

Environment Agency permitting decisions

Bespoke permit

We have decided to grant the permit for Johnsons Aggregates and Recycling Limited – The Midlands Urban Mine operated by Johnsons Aggregates and Recycling Limited.

The permit number is EPR/MP3430AM/A001.

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 decision document:

- explains how the application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account
- justifies the specific conditions in the permit other than those in our generic permit template.

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

Structure of this document

- Key issues of the decision
- Annex 1 – the decision checklist
- Annex 2 – the consultation and web publicising responses

Key issues of the decision

1 How we reached our decision

The Application was duly made on 10 March 2015. This means we considered it was in the correct form and contained sufficient information for us to begin our determination but not that it necessarily contained all the information we would need to complete that determination: see below.

The Applicant (now the Operator) made no claim for commercial confidentiality. We have not received any information in relation to the Application that appears to be confidential in relation to any party.

We carried out consultation on the Application in accordance with the Environmental Permitting Regulations (EPR), our statutory Public Participation Statement (PPS) and our own Regulatory Guidance Note 6 for Determinations involving Sites of High Public Interest. The way in which we did this is set out below.

The following organisations were consulted:

- Health & Safety Executive
- Public Health England
- Derbyshire Fire & Rescue Service
- Director of Public Health, Derbyshire County Council
- Erewash Borough Council (Environmental Health Department)
- Erewash Borough Council (Planning Department)
- Derbyshire Wildlife Trust

We advertised the Application by a notice on our website, which contained information telling people where and when they could see a copy of the Application.

Further details along with a summary of consultation comments and our response to the representations we received can be found in Annex 2. We have taken all relevant representations into consideration in reaching our determination.

Although we were able to consider the Application duly made, we did in fact need more information in order to determine it, and issued information notices on 14 April 2015 and 8 June 2015. Copies of the information notices were placed on our public register, as was the response when received.

2 The legal framework

The Permit will be granted, under Regulation 13 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 facility is:

- an *Installation* for the purposes of the Industrial Emissions Directive (IED);
- an *operation* covered by the Waste Framework Directive (WFD), and
- subject to aspects of other relevant legislation which also have to be addressed.

We address some of the major legal requirements directly where relevant in the main body of this document. Other requirements are covered in a section towards the end of this document.

We consider that, in granting the Permit, it will ensure that the operation of the Installation as a whole 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 The Installation

3.1 Description of the Installation and related issues

The Application is for an Installation whose purpose is the recovery of waste. This permit controls those processes concerned with the treatment/ recycling of incinerator bottom ash (IBA) and metal wastes. Schedule 1, Table S1.1 of the permit sets out the limits of the activities which can be carried out at the Installation. The Installation is a regulated facility subject to the EPR because it carries out activities listed in Part 1 of Schedule 1 to the EPR:

- 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; and
- S5.4 A(1) (b) (iv) – Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 75 tonnes per day involving treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

An Installation may also comprise “directly associated activities”, which at this Installation include:

- Storage of wastes pending recovery
- Storage of processed materials
- Operation of a diesel-fuelled burner
- Storage of raw materials
- Collection and storage of process water
- Collection and storage of surface water

Together, these listed and directly associated activities comprise the Installation – a regulated facility.

3.2 The site and its protection

The Installation is located in the New Stanton area, which lies between Ilkeston, Sandiacre and Stapleford at grid reference SK 47615 39168. The site is bounded to the north by a disused rifle range, to the south by vegetation, to the east by existing industrial land and to the west by public paths which form part of the National Cycle Network.

The Applicant submitted a plan which we consider is satisfactory, showing the site and its extent on which the permitted activities will take place and of the Installation as a whole. A plan is included in Schedule 7 to the Permit, and the Operator is required to carry on the activities set out in Table S1.1 within the site boundary.

A site condition report (SCR) is required for any facility regulated under the EPR, where there may be a significant risk to land or groundwater. Article 22(2) of the IED requires the Applicant to provide a baseline report containing at least the information set out in paragraphs (a) and (b) of the Article before starting operation. The baseline report is an important reference document in the assessment of contamination that might arise during the operational lifetime of the Installation and at cessation of activities at the Installation.

At the definitive cessation of activities, the Operator has to satisfy us that the necessary measures have been taken so that the site ceases to pose a risk to soil or groundwater, taking into account both the baseline conditions and the site's current or approved future use. To do this, the Operator has to apply to us for surrender, which we will not grant unless and until we are satisfied that these requirements have been met.

The Applicant submitted a site condition report which included baseline conditions reference data as required by Article 22. We have reviewed the report and consider that it adequately describes the condition of the soil and groundwater prior to the start of operations. This is in accordance with the Environment Agency Guidance H5 – Site Condition Report.

Potentially contaminated water from leachate/run-off from IBA stockpile spraying and all surface water run-off is collected and stored in lined/impermeable wedge pit lagoons and re-used on site for dust suppression.

3.3 Operation of the Installation – general issues

3.3.1 What the installation does

The Installation will accept up to 300,000 tonnes of IBA and 50,000 tonnes of metal wastes per annum. The wastes (IBA and metals) will be imported to the

site and stored outside within a reception area as the IBA goes through an 'ageing' process for 2 to 4 weeks.

The IBA will be dried using heat provided by an open-fired burner prior to being processed, in order to optimise the screening and separation activity for maximum recovery. Incoming metal wastes will bypass the drier and will be fed directly into the rotor shredder which crushes, untangles and breaks up the materials for screening and separation. The incoming metals and the metals recovered from the process of IBA will be mixed together to increase the quality of the final output.

A series of conveyor belts will be used to transfer the IBA around the site and through the various elements of the process plant. The majority of the conveyor system will be contained within the enclosed building while the remaining will be external. The IBA will then go through vibrating screens and magnetic metal separation, this removes the ferrous and non-ferrous metals and produces different sized fractions of Incinerator Bottom Ash Aggregate (IBAA).

The finished IBAA will be usually stored outside to go through the 'ageing' process again. The Applicant proposes to produce breeze block aggregate using IBAA and virgin aggregate as a raw material. It is estimated that storage of IBAA and metal outputs will not exceed 3 months to allow for unscheduled events.

All waste storage areas are on impermeable surfaces. The drainage system removes surplus water to two wedge pit lagoons, which is then re-used for dust suppression.

3.3.2 Administrative issues

We are satisfied that the Applicant is the person who will have control over the operation of the Installation after the granting of the Permit; and that the Applicant will be able to operate the Installation so as to comply with the conditions included in the Permit.

The treatment/ recycling of IBA and metal wastes is a Specified Waste Management Activity (SWMA) and therefore requires technically competent management (TCM) under an approved scheme. We are satisfied that the Operator is a member of an agreed scheme. The Applicant has provided evidence that they will have a technically competent manager that holds a relevant qualification at the Installation.

3.3.3 Management

The Applicant has stated that they will implement an Environmental Management System (EMS). A pre-operational condition (POC 2) is included in the permit, requiring the Operator to provide all EMS documentation prior to the commencement of commissioning of the plant.

We are satisfied that appropriate management systems and management structures will be in place for this Installation, and that sufficient resources are available to the Operator to ensure compliance with all the Permit conditions.

3.3.4 Site security

Having considered the information submitted in the Application, we are satisfied that appropriate infrastructure and procedures will be in place to ensure that the site remains secure.

3.3.5 Accident management

The Applicant has provided an Accident Management Plan. Having considered the Plan and other information submitted in the Application, we are satisfied that appropriate measures will be in place to ensure that accidents that may cause pollution are prevented but that, if they should occur, their consequences are minimised. An Accident Management Plan will form part of the EMS and must be in place prior to commissioning as required by a pre-operational condition (POC 2).

3.3.6 Off-site conditions

We do not consider that any off-site conditions are necessary.

3.3.7 Operating techniques

We have specified that the Applicant must operate the Installation in accordance with the following documents contained in the Application:

Operating techniques	
Description	Parts
Application MP3430AM/A001	Information JA09a, JA09b provided in response to section 3a – technical standards, Part B3 of the application form: <ul style="list-style-type: none"> • JA09a – Directly Associated Activities • JA09b – Hauck Starjet Manual Other documents: <ul style="list-style-type: none"> • JA01b – Site location • JA10a – Simplified Process Flow Diagram • JA10b – IBA Process Flow Description • JA10c – Detailed Process Flow Diagram • JA14 – Dust Management Plan • JA17 – Site Closure Plan
Response to Schedule 5 Notice #1 dated 14/04/15	Response to questions 1, 4 and 13, including the following documents: <ul style="list-style-type: none"> • JA02 – Non technical summary • JA08 – List of wastes • JARL04 – Site storage areas

Operating techniques	
Description	Parts
	<ul style="list-style-type: none"> • JA07a – Site environmental risk assessment • JA18 – Accident management plan • JA12 – Waste pre-acceptance, acceptance and storage procedures
Response to Schedule 5 Notice #2 dated 08/06/15	Response to questions 1 to 8 including the following documents: <ul style="list-style-type: none"> • JA16 – Best Available Techniques • Fire Prevention Plan • Drawing JARL05A – Site Emergency Plan
Additional information	Inclusion of waste code 19 12 12 for ash treatment.
Additional information	Revised site layout plan
Additional information	IBA drier process description, revised site drainage plan, location of rotor shedder and clarification of site infrastructure.

The details set out above describe the techniques that will be used for the operation of the Installation that have been assessed by the Environment Agency as BAT; they form part of the Permit through Permit condition 2.3.1 and Table S1.2 in the Permit.

3.3.8 Avoidance, recovery or disposal with minimal environmental impact of wastes produced by the activities

This requirement addresses wastes produced at the Installation and does not apply to the waste being treated there. Note also that the purpose of this plant is to move the waste up the waste hierarchy (e.g. produce substitute aggregate material and separate the metals for recycling). The principal waste streams the Installation will produce are processed IBA (referred to as Incinerator Bottom Ash Aggregate – IBAA), recovered ferrous and non-ferrous metals, and residual IBA.

Most IBA is likely to be classified as non-hazardous waste. However, IBA is classified on the European List of Wastes as a “mirror entry”, which means IBA is a hazardous waste if it possesses a hazardous property relating to the content of dangerous substances. Classification of processed IBA for its subsequent use or disposal is controlled by other legislation and so is not duplicated within the permit.

Having considered the information submitted in the Application, we are satisfied that the waste hierarchy referred to in Article 4 of the WFD will be applied to the generation of waste and that any waste generated will be treated in accordance with this Article.

We are satisfied that waste from the Installation that cannot be recovered will be disposed of using a method that minimises any impact on the environment. Standard condition 1.4.1 will ensure that this position is maintained.

4 Minimising the Installation's environmental impact

Regulated activities can present different types of risk to the environment, including: odour, noise and vibration, accidents, fugitive emissions to air and water, releases to air, discharges to ground or groundwater, global warming potential and generation of waste.

For an Installation of this kind, the principal emissions are:

- releases to air (discussed in sections 4.1, 5.2.1 and 5.2.4 below);
- releases to controlled water and groundwater (discussed in sections 5.2.2 and 5.2.4 below);
- noise and vibration (discussed in section 5.2.6)

This section of the document assesses the likely impact of emissions from the Installation on human health and the environment and what measures we are requiring to ensure a high level of protection.

4.1 Impact on human health

The Applicant's assessment of the impact of air quality is set out in the Application. The assessment comprises:

- A screening assessment of emissions to air from the operation of the Installation;
- Dispersion modelling of emissions to air from the operation of the open-fired burner; and
- A study of the impact of emissions on nearby sensitive habitat/conservation sites.

The assessment considered the emissions arising from one open-fired burner with a stack height of 21.5 metres, operating at full load continuously throughout the year.

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the stack and its impact on local air quality and conservation sites. These assessments predict the potential effects on local air quality from the Installation's stack emissions using the ADMS (version 5) dispersion model, which is a commonly used computer model for regulatory dispersion modelling.

Meteorological data for the assessment comprises five years continuous monitoring from RAF Watnall Weather Station (2008-2012). The impact of the terrain surrounding the site and buildings upon plume dispersion was considered in the dispersion modelling. As well as calculating the peak ground level concentration, the Applicant has modelled the concentration of key pollutants at a number of specified locations within the surrounding area.

The pollutants considered in the assessment are those associated with drying of IBA, namely nitrogen dioxide, sulphur dioxide, carbon monoxide and

particulate matter. We are satisfied that there is no need to consider any other pollutants, as the fuel is diesel.

The Applicant's modelling predictions are presented in Table 1 below. The figures shown indicate the predicted peak ground level exposure to pollutants in ambient air. We have made our own simple verification of the percentage process contribution/ deposition and predicted environmental concentration submitted by the Applicant. These may be very slightly different to those shown in the Application. Any such minor discrepancies do not materially impact on our conclusions. The following table shows the maximum modelled concentration of pollutants at the most sensitive human receptor (Receptor R5 – Lows Lane).

Table 1 Maximum modelled concentration of pollutants at the most sensitive human receptor

Pollutant	EQS / EAL	Back-ground	Process Contribution (PC)		Predicted Environmental Concentration (PEC)	
	µg/m ³		µg/m ³	µg/m ³	% of EAL	µg/m ³
NO ₂ (annual)	40	29.97	0.06	0.15	[1]	[1]
NO ₂ (1-hour)	200	[1]	0.56	0.28	[1]	[1]
SO ₂ (15-min)	266	10.76	30.59	11.50	41.35	15.54
SO ₂ (1-hour)	350	[1]	20.91	5.97	[1]	[1]
SO ₂ (24-hour)	125	[1]	7.35	5.88	[1]	[1]
PM ₁₀ (annual)	40	[1]	0.18	0.44	[1]	[1]
PM ₁₀ (24-hour)	50	44.54	0.53	1.05	44.07	88.13
PM _{2.5} (annual)	25	[1]	0.18	0.70	[1]	[1]
CO (8-hour)	10,000	[1]	11.88	0.12	[1]	[1]

Note [1]: Where the PC is less than 1% of the benchmark for a long term measurement or less than 10% for a short term measurement, the impact is considered to be insignificant. In these cases, examination of the background and PEC is not required.

From the table above, sulphur dioxide and PM₁₀ cannot be screened out as insignificant in that the process contribution is >10% of the short term EQS/EAL. Although sulphur dioxide and PM₁₀ did not screen out as insignificant, we consider that they are unlikely to give rise to significant pollution in that the predicted environmental concentration (PEC) is less than 100% (taking expected modelling uncertainties into account) of both the long term and short term EQS/EAL.

Further assessment was carried out using the Environment Agency's modelling screening tool. The results showed "low risk" for sulphur dioxide

and PM₁₀ emissions based on a 21.5-metre stack height. The conclusion is that it is unlikely that there will be a significant impact to human health caused by the operation of the Installation.

We have carefully scrutinised the Applicant's proposals to ensure that they are applying the Best Available Techniques (BAT) to prevent and minimise emissions of these substances.

4.2 Impact on habitats sites, SSSIs, non-statutory conservation sites etc.

A total of thirty non-statutory sites (Local Wildlife Sites, Ancient Woodlands and Local Nature Reserves) are located within 2 km of the Installation.

The Applicant's assessment of non-statutory sites was reviewed by the Environment Agency and we agree with the conclusions, that the proposal will not damage the special features of the non-statutory sites. As there are no specific regulations for the protection of these sites (*beyond our requirements to enhance biodiversity under the Natural Environment and Rural Communities Act 2006 and our wider conservation duties under the Environment Act*), we are required to ensure that the permitting of the installation will not result in significant pollution.

In accordance with Environment Agency guidance, we consider that given the size of the process contribution which is a small fraction of the critical level/load, the impact on the sites is not likely to cause significant pollution. As modelling and assessment has demonstrated that the predicted ground level environmental concentrations of pollutants in the area even at a maximum will not compromise any Air Quality Objectives, then we are satisfied that the operation of the Installation will not compromise the integrity of the above sites.

5 Application of Best Available Techniques (BAT)

5.1 BAT for processing of IBA

The principal aim of IBA treatment is to improve ash quality in order to generate a material that has the potential for safe recovery (e.g. for use as a secondary aggregate material in road construction) and to mechanically separate and collect the ferrous and non-ferrous metal fractions for further recycling. The use of treated IBA as a secondary aggregate both reduces the use of virgin aggregates and reduces the amount of waste sent to landfill.

IBA is a coarse ash produced from the incineration of municipal solid waste. Depending on the waste burnt, IBA is likely to contain varying quantities of glass, ceramics, brick, concrete and metals in addition to clinker and ash.

Processes for IBA treatment can broadly be categorised as follows:

- Dry Treatment
- Wet Treatment
- Thermal Treatment (vitrification)

The Applicant proposes to use a dry treatment process. Currently this is the most common type of treatment and generally involves the following mechanical processes: screening, size-reduction of oversize material, separation of ferrous and non-ferrous metals and any residual un-burnt material.

The Applicant has chosen the dry process for the following reasons. Wet treatment systems may produce a better quality cleaner aggregate, however they produce additional wash/ rinse waters which require management. Thermal treatment systems produce a chemically inert product, but have a very high energy consumption and there are none operating in the UK at the present time.

Both wet and dry treatment systems can be combined with an ash ageing process, which utilises the weak cement-like properties of the ash and through a number of chemical reactions (oxidation, carbonation, hydration) improves its physical properties and chemical properties by stabilising the material and reducing its leaching capacity.

In summary, the operator proposes the following:

- IBA storage and handling: The site has the capacity to store 20,000 tonnes of incoming unprocessed IBA. All waste storage areas are on impermeable surface. Drainage removes surplus water to two wedge pit lagoons which collect all arisings for recycling to the process. Unprocessed IBA is stored externally to enable weathering (maturing/ageing) reactions to take place. The treatment is carried out within a building and the processed IBA is stored for a further weathering period of 3 months, externally.
- IBA Treatment: this consists of the separation of metals (ferrous and non-ferrous), unburned material and oversize material via the following methods:
 - handpicking
 - overband magnets
 - screens
 - eddy current separators

The processed IBA is screened into size-segregated fractions suitable for its final destination.

As a result of our assessment, we are satisfied that the Applicant's proposals are BAT for ash treatment (Environment Agency guidance document *Quick guide 384_12 – Storing and treating incinerator bottom ash*) and the recycling of metal wastes (*British Metals Recycling Association Bref Report*).

5.2 Emissions to the Environment

5.2.1 Point source emissions to Air

There is one point source emissions to air from the open-fired burner. IBA is received in a moist condition and this prevents dust arising. An adequate water supply for dust prevention is available on site for damping the unprocessed IBA if required. The IBA will be transferred and processed within an enclosed building fitted with dust collectors.

Based upon the information in the application we are satisfied that appropriate measures will be in place to prevent and /or minimise emissions to air.

5.2.2 Point source emissions to surface water

There are no point source discharges to controlled waters from the Installation.

Surface water from the processing and storage areas will drain to either Wedge pit lagoon 1 or Wedge pit lagoon 2. This will be achieved using the natural topography of the site or in the case of the IBA storage areas by forming an impermeable concrete base laid to the correct falls.

As Wedge pit lagoon 1 approaches holding capacity, the water will be pumped into Wedge pit lagoon 2. As Wedge pit lagoon 2 approaches holding capacity, water will be pumped into the above-ground water storage tanks. Water from the storage tanks will be used within the IBA processing plant or re-used on site for dust suppression.

Water from non-operational areas will be discharged using the existing storm drain system via the Nutbrook Culvert.

Based upon the information in the application, together with the controls set through permit conditions, we are satisfied that appropriate measures will be in place to prevent and/ or minimise emissions to surface waters.

5.2.3 Emissions to sewer

There are no point source discharges to sewer.

5.2.4 Fugitive emissions

The Applicant has submitted details of their dust management measures to prevent and minimise off site emissions of dust as part of the application. Key proposals within the dust management measures are:

- Processing activities are carried out in an enclosed building fitted with a dust extraction system. Key components of the control system are as follows:

- i. Donaldson dust extraction unit – this captures dust from the rotor shredder, which in itself is situated within proprietary housing to minimise emissions. There are no point source emissions from this unit, as collected dust is fed back onto the conveyor belt for blending with the IBAA, prior to it entering the paddle mixer where water is introduced to achieve the desired 5 to 7 % moisture content.
 - ii. Guidetti dust extraction unit – this unit captures emissions from the Trenso cyclones. It operates in the same way as the Donaldson unit, with the dust being fed back into the process.
- The filters within the dust extraction units will be regularly checked and cleaned to ensure that the required level of performance is maintained;
 - The open-fired burner will have a fabric filter to collect dust during operation;
 - Facilities for damping down of stock piles of unprocessed IBA and processed IBAA; and
 - Monitoring of dust at the site boundary via the installation of a dust monitor.

The dust management measures included in the application have been incorporated into the permit as an operating technique in Table S1.2 of Schedule 1.

The Applicant has submitted proposals to demonstrate that the plant will be designed in such a way as to prevent the unauthorised and accidental release of polluting substances into soil, surface water and groundwater. This includes:

- Stockpiles of untreated and treated ash are stored on impermeable surfaces; and
- The site drainage system is connected to two wedge pit lagoons (with impermeable lining) and not directly to surface water or sewer.

The Operator reports that operational areas of the site will benefit from an impermeable surface which will prevent the release of potentially polluting liquids to surface water and groundwater. Secondary containment will be provided for the oil storage tanks. The proposed secondary containment is designed to hold a minimum of 110% of the capacity of the largest tank or 25% of total tank volume, whichever is the greater.

We have set pre-operational conditions (POC 3, POC 4 and POC 5) which require the submission of a report confirming the construction and integrity of the secondary containment of the oil storage tanks (including pipework) and

site surfacing are fit for purpose and in accordance with industry standards prior to the commencement of plant commissioning. This will ensure that the proposed site infrastructure are properly designed to minimise risks to the environment and reduce the risks of accidents and their consequences.

Based upon the information in the Application we are satisfied that appropriate measures will be in place to prevent and/ or minimise fugitive emissions, which will be regulated through permit conditions 3.2.1 to 3.2.3.

5.2.5 Odour

Based upon the information in the Application, we are not satisfied that appropriate measures will be in place to prevent and/ or minimise odour.

The Operator submitted an odour management plan (OMP) as part of this application. The Environment Agency reviewed the OMP and consider that it requires revision. We have not approved the OMP as we are not satisfied with its content. We have imposed a requirement on the Operator through a pre-operational condition (POC 6) which requires the submission of a revised OMP that addresses the Environment Agency's review comments.

5.2.6 Noise and vibration

The proposed facility is located in an industrial/commercial area. The site is approximately 130 metres from a proposed residential housing development.

The primary source of noise at this Installation will be from site infrastructure including the open-fired burner, mobile crusher, external conveyor system and on-site traffic. The Applicant carried out a noise assessment survey and the nearest receptors assessed for potential noise impacts. The noise assessment identified local noise sensitive receptors, potential sources of noise at the proposed plant and noise attenuation measures. Measurements were taken of the prevailing ambient noise levels to produce a baseline survey and an assessment was carried out in accordance with British Standard 4142:1997 – *Method for rating industrial noise affecting mixed residential and industrial areas* to compare the predicted plant rating noise levels with the established background levels.

The noise assessment concluded that the predicted noise rating level would lead to a situation where complaints would be likely during both the daytime and evening period. Based on the above, mitigation measures were proposed in order to reduce the potential for complaints.

- All IBA treatment processes are to be carried out within an enclosed building;
- External site activities will be limited to the operating hours of 6am to 6pm Mondays to Saturdays inclusive;
- All machinery will be operated in accordance with manufacturers' instructions and within normal working parameters;

- All machinery and equipment will use associated acoustic screens if recommended by the manufacturer;
- Any damaged or otherwise incomplete acoustic screens will be replaced as soon as reasonably practicable;
- Heavy plant, lorries and other vehicles operating at the site will be fitted with white noise reversing alarms;
- An on-site speed limit of 10 miles per hour will be enforced;
- External areas of hardstanding and site roads will be regularly maintained and kept clean to reduce vehicle suspension noise;
- Annual monitoring of noise impact at sensitive human receptors; and
- Implementation of a site noise management plan

The Operator submitted a noise management plan (NMP) as part of this application. The Environment Agency reviewed the NMP and consider that it requires revision. We have not approved the NMP as we are not satisfied with its content. We have imposed a requirement on the Operator through a pre-operational condition (POC 7) which requires the submission of a revised NMP that addresses the Environment Agency's review comments.

We have also set Improvement conditions (IC2 and IC3) for a further noise assessment following the commencement of site operations. Improvement condition (IC2) requires the submission of a report detailing the outcome of further noise assessment (post plant commissioning) to verify the assumptions made in the application and proposals for carrying out mitigation measures from the results of the assessment if required (IC3).

Based upon the information in the application we are satisfied that the appropriate measures will be in place to prevent or where that is not practicable to minimise noise and vibration and to prevent pollution from noise and vibration.

5.3 Monitoring

We have specified that monitoring should be carried out for the parameters listed in Schedule 3 table S3.1, S3.2 and S3.3 in the permit using the methods and to the frequencies in those tables. These monitoring requirements have been imposed in order to demonstrate compliance with emission limit values.

Annual monitoring of emissions (Table S3.1 in the permit) from the open-fired burner will be undertaken by MCERTS accredited personnel using MCERTS approved methods. The Environment Agency has specified that monitoring of the burner should be carried out in accordance with the monitoring requirements of M2 – *Monitoring of stack emissions to air*.

Sampling and analysis of the processed ash may be required depending on the end use of the material. The end uses of processed IBA are not controlled by this permit but through other environmental legislation. The Operator may be required to carry out monitoring to meet the requirements of this legislation. However these controls are not duplicated within this permit.

We have specified other monitoring at the Installation as a whole (see Table S3.3 in the permit). Monitoring parameters include daily site boundary checks for odour and dust, visual integrity checks of oil storage tanks and site surfacing. These monitoring requirements are imposed to ensure that on-going site activities and/or malfunction of plant/equipment on site are detected early to prevent significant pollution.

Based on the information in the Application and the requirements set in the conditions of the permit, we are satisfied that the Operator's techniques, personnel and equipment will have either MCERTS certification or MCERTS accreditation as appropriate.

5.4 Commissioning

At the commissioning stage, Operators are required to demonstrate that a plant is under control and that appropriate measures are in place to protect the environment and human health. The proposed Installation will undergo a period of commissioning before becoming fully operational. The IED and the conditions set out in the permit cover activities at the Installation once operational – accepting waste for processing. Prior to commissioning, the Operator shall submit a commissioning plan (required under pre-operational condition POC 1) to the Environment Agency for approval, outlining the expected emissions during different stages of commissioning, the expected duration and timeline for completion of activities and any necessary action to protect the environment in the event that actual emissions exceed expected emissions in accordance with the approved commissioning plan.

It is recognised that certain information provided in the application are based upon design data or data from similarly designed operational plant. The commissioning stage provides an early opportunity to verify much of the information submitted in the application and to demonstrate compliance with the conditions of the Permit. Improvement condition 1 (IC1) has been set in the permit requiring the submission of a report which includes an assessment of the performance of the Installation following the commencement of site operations and any deviation from the application supporting documents. This will ensure that any impacts on human and ecological receptors can be identified and rectified at the earliest opportunity.

5.5 Reporting

We have specified the reporting requirements in Schedule 5 of the Permit either to ensure data is reported to enable timely review by the Environment Agency and to ensure compliance with permit conditions.

6 Other legal requirements

In this section we explain how we have addressed other relevant legal requirements, to the extent that we have not addressed them elsewhere in this document.

The purpose of IBA treatment is to generate a material which is inert, does not negatively affect water bodies, and has the potential for safe recovery, e.g. as a soil substitute or in road construction. It is important to recognise that these recovered materials will continue to be considered as a waste material including for the purpose of any subsequent re-use.

The Environment Agency is currently engaged in work to establish 'product specifications' for treated IBA. The purpose of such a product specification would be to provide a test for treated IBA to cease to be considered a waste material.

In the interim, the Environment Agency has published a position statement on the status of these materials and how the requirements of waste regulation will be applied to them.

Annex 1: decision checklist

This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met
		Yes
Consultation		
Scope of consultation	The consultation requirements were identified and implemented. The decision was taken in accordance with RGN 6 High Profile Sites, our Public Participation Statement and our Working Together Agreements.	✓
Responses to consultation and web publicising	The web publicising and consultation responses (Annex 2) were taken into account in the decision. The decision was taken in accordance with our guidance.	✓
Operator		
Control of the facility	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with EPR RGN 1 – Understanding the meaning of operator.	✓
The facility		
The regulated facility	The extent/ nature of the facilities taking place at the site required clarification. The decision on the facility was taken in accordance with RGN 2 – Understanding the meaning of operator (See Key Issues).	✓
European Directives		
Applicable directives	All applicable European directives have been considered in the determination of the application. The Industrial Emissions Directive which, came into force on 27 February 2013 by amendment of the Environmental Permitting (EP) Regulations, applies to the two scheduled activities undertaken on site.	✓
The site		
Extent of the site of the facility	The operator has provided a plan which we consider is satisfactory, showing the extent of the site of the facility. A plan is included in the permit and the operator is required to carry on the permitted activities within the site boundary.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Planning permission	We are satisfied that planning permission is in place and is appropriate for the relevant waste operations applied for.	✓
Site condition report	The operator has provided a description of the condition of the site. We consider this description is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under IED – guidance and templates (H5).	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a site of heritage, landscape or nature conservation, and/or protected species or habitat. A full assessment of the application and its potential to affect the local wildlife sites, ancient woodlands and local nature reserves have been carried out as part of the permitting process. We consider that the application will not affect the features of the ecological sites. We have not formally consulted on the application. The decision was taken in accordance with our guidance AQTAG 14 (see Key Issues).	✓
Environmental Risk Assessment and operating techniques		
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory. The assessment shows that, applying the conservative criteria in our guidance on Environmental Risk Assessment, all emissions may be categorised as environmentally insignificant.	✓
Operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the following guidance notes:</p> <ul style="list-style-type: none"> • EPR 1.01 – <i>Combustion Activities</i>; • IPPC S5.06 – <i>Guidance for the Recovery and Disposal of Hazardous and Non-Hazardous Waste</i>; • BRMA Bref Report; and • Quick guide 384_12 – <i>Storing and treating incinerator bottom ash</i> <p>The proposed techniques/emission levels for priorities for control are in line with the benchmark levels contained in the above technical guidance notes and we consider them to represent appropriate techniques for the facility. We are satisfied with the BAT assessment provided by the operator which adequately addresses the following</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
	<p>points:</p> <ul style="list-style-type: none"> • pre-acceptance of waste • acceptance of waste • storage and handling of waste • process (treatment) description • fugitive emissions to air • fugitive emissions to surface and groundwater (secondary containment, site drainage plan) • point source emissions to air, water or land (where relevant) • monitoring • accidents 	
The permit conditions		
Raw materials	We have specified limits and controls on the use of fuels as required by The Sulphur Content of Liquid Fuels (England and Wales) (Amendment) Regulations 2014.	✓
Waste types	We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility. We are satisfied that the operator can accept permitted wastes because they have the necessary infrastructure, operating systems and technical capability to manage these wastes using appropriate measures. We made these decisions with respect to waste types in accordance with our Technical Guidance Note <i>Quick guide 384_12 – Storing and treating incinerator bottom ash</i> .	✓
Pre-operational conditions	Based on the information in the application, we consider that we need to impose pre-operational conditions (see Key Issues).	✓
Improvement conditions	Based on the information in the application, we consider that we need to impose improvement conditions (see Key Issues).	✓
Incorporating the application	We have specified that the applicant must operate the permit in accordance with descriptions in the application, including all additional information received as part of the determination process. These descriptions are specified in the Operating Techniques table in the permit.	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
Emission limits	<p>We have decided that emission limits should be set for the parameters listed in the permit.</p> <p>The following substances (nitrogen oxides, sulphur dioxide, carbon monoxide, particulate matter) have been identified as being emitted in significant quantities and ELVs based on BAT have been set for those substances (see Table S3.1 in the permit). Emission limit values have been set for those substances with respect to air based on the operator's data and impact assessment.</p> <p>It is considered that the ELVs specified in the permit will ensure that significant pollution of the environment is prevented and a high level of protection for the environment secured.</p>	✓
Monitoring	<p>We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified.</p> <p>These monitoring requirements have been imposed in order to demonstrate compliance with the conditions of the permit for operations requiring the management of air emissions. We made these decisions in accordance with <i>EPR 1.01 – Combustion Activities</i>, which is considered the most appropriate TGN for this activity.</p> <p>Based on the information in the application we are satisfied that the operator's techniques, personnel and equipment have either MCERTS certification or MCERTS accreditation as appropriate.</p>	✓
Reporting	<p>We have specified reporting in the permit. As the monitoring of point source emissions to air is only required annually, reporting is also required annually. Reporting forms have been prepared to facilitate reporting of data in a consistent format. These reporting requirements are deemed sufficient and proportional for the installation. We made these decisions in accordance with our guidance <i>How to Comply with your Environmental Permit</i>.</p>	✓
Operator Competence		
Environment management	<p>There is no known reason to consider that the operator will not have the management systems to enable it to</p>	✓

Aspect considered	Justification / Detail	Criteria met
		Yes
system	comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	
Technical competence	Technical competency is required for activities permitted. The operator is a member of an agreed scheme.	✓
Relevant convictions	The National Enforcement Database has been checked to ensure that all relevant convictions have been declared. No relevant convictions were found. The operator satisfies the criteria in RGN 5 on Operator Competence.	✓
Financial provision	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

Annex 2: Consultation and web publicising responses

The Application has been advertised and consulted upon in accordance with the Environment Agency's Public Participation Statement. The way in which this has been carried out along with the results of our consultation and how we have taken consultation responses into account in reaching our decision is summarised in this Annex. Copies of all consultation responses have been placed on the Environment Agency Public Register.

The Application was advertised on the Environment Agency website from 16 March 2015 to 14 April 2015. Copies of the Application were placed on the Environment Agency Public Register at Trentside Offices, Scarrington Road, West Bridgford, Nottingham, NG2 5BR.

The following organisations were consulted:

- Health & Safety Executive
- Public Health England
- Derbyshire Fire & Rescue Service
- Director of Public Health, Derbyshire County Council
- Erewash Borough Council (Environmental Health Department)
- Erewash Borough Council (Planning Department)
- Derbyshire Wildlife Trust

Summary of responses to consultation and web publication and the way in which we have taken these into account in the determination process is presented below. (Newspaper advertising is only carried out for certain application types, in line with our guidance.)

Response received from Health & Safety Executive dated 23/03/15	
Brief summary of issues raised:	Summary of action taken / how this has been covered
No comments or issues raised.	No further action.

Response received from Public Health England dated 01/04/15	
Brief summary of issues raised:	Summary of action taken / how this has been covered
PHE state that they have no significant concerns regarding risk to health of the local population from the installation, provided that the permit holder takes all appropriate measures to prevent and control pollution, in accordance with the relevant sector.	No further action

Response received from Derbyshire Fire & Rescue Service dated 13/04/15	
Brief summary of issues raised:	Summary of action taken / how this has been covered
No comments or issues raised.	No further action.

No responses received from

Director of Public Health, Derbyshire County Council
Erewash Borough Council (Environmental Health Department)
Erewash Borough Council (Planning Department)
Derbyshire Wildlife Trust
Members of the Public