

# Permitting decisions

## Variation

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We have decided to grant the variation for Hill and Moor Landfill operated by Severn Waste Services Limited.

The variation number is EPR/ZP3933LD/V007.

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 provides a record of the decision making process. It:

- highlights key issues in the determination
- summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account
- shows how we have considered the consultation responses

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. The introductory note summarises what the variation covers.

# Key issues of the decision

## Incinerator Bottom Ash Treatment

Non-hazardous Incinerator Bottom Ash (IBA) is already accepted at the installation for landfilling. The variation proposal adds an additional Schedule 1 activity S5.4A(1)(b)(iii): treatment of slags and ashes (for incinerator bottom ash treatment ). This will allow the operator to store and screen the IBA on site to recover ferrous and nonferrous metals.

IBA will be delivered to site on a daily basis. It is transported in-house from the operator's energy from waste facility where ongoing sampling and analysis will ensure the material received is non-hazardous and can therefore be accepted under the existing landfill permit. IBA will be stockpiled on site in the current active landfill tipping cell. After approximately 6 months a third party will bring mobile plant onto the site to treat the IBA. The mobile plant will be set up on the active landfill area where the IBA has been stored. It will consist of a crusher, various conveyor belts, a magnet, screens, eddy current separators and a picking station.

All separated ferrous and non-ferrous metal will be stored in containers and then exported off site for recovery. Once the metals are removed, the separated fraction of the IBA will be stockpiled on the active landfill area and either be directly disposed of within the landfill cell or removed from site for use within the construction industry as secondary aggregate.

We have compared the operator's proposed appropriate measures to our guidance: Storing and treating incinerator bottom ash Quick Guide 384\_12. We consider that the operator's proposals comply with the appropriate measures for waste acceptance; IBA storage and handling; and IBA treatment and therefore meet Best Available Technique (BAT). A summary of the appropriate measures taken on site are found in Table 1 below:

**Table 1: Appropriate measures for IBA**

<p><b>Waste Acceptance</b></p>	<p>The landfill operations have appropriate waste pre-acceptance and waste acceptance procedures for importing waste materials. Non-hazardous IBA is already accepted on site for landfilling. IBA will be delivered to site on a constant daily basis; transported in-house from the company's own energy from waste facility.</p> <p>Ongoing sampling and analysis ensures the material is non-hazardous and can therefore be accepted under the current landfill permit.</p>
<p><b>IBA storage and handling</b></p>	<p>IBA will be stockpiled in an active landfill tipping cell, away from day to day waste disposal operations. The IBA will be stockpiled over a period of between 6 and 12 months, depending on storage capacity, up to a maximum of 50,000 tonnes. The oldest material will be processed first to ensure effective stock management. If storage space becomes limited, there is the option to landfill the material.</p> <p>The surface that the IBA material is placed on is not impermeable, however the underlying landfill basal is and the sealed drainage of the landfill basal allows contaminated water to be extracted from a sump for treatment. As the process occurs within an active landfill cell, all run-off is contained within the cell creating effectively a sealed drainage system.</p> <p>Any run-off passing through the waste is extracted through the same means as normal landfill leachate. The area is regularly monitored and any excess liquid passing through the drainage layer to the extraction sum is removed for treatment on site. As an active landfill cell, leachate management is standard practice, with extracted liquid being held on site in suitable tanks prior to treatment through the site's own treatment plant.</p> <p>Once processed, the treated IBA is stockpiled away from the untreated material to avoid cross contamination.</p>

	<p>Due to the large quantity of material that has to be stored, outside is the only practical option for the site. The issue of dust is controlled through a Dust Management Plan. The following measures are taken on site to suppress dust emissions:</p> <ul style="list-style-type: none"> <li>• The addition of water to IBA stockpiles if necessary. The amount of water used for dust suppression is managed so that only sufficient water is added.</li> <li>• The processing plant used is configured in such a way that drop heights are kept to a minimum.</li> <li>• If excessive dust is generated then the process is stopped until weather conditions are more appropriate.</li> <li>• During processing, access roads are damped down to stop dust being generated by mobile plant.</li> </ul> <p>The storage area and associated infrastructure is inspected daily as part of the routine inspections carried out for the landfill site. These inspections are documented and stored on site. Any damage identified is defected through the Company's defect reporting procedure and actioned as soon as possible. The defect is signed off detailing what action has been taken.</p>
<p><b>IBA treatment</b></p>	<p>The treatment of IBA consists of a crusher, a magnet (to separate ferrous metal) and various screens to separate the IBA into different fractions. Each fraction passes over an eddy current separator to extract the non-ferrous metals. Material passing over the screens is unburnt material which is immediately disposed of on the adjacent landfill.</p> <p>The treatment process is designed primarily to extract the ferrous and non-ferrous metals. Batches of these will be sent off for testing to analyse the contents and to ensure quality control of the recovered materials.</p> <p>The separated IBA fractions are either removed off site for re-use (e.g. secondary aggregate) or will be landfilled. Recovered material (metals and IBA) when exported off site will be characterised and consigned accordingly. Material not suitable for recycling (e.g. unburnt waste) will be disposed of directly on the landfill where the screening process is carried out.</p> <p>As the treatment area is an active landfill cell, full containment is created by the underlying engineered landfill basal. The sealed drainage flows to an extraction sump from where excess liquid is removed for treatment in the site's leachate treatment plant. As the associated drainage is part of the landfill it is subject to ongoing monitoring with leachate levels in the area being taken monthly. Should there be an issue with leachate levels within the cell, pumps are utilised to extract the leachate for treatment on site.</p> <p>The IBA storage and treatment area is on part of an active non-hazardous landfill with active gas extraction. The site is therefore already subject to a Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) assessment and has suitable controls in place. The DSEAR assessment includes IBA storage due to the potential for hydrogen to be emitted.</p> <p>The storage and processing area and all associated infrastructure is inspected daily as part of the routine inspections carried out for the landfill site. These inspections are documented and stored on site. Any damage identified is defected through the Company's defect reporting procedure and actioned as soon as possible. The defect is signed off detailing what action has been taken.</p>

## Fire Prevention

Waste fires are potentially harmful to human health. The Environment Agency has a statutory duty to regulate certain activities, including waste management facilities in order to protect the local community. The measures set out in the Fire Prevention Plans: environmental permits guidance (November 2016) (the guidance) have therefore been designed to meet the following three objectives:

- minimise the likelihood of a fire happening;
- aim for a fire to be extinguished within 4 hours; and
- minimise the spread of fire within the site and to neighbouring sites.

We consider that if an operator submits a fire prevention plan (FPP) that includes the measures set out in the guidance we are likely to approve that FPP. If an operator is unable to meet the measures in the guidance but can propose alternative measures that nevertheless meet the aims of the guidance we can still approve that FPP. It is for the operator to demonstrate these measures, so that we can be satisfied that the alternative measures meet the objectives of the guidance.

The composting activity will store and process non-hazardous combustible waste such as wood and plant materials. The proposal contained in the variation application has the potential to increase the risk of fire at the installation due to (a) the storage of combustible wastes and (b) an increase in the quantity of combustible waste to be processed on site.

We requested that the Operator submit an FPP as part of the Application. The FPP sets out the measures put in place to prevent a fire and the actions that will be taken in the event of a fire occurring at the composting site. Appropriate measures are in place for non-waste materials; managing common causes of fire; preventing self-combustion; managing waste pile sizes; preventing fire spread; fire water containment; and contingency planning during and after an incident. We consider these to be in line with the guidance.

Having considered their FPP we are satisfied that appropriate measures will be in place to prevent waste fires, and that if fire did occur, the impact on people and the environment will be reduced. We have approved the operator's FPP as it meets the minimum regulatory standards that we expect operators to follow.

The approved FPP is referenced within Table S1.2 of the varied Permit as it forms part of the Operating Techniques for the Installation.

## Dust Management

The operator has identified the potential risk of dust emissions from the installation due to the nature of the Incinerator Bottom Ash (IBA) treatment activities on site. To manage the risk of impact on nearby receptors the operator has provided a Dust Management Plan. This proposed the following measures:

- IBA is delivered to the site in covered containers on HGV vehicles. The IBA is damped down at the operator's Energy from Waste facility prior to loading into containers. All loads remain sheeted until they are at the disposal point to prevent dust and particulate emissions.
- When the material is being screened, the area is damped down regularly to minimise dust and particulate matter being generated from the movement of heavy plant. Dust suppression is achieved by the addition of water from a tractor and bowser should it be deemed necessary. The landfill site has a full time tractor and bowser to damp down road surfaces during dry weather and a road sweeper to regularly clean the access roads. The amount of water used for dust suppression is managed so that only sufficient water is added.
- Upon leaving the site, all vehicles pass through a powered wheel wash. The landfill site has a full time road sweeper to clean onsite and offsite roadways.
- The processing plant used is configured in such a way that drop heights are kept to a minimum.
- All plant and generators are regularly maintained and serviced to reduce particulate emissions from the exhaust.
- If excessive dust is generated then the process is stopped until weather conditions are more appropriate.

- During the IBA processing, dust monitoring will be carried out at the perimeter of the site and at the edge of the processing area, both down and upwind. The operator has provided details of the monitoring techniques proposed.
- A reporting and complaints procedure is in place for the site, and the operator actively engages with the local community.

The IBA processing area of the site is not located within an air quality management area and the wider landfill site provides a reasonable buffer between the activity and the closest sensitive receptors. We have assessed the operator's proposals for managing the risk of dust emissions in line with the requirement of our guidance and are satisfied the measures represent Best Available Techniques.

However, the Operator has committed to baseline dust monitoring of the site and a review of the proposed dust monitoring and mitigation methods on site to ensure that the IBA processing will not impact on nearby receptors. Once the baseline monitoring has been established, a robust ongoing monitoring procedure will be established in a revised Dust Management Plan for the site. This has been included as two improvement conditions (IC) in the permit, IC19 and IC20, as detailed in Table 2 below.

**Table 2: Improvement Conditions**

<b>Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
19	The operator shall submit a written report by an experienced and suitably qualified person to the Environment Agency for approval. The report shall contain a review of the results of the baseline particulate/dust monitoring for activities on site and the effectiveness of the site's current particulate/dust monitoring strategy. The report shall include further measures to be undertaken to reduce particulate emissions at the facility (if necessary) for the IBA activity and dates for implementation. The actions and outcomes of the report shall be implemented by the operator from the date of approval in writing by the Environment Agency subject to any such amendments or additions as notified by the Environment Agency.	Within 3 months of the issue of the Permit Variation (V007)
20	Using the results of IC19, the operator shall submit a revised Dust Management Plan to the Environment Agency for approval. The Plan shall include, but not be limited to, measures that demonstrate the site is compliant with the requirements of BAT for the IBA processing for this type of installation and a robust dust monitoring procedure to ensure ongoing compliance on site. The Plan will require the written agreement of the Environment Agency, prior to adoption.	Within 6 months of the issue of the Permit Variation (V007)

## Decision checklist

Aspect considered	Decision
<b>Receipt of application</b>	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.  The decision was taken in accordance with our guidance on confidentiality.
<b>Consultation/Engagement</b>	
Consultation	The consultation requirements were identified in accordance with the Environmental Permitting Regulations and our public participation statement.  The application was publicised on the GOV.UK website between 3 October and 31 October 2017.  We consulted the following organisations: <ul style="list-style-type: none"> <li>• Worcestershire County Council Environmental Protection Department</li> <li>• Health and Safety Executive</li> <li>• Food Standards Agency</li> <li>• Public Health England</li> <li>• Directors of Public Health</li> </ul> The comments and our responses are summarised in the <a href="#">consultation section</a> .
<b>The facility</b>	
The regulated facility	We considered the extent and nature of the facilities at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN 2 'Defining the scope of the installation' and Appendix 1 of RGN 2 'Interpretation of Schedule 1'.  The extent of the facilities are defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.
<b>The site</b>	
Site condition report	The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.
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.  Bredon Hill Special Area of Conservation is situated approximately 6.9km south of the installation boundary.

Aspect considered	Decision
	<p>We have assessed the application and its potential to affect all known sites of nature conservation, landscape and heritage and/or protected species or habitats identified in the nature conservation screening report as part of the permitting process.</p> <p>We consider that the application will not affect any sites of nature conservation, landscape and heritage, and/or protected species or habitats identified.</p> <p>We have not consulted Natural England on the application. The decision was taken in accordance with our guidance. An Appendix 11 assessment was sent to them for information only, and saved to our records management system for audit purposes.</p>
<b>Environmental risk assessment</b>	
Environmental risk	<p>We have reviewed the operator's assessment of the environmental risk from the facility.</p> <p>The operator's risk assessment is satisfactory.</p>
<b>Operating techniques</b>	
General operating techniques	<p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.</p> <p>We have reviewed the techniques used by the operator and compared these with the relevant guidance notes:</p> <ul style="list-style-type: none"> <li>• How to Comply <a href="#">S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste</a>;</li> <li>• How to Comply with your Environmental Permit: Additional Technical Guidance for Composting and Aerobic Treatment Sector;</li> <li>• Guidance on <a href="#">fire prevention plans</a>;</li> <li>• H4 – Odour Management;</li> <li>• Storing and treating incinerator bottom ash Quick Guide 384_12.</li> </ul> <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.</p> <p>The operating techniques that the applicant must use are specified in table S1.2 in the environmental permit.</p>
Fire prevention plan	<p>We have assessed the fire prevention plan and are satisfied that it meets the measures and objectives set out in the Fire Prevention Plan guidance.</p> <p>Please see <a href="#">key issues</a> sector for more information.</p>
<b>Permit conditions</b>	
Updating permit conditions during consolidation	<p>We have updated permit conditions to those in the current generic permit template as part of permit consolidation. The conditions will provide the same level of protection as those in the previous permit.</p>

Aspect considered	Decision
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>We are satisfied that the operator can accept these wastes for the following reasons:</p> <ul style="list-style-type: none"> <li>• they are suitable for the proposed activities</li> <li>• the proposed infrastructure is appropriate; and</li> <li>• the environmental risk assessment is acceptable.</li> </ul> <p>We made these decisions with respect to waste types in accordance with How to Comply S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste; How to Comply with your Environmental Permit: Additional Technical Guidance for Composting and Aerobic Treatment Sector and Storing and treating incinerator bottom ash Quick Guide 384_12.</p>
Improvement programme	<p>Based on the information on the application, we consider that we need to impose an improvement programme.</p> <p>We have imposed an improvement programme to ensure that dust monitoring and mitigation for the on-site IBA processing activity is appropriate for the facility type and location. See <u>key issues</u> section for more details.</p>
Emission limits	<p>No emission limits have been added, amended or deleted as a result of this variation.</p>
Monitoring	<p>We have decided that monitoring should be added for the following parameters, using the methods detailed and to the frequencies specified:</p> <ul style="list-style-type: none"> <li>• Internal temperature and moisture for each composting batch during sanitisation and stabilisation stage;</li> <li>• Temperature, moisture and thatching/compaction of the onsite biofilters;</li> <li>• Odour monitoring of the waste reception building, leachate storage tanks and maturation area;</li> <li>• Integrity checks of the leachate storage tanks.</li> </ul> <p>These monitoring requirements have been imposed in order to justify the requirements of How to Comply with your Environmental Permit: Additional Technical Guidance for Composting and Aerobic Treatment Sector.</p> <p>We made these decisions in accordance with How to Comply S5.06 – Guidance for the Treatment of Hazardous and Non-Hazardous Waste; and How to Comply with your Environmental Permit: Additional Technical Guidance for Composting and Aerobic Treatment Sector.</p>
Reporting	<p>We have added reporting in the permit for the following parameters:</p> <ul style="list-style-type: none"> <li>• Biofilter efficiency</li> </ul> <p>We made these decisions in accordance with How to Comply with your Environmental Permit: Additional Technical Guidance for Composting and Aerobic Treatment Sector.</p>

Aspect considered	Decision
<b>Operator competence</b>	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.
Technical competence	<p>Technical competence is required for activities permitted.</p> <p>The operator is a member of an agreed scheme.</p> <p>We are satisfied that the operator is technically competent.</p>
Financial provision	The financial provision arrangements satisfy the financial provisions criteria. The operator's financial provision agreement has not changed as a result of this variation.
<b>Growth Duty</b>	
Section 108 Deregulation Act 2015 – Growth duty	<p>We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.</p> <p>Paragraph 1.3 of the guidance says:</p> <p>“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”</p> <p>We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.</p> <p>We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.</p>

## Consultation

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

### Responses from organisations listed in the consultation section

<b>Response received from</b>
Worcestershire Regulatory Services – Worcestershire County Council Environmental Protection Department. 06/10/2017
<b>Brief summary of issues raised</b>
No adverse comments related to this proposed environmental permit variation.
<b>Summary of actions taken or show how this has been covered</b>
None taken.

The following organisations were also consulted as part of this variation proposal, with no response received:

- Health and Safety Executive
- Food Standards Agency
- Public Health England
- Directors of Public Health