge to water which is monitored by the operator in line with table S3.1. Water is only discharged when the lagoon capacities are exceeded due to heavy rainfall.</p> <p>There are no complaints with regards to fugitive emissions at the site and most of the treatment takes place inside a building. However, the Regulation 61 response has stated that the storage area for IBA and IBAA outside does not have protection on all sides from prevailing winds and that a screening activity is taking place outside. In order to ensure that BAT is being met, IC3 has been included within the permit.</p> <p>The Regulation 61 response also highlighted that the operator needs to undertake integrity testing of their impermeable surface to ascertain if is suitable to CIRIA 736 standard. We have included Improvement Condition IC2 for the operator to undertake a review of the site surfacing and drainage to ensure they are in line with or equivalent to the standards required in CIRIA Report C736.</p>
<b>Emissions monitoring and limits appropriate measures</b>	FC	<p>The operator indicated that there are no channelled emissions to air. There are no complaints with regards to fugitive emissions at the site and most of the treatment takes place inside a building. A daily visual assessment of dust in the ambient air is required to be monitored by the permit as is deposited dust in line with guidance. However, as the operation of the screener and protection of storage from prevailing winds are not in line with BAT and we have asked the operator to review, recommend and implement improvements to meet BAT under IC3</p> <p>We have also asked for a revised Dust Management Plan (DMP). The revised plan shall include an assessment of the risk of dust pollution associated with the permitted site operations and a proposal for optimum moisture ranges and details of the moisture monitoring method and frequency for the IBA and IBAA. The monitoring methods may include for example, the use of moisture probes or dry/wet analysis or any other alternative methods that are suitable for establishing the optimum moisture range for effective dust emission control.</p> <p>The site does have a direct discharge to water which is monitored by the operator in line with table S3.1. This emission only occurs when the lagoon capacities are exceeded due to heavy rainfall.</p>
<b>Raw Material, Process efficiency and Water Use appropriate measures</b>	CC	<p>Raw materials and water are not being used in the treatment process, but water generated from the site is being used on site for dust emission control. The operator is complying with appropriate measures associated with process efficiency and water use.</p>



**Table 1 – Summary of our assessment of the operator’s Reg. 61 response**

Appropriate measures	Compliance status	Assessment of the installation’s compliance with relevant standards (appropriate measures) and any alternative techniques proposed by the operator
BAT 1 - EMS	CC	The site operates with ISO 14001 and ISO 9001 management systems that are externally audited.
BAT 3 - monitoring of specified process parameters	CC	The site does have a direct discharge to water which is monitored by the operator in line with table S3.2 for PH and conductivity. This emission only occurs when the lagoon capacities are exceeded due to heavy rainfall.
BAT 6 - monitor emissions to water from FGC and/or bottom ash treatment with at least the frequency given below and in accordance with EN standards	FC	The site does have a direct discharge to water which is monitored by the operator in line with table S3.1. This was added to the permit during V005. This emission only occurs when the lagoon capacities are exceeded due to heavy rainfall.
BAT 10 - quality output management system part of EMS where bottom ash treatment is carried out	CC	The operator has stated that they have a quality management system in place at the site. The site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain standards.
BAT 12 - in order to reduce the environmental risks associated with the reception, handling and storage of waste, BAT is to use both of the techniques listed in the corresponding table	FC	<p>The operator stated that measures in line with BAT 12 i.e. site surface checks will be in place by 03/12/2023. There is no evidence that this is yet in place. They stated that they are currently not conducting integrity checks on the site’s impermeable surface. The operator has not provided any evidence that the impermeable surface is designed to meet the standards outlined in the CIRIA C736 report.</p> <p>Based on this, we have included improvement condition IC2 which requires the operator to undertake a review of the site surfacing and drainage systems for all areas where waste storage and treatment are taking place. The review shall ascertain the state, design and construction standard of impermeable surfaces and sealed drainage systems on site to confirm that they are in line with, or equivalent to the standards required in CIRIA Report C736.</p> <p>The report of the review shall be certified by a suitably qualified engineer and submitted to the Environment Agency for approval together with details of any improvements.</p> <p>An adequate waste storage capacity has been established with justification.</p>
BAT 23 - in order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to include in the environmental	FC	<p>The operator has stated that their EMS includes the features listed under BAT 23 to identify, reduce and monitor diffuse dust emissions.</p> <p>Based on the information the operator has supplied; treatment is predominantly inside a processing shed and water sprayers are used to keep the waste moist. However, stockpile</p>

<p>management system (see BAT 1) the diffuse dust emissions management features</p>		<p>protection is not in place on all sides of waste storage bays. The conveyors do not adjust to vary the height of discharge and there is screening taking place outside of the process building.</p> <p>We have included improvement conditions which require the operator to carry out a detailed review of the existing waste treatment, storage and handling equipment at the site to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions.</p> <p>This review shall include but not be limited to an assessment of:</p> <ul style="list-style-type: none"> <li>• The screening activities taking place outside.</li> <li>• Stockpile protection.</li> <li>• Discharge height of conveyors</li> </ul> <p>Following the review, the operator is required to submit a written report to the Environment Agency for approval outlining the results of the review and measures and procedures that are in place to prevent fugitive emissions of dust.</p> <p>The report shall include recommendations for improvements and installation of new infrastructure, including timescales for implementation of the identified improvements.</p>
<p>BAT 24 - In order to prevent or reduce diffuse dust emissions to air from the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table</p>	<p>FC</p>	<p>The operator confirmed that measures listed under sub-section <b>a, d and e</b> of BAT 24 table are in use at the site. They have also stated in their RFI response that the measures listed under sub-section <b>f</b> of BAT 24 table are not in use. They indicated that measure <b>f</b> is not in use because the IBA is delivered to the site with a moisture content of around 20%. They also stated that sub-atmospheric conditions are generally required for sites that have potential issues with dust and odour. They indicated that they have a Dust Management Plan in place at the site which contains details of procedures to prevent fugitive emissions. They accepted that the material has a faint earthy smell, but this has never been raised as an issue.</p> <p>The operator stated that BAT 24 <b>b and c</b> are not in use. Accordingly, we have included IC1a and IC1b which require the operator to review existing waste treatment, storage and handling measures to ensure that they are in accordance with the requirements specified in the Non-hazardous and inert waste: appropriate measures for permitted facilities guidance and BAT 24 of the Waste Incineration BAT Conclusions.</p> <p>This review shall include but not be limited to an assessment of:</p> <ul style="list-style-type: none"> <li>• The screening activities taking place outside.</li> <li>• Stockpile protection.</li> <li>• Discharge height of conveyors</li> </ul>

		<p>Following the review, the operator is required to submit a written report to the Environment Agency for approval outlining the results of the review and measures and procedures that are in place to prevent fugitive emissions of dust.</p> <p>The report shall include recommendations for improvements and installation of new infrastructure, including timescales for implementation of the identified improvements.</p>
BAT 26 - use a bag filter if treating air from treatment of IBA under sub-atmospheric conditions.	NA	The operator stated that this BAT is not applicable because the IBA is not being treated under sub-atmospheric conditions at the site.
BAT 32 - in order to prevent the contamination of uncontaminated water, to reduce emissions to water, and to increase resource efficiency, BAT is to segregate waste water streams and to treat them separately, depending on their characteristics	FC	<p>The operator collects uncontaminated water from building roofs in tanks. Process run off is collected in the two site lagoons.</p> <p>Where the capacity of the lagoons is exceeded during peak rainfall there is a release to surface water which is monitored by table S3.1 and S3.2.</p>
BAT 34 - in order to reduce emissions to water from FGC and/or from the storage and treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table, and to use secondary techniques as close as possible to the source in order to avoid dilution	FC	<p>The operator stated that there are no direct or indirect emissions to water from bottom ash treatment. However, we interpret treatment of bottom ash to include the storage and handling of IBA and IBAA and not just the actual treatment taking place in the 4 sided processing building.</p> <p>The site can directly release to surface water and this is controlled by the monitoring of relevant parameters in table S3.1</p> <p>Given this, we have included an improvement condition for the operator to review the water treatment systems on site to ensure that the discharge to water is compliant with the BAT AELs.</p>
BAT 36 - in order to increase resource efficiency for the treatment of slags and bottom ashes, BAT is to use an appropriate combination of the techniques in the corresponding table based on a risk assessment depending on the hazardous properties of the slags and bottom ashes.	CC	The following measures listed in the table of BAT 36 are used: <b>a, b, c, d</b> and <b>e</b> . The operator indicated that they are currently not using technique <b>f</b> . The site does not have the capability to wash the IBA.
BAT 37 - in order to prevent or, where that is not practicable, to reduce noise emissions, BAT is to use one or a	CC	The operator confirmed that techniques <b>a, b, c, d</b> and <b>e</b> are all utilised to reduce noise. There have been no issues with noise at the site.

combination of the techniques in the corresponding table		
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