Permitting Decisions - Environment Agency Initiated Variation

We have issued an Environment Agency initiated variation for Ridham IBA Recycling 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/BB3837RM/V006

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 13/04/2023. 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.

We considered that the Regulation 61 notice response did not contain sufficient details for us to commence the determination of the permit review and we needed further information to complete the permit review assessment.

These responses are available on our public register.

The documents submitted by the operator which now form part of the operating techniques that the operator must implement are specified in table S1.2 in the environmental permit. These include documents titled:

- BPUK Ridham 220220 BATC returns Spreadsheet V1.5”
- “RD-BPL-UK-017-Process-Flow-A03”

- “RD P22006-SMCE-ZZ-XX-DR-C0001 -P01-Permit Site Plan”
- ”BPL QMS P002 Storage and Handling of IBA-IBAA
- “BPL EMS P005 Waste acceptance Criteria

Changes to the permit conditions

Following the assessment of the information provided by the operator in response to the Regulation 61 Notice, summarised in table 1 and the additional information received in response to the request further information, we have made the following changes to the permit conditions:

- Conditions 2.4.1 and 2.4.2 have been added to implement the improvement programmes associated with this variation.
- Conditions 3.6.1 to 3.6.4 related to monitoring, have been added to update to modern permit conditions.
- Conditions 3.7.1 to 3.7.2 related to pests, have been added as they are deemed relevant.
- Table S1.1 as referenced in Condition 2.1.1 has been amended to clearly define the activities that are undertaken at the site and to apply relevant limits to them.
- Table S1.2 as referenced in Conditions 2.3.1 and 2.3.2 has been amended to incorporate operating technique documents submitted in response to the Regulation 61 Notice.
- Table S1.3 as referenced in Condition 2.4.1 has been added to implement the improvement conditions IC1 – IC4.
- Table S3.1 as referenced in Conditions 3.6.1 (a) and 3.6.4 has been added for process monitoring requirements.
- Table S3.2 as referenced in Conditions 3.6.1 (b) has been added for monitoring of ambient air.
- Table S4.2 has been amended to reflect the modern IBA template.
- Table S4.4 as referenced in Conditions 4.2.2 (c) and 4.2.3 (b) has been amended to include relevant forms.
- Amendment to schedule Notification Part A in line with the modern permit conditions.
- Schedule 6 as referenced in condition 4.4.1 has been amended by adding additional interpretations that are relevant to the changes made as a result of this variation and by updating some of the existing interpretations.

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
General management appropriate measures and brief non-technical description of the regulated facility	CC	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. ▪ The site activities include: ▪ 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. ▪ Storage of waste prior to treatment. ▪ Storage of wastes recovered from the IBA treatment processes ▪ Collection and storage of uncontaminated roof and site surface water ▪ Collection and storage of contaminated site surface water drainage in a settlement lagoon ▪ Storage of raw materials. ▪ Blending of IBAA fractions with virgin/primary aggregate. The site is in on the north side of an industrial estate and sits adjacent to other facilities processing concrete and aggregates. To the west of the industrial estate is marsh land. The Swale channel is approximately 450 metres to the east and also meanders to within 100 metres to North of the site There are two Sites of Specific Scientific Interest (SSSI's) within 2 kilometres of the facility. There are a number of European habitat sites and wildlife sites within the screening distances of the facility. This includes three Special Protection Areas (SPAs), three Ramsar Sites and one Marine Conservation Zone (MCZ) within 10 kilometres of the installation boundary. There is one National Nature Reserve (NNR), and two Local Wildlife sites (LWS) within 2 kilometres of the Installation boundary. There are no Special Areas of Conservation (SACs) within 10km of the installation boundary The nearest residential receptor is a house located at Swallow Avenue approximately 1.1 miles to the west from the facility. The site is equipped with an impermeable surface and a sealed drainage system. Treatment is carried out within a processing building. There are no channelled emissions to air or water. All surface water flows to a concrete catchpit to remove settled solids and then to a lined lagoon. Water from the lagoon can be used again for dust suppression. Any excess lagoon water is tankered off site to an appropriate water treatment facility.
Waste pre-acceptance, acceptance and tracking appropriate measures	CC	The operator provided a waste acceptance procedure "BPL EMS P005 Waste acceptance Criteria" and "BPL QMS P002 Storage and Handling of IBA/IBAA procedure". This outlined that they follow the

		voluntary industry protocol to provide reliable classification and assessment of the incinerator bottom ash. The stocks of IBA that are waiting for the 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. The Energy from Waste Facility (EFW) will inform the site when it is going to take the sample from its raw ash. Once a sample is taken by the EFW and the raw ash begins to be delivered to site a new batch will be started and its location and name added to the site ESA Protocol Board. This batch will continue to be stocked in this place until a new sample is taken by the EFW, at this time the incoming IBA will become a new Batch and thus be stored as a separate stockpile.
Waste storage, segregation and handling appropriate measures	FC	The operator has provided a storage and handling procedure "*BPL QMS P002 Storage and Handling of IBA-IBAA*". This shows that IBA is stored separately in batches pending test results (as above) and is removed from site and taken to a suitably authorised facility if test results demonstrate that IBA is hazardous waste. Waste is stored on an impermeable surface with a sealed drainage system, and it shall be stored for no longer than 12 months. The impermeable surface engineering should be designed to meet CIRIA 736. The Reg 61 response highlighted that the operator needs to add integrity testing of their impermeable surface procedures to meet BAT. Further to this there is also no confirmation that the site surfacing meets standards laid out in CIRIA 736. In addition, the area officer has highlighted that the site has surface water run-off from a handling area that is not contained on site. In order to meet appropriate measures and BAT, they must ensure that they inspect storage and handling areas, containers and infrastructure regularly to make sure there is no loss of containment. improvement conditions have been added to the permit to address these points IC3a *The operator shall undertake a review of the site surfacing and drainage systems for the waste reception, handling, and storage and treatment areas in line with BAT 12. 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.* *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* IC3b

		Following the completion IC3a, the operator shall implement the improvement measures by the deadline specified in this improvement condition unless otherwise agreed in writing with the Environment Agency. The improvements may include, but are not limited to, the installation of impermeable surface, sealed drainage and containment systems Unprocessed IBA is stored outside for 3 to 6 weeks prior to treatment. IBAA is also stored outside for up to 30 weeks after treatment. The operator has identified how much waste can be stored on site at anyone point in time and justified this through their response to a Request for Information dated 06/01/2025
Waste treatment appropriate measures	FC	The treatment process involves the receipt of raw unprocessed incinerator bottom ash (IBA) to produce an IBAA that can be used commercially. Separation of ferrous and non-ferrous metals from the IBA takes place as well as the production of different fractions of IBAA (coarse IBAA 40mm and fine IBAA 14mm). Blending takes place with virgin and primary aggregates and different fractions of IBAA to produce a final aggregate. In order to optimise the waste treatment process the moisture content must be optimised to prevent clogging and dust emissions. The operator has not identified the optimum moisture range for treatment of IBA on site. As a result, the operator is required to carry out a review of the optimum moisture range in IC1. *The operator shall 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.* This review shall include but not be limited to an assessment of: • *Stock pile protection from prevailing winds* • *Blending of IBAA with other aggregates* • *Discharge height of conveyors.* • *Of the optimum moisture range.* The voluntary industry protocol to provide reliable classification and assessment of the incinerator bottom ash is also undertaken to prevent unsuitable waste entering the treatment process and ensure compliance with WM3.

		The operator/site has a processing shed within which treatment takes place, Treatment is conducted with the use of vibrating screens and magnetic separation. The operator has provided a flow chart describing the treatment activity and also provided their planned preventative maintenance programme in support of appropriate measures.
Emissions control appropriate measures	FC	Treatment is carried out inside a processing building with the exception of a blending activity that takes place outside. The operator also highlighted in their reg 61 response that there wasn't stockpile protection on all sides and that the discharge height of conveyors could not be controlled. As stated above they also haven't highlighted how they will control optimum moisture content. In order to ensure the operator meets the standards laid out in the appropriate measures and BAT on control of fugitive emissions we require the operator to complete IC1 and IC2. *IC1* *The operator shall 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.* This review shall include but not be limited to an assessment of: • *Stock pile protection from prevailing winds* • *Blending of IBAA with other aggregates* • *Discharge height of conveyors.* • *Of the optimum moisture range.* *IC2* *Following the review required under IC1, the operator shall submit an updated Dust Management Plan to the Environment Agency for approval.* *The revised plan shall include any recommendation for improvements identified under IC1 including those relating to:* • *Stock pile protection from prevailing winds* • *Blending of IBAA with other aggregates* • *Discharge height of conveyors.*

		• *the optimum moisture range.* *The dust management plan shall also provide details of the moisture monitoring method and frequency for the monitoring of IBA and IBAA stockpiles. 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.* *The plan shall take into account the appropriate measures for dust control specified in the* Non-hazardous and inert waste: appropriate measures for permitted facilities *guidance and* Control and monitor emissions for your environmental permit*, which may include but not limited to, installation of new infrastructure together with timescales for implementation of any identified improvements.* *Once the DMP is approved by the Environment Agency, the operator shall carry out site operations in accordance with the approved DMP, and any subsequent revisions agreed in writing by the Environment Agency.* There are no channelled emissions to air from site operations. The runoff from site flows to a lagoon where it is stored so that it can be used in dust suppression. Any excess lagoon water is tankered off site to an appropriate water treatment facility. There are no point source discharges to controlled waters or foul sewer.
Emissions monitoring and limits appropriate measures	CC	There are no channelled emissions to air from site operations. The runoff from site flows to a lagoon where it is stored so that it can be used in dust suppression. Any excess lagoon water is tankered off site to an appropriate water treatment facility. There are no point source discharges to controlled waters or foul sewer. Included within the permit are requirements for the operator to undertake ambient air monitoring and IBA/IBAA moisture content monitoring on site.
Raw Material, Process efficiency and Water Use appropriate measures	CC	Fuel oil is used as a raw material. Water is not being used in the treatment process, but the 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.

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 operator has stated that a quality management system is in place at the site. The site operates ISO 14001 and ISO 9001 management systems that are externally audited annually to maintain standards.
BAT 3 - monitoring of specified process parameters	N/A	This is not applicable as the operator does not have a discharge to surface water.
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	N/A	This is not applicable as the operator does not have a discharge to surface water.
BAT 10 - quality output management system part of EMS where bottom ash treatment is carried out	CC	The operator has stated that a quality management system is 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	The operator stated that measures in line with BAT 12 will be in place by 03/12/2023 however, no evidence has been provided to demonstrate this has been actioned. The operator has stated that currently there are no integrity checks in place for checking the condition of the site surfacing. The operator has not provided any evidence that the impermeable surface is designed to meet the standards outlined in the CIRIA 736 report. In addition, the area compliance officer has highlighted that the site has surface water run-off from a handling area that is not contained on site. In order to meet appropriate measures and BAT, they must ensure that they inspect storage and handling areas, containers and infrastructure regularly to make sure there is no loss of containment. Improvement Conditions below have been added to the permit to address these points. *IC3* *The operator shall undertake a review of the site surfacing and drainage systems for the waste reception, handling, and storage and treatment areas in line with BAT 12. 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. *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* *IC4* *Following the completion IC3, the operator shall implement the improvement measures by the deadline specified in this improvement condition unless otherwise agreed in writing with the Environment Agency. The improvements may include, but are not limited to, the installation of impermeable surface, sealed drainage and containment systems* The operator has also clearly stated and justified their capacity to store waste at anyone point in time as such the appropriate storage capacity has been included within the permit. The requirement to add a storage limit at anyone time is a requirement of BAT 12.
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 management system (see BAT 1) the diffuse dust emissions management features	FC	The operator has stated that their EMS includes the features listed under BAT 23 to identify, reduce and monitor diffuse dust emissions. Treatment takes place inside a processing shed with the exception of the blending of IBAA. Water cannons are used to keep the waste moist. The operator also highlighted in their Reg 61 response that there wasn't stockpile protection on all sides of the waste storage areas and that the discharge height of conveyors could not be controlled. As stated above they also haven't highlighted how they will control optimum moisture content within the IBA. In order to ensure the operator meets the standards laid out in the appropriate measures and BAT on control of fugitive emissions we require the operator to complete IC1 and IC2.
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	FC	Treatment takes place inside a processing shed with the exception of blending of IBAA. Water cannons are used to keep the waste moist. The operator also highlighted in their reg 61 response that there wasn't stockpile protection on all sides and that the discharge height of conveyors could not be controlled. As stated above they also haven't highlighted how they will control optimum moisture content. In order to ensure the operator meets the standards laid out in the appropriate measures and BAT on control of fugitive emissions we require the operator to complete IC1 and IC2 .

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 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	N/A	There is no release to sewer or surface water. All water is used for dust suppression and any excess lagoon water is tankered off site to an appropriate water treatment facility.
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	The operator currently has a discharge to surface water. All relevant parameters and BAT AEL's to monitor this discharge are listed in table S3.1. point source emissions to water. Waste water runoff is directed to catchpits to remove settled solids and then on to an attenuation lagoon.
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: **a, c, d** and **e**. The operator indicated that they are currently not using technique **b** and **f.** The site does not crush or 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 combination of the techniques in the corresponding table	CC	The operator confirmed that techniques **a, b, c, d** and **e** are all utilised to reduce noise. There have been no issues with noise reported by the area compliance officer.