

# **Determination of an Application for an Environmental Permit under the Environmental Permitting (England & Wales) Regulations 2010**

## **Consultation on our decision document recording our decision-making process**

The Permit number is:

EPR/BU8045IR

The variation number is:

EPR/BU8045IR/V005

The Applicant / Operator is:

Biffa Waste Services Limited

The Installation is located at:

Houghton-Le-Spring Landfill

The Quarry

Quarry Row

Houghton-Le-Spring

County Durham

Consultation commences on:

14/08/2014

Consultation ends on:

11/09/2014

## **What this document is about**

This is a draft decision document, which accompanies a draft permit.

It explains how we have considered the Applicant's Application, and why we have included the specific conditions in the draft permit we are proposing to issue to the Applicant. It is our record of our decision-making process, to show how we have taken into account all relevant factors in reaching our position. Unless the document explains otherwise, we have accepted the Applicant's proposals.

The document is in draft at this stage, because we have yet to make a final decision. Before we make this decision we want to explain our thinking to the public and other interested parties, to give them a chance to understand that thinking and, if they wish, to make relevant representations to us. We will make our final decision only after carefully taking into account any relevant matter raised in the responses we receive. Our mind remains open at this stage: although we believe we have covered all the relevant issues and reached a reasonable conclusion, our ultimate decision could yet be affected by any information that is relevant to the issues we have to consider. However, unless we receive information that leads us to alter the conditions in the draft Permit, or to reject the Application altogether, we will issue the Permit in its current form.

In this document we frequently say “we have decided”. That gives the impression that our mind is already made up; but as we have explained above, we have not yet done so. The language we use enables this document to become the final decision document in due course with no more re-drafting than is absolutely necessary.

We try to explain our decision as accurately, comprehensively and plainly as possible. Achieving all three objectives is not always easy, and we would welcome any feedback as to how we might improve our decision documents in future.

## **Environment Agency permitting decisions**

### **Variation**

We are minded to issue the variation for Houghton Le Spring Quarry Landfill Site operated by Biffa Waste Services Limited.

The variation number is EPR/BU8045IR/V005

We consider in reaching this draft 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
- Annex 1 the decision checklist
- Annex 2 the consultation, web responses

### **Key issues of the decision**

This variation application is to add a new inert soils and aggregate recycling waste operation. This will facilitate the further enhancement of material recycling at the site via the incorporation of a fixed screening, washing and separation plant in addition to the existing mobile crushing and screening

equipment. There is no increase in waste treatment tonnage throughput at the facility. There are additional European waste codes (EWC) added to the permit to allow the acceptance of inert construction, demolition and highways road sweepings type wastes. There is no change to the installation boundary as a result of this application. The key issues for the determination of this variation are:

- the proposed new waste operation, waste streams management control and monitoring;
- the potential noise impact of the new operation, and;
- protection of soil, surface run off and groundwater.

#### **A. Soils and aggregate waste operation**

The operator wishes to incorporate a fixed screening, washing and separation plant as a new waste treatment operation. The proposed operation includes: delivery, storage, separation and treatment of construction, demolition and highways street sweepings type waste. The plant will be used to screen and mechanically wash the currently consented inert wastes as well as the proposed additional EWC codes. The addition of this plant to current site operations will allow the further recovery of soils, aggregates and street sweepings in order to divert some of these waste stream from inert and non-hazardous landfill accordingly.

Material is fed into the plant from the delivery vehicle by a small excavator / telehandler into the reception hopper. A over-band magnet will remove any ferrous metal, which will be placed into a skip for offsite removal and recovery. Aggregates are separated from lightweights/organic materials via an integrated upward flow classification system. The aggregates are scrubbed to break up clays and clean the solid aggregate and stone. The lightweights and organic material are discharged onto the lightweight dewatering screen to remove excess water before being discharged to the lightweights stockpile conveyor. A double deck screen is used to screen the aggregates into two washed products and remove the fines/sand component. The sand removed by the sizing screen is flumed back into the sump below the lightweights dewatering screen. The sand and process water are pumped into the wash unit.

The material entering the sump of the wash unit and is pumped to the hydrocyclone where the waste water and silt are separated from the sand. The washed sand is discharged from the bottom of the cyclone and onto the dewatering screen to remove excess water. Wastewater and silt exit through the top of the cyclone and are sent to the water treatment plant. The waste water is discharged into a buffer tank and a positive displacement pump is used to agglomerate the fine particles together to assist with the separation from the water.

A centrifuge is used to separate the fine solid material from the water. The clean water overflows from the rear of the plant and into the recycled water storage tank for re-use and re-circulation around the system. Before entering the water tank the water will pass through a 'SmartSponge' filter system to remove hydrocarbons and reduce heavy metals (these will be removed for

offsite disposal). The solids are concentrated into a waste product which is discharged into a stockpile underneath.

The operator has both pre-acceptance and waste acceptance procedures to verify and characterise the waste as it arrives at the waste treatment facility. Wastes will not be accepted at the facility unless an assessment has been made of their suitability for treatment. If a load is found to be non-compliant and the producer/carrier has left the site, the load will be re-containerised and placed within a quarantine area awaiting collection for removal to a suitably permitted facility.

The new waste operation plant will provide enhanced recovery of the incoming waste material and enable increased diversion away from landfill. In accordance with our sector guidance note 'S5.06: recovery and disposal of hazardous and non-hazardous waste' we are satisfied that the techniques proposed by the operator will provide sufficient levels of control for the following:

- ensuring that the waste is suitable for the activity (pre-acceptance). See 'Waste Types' in the table of Annex 1 below, in respect to the additional waste codes requested in the application
- adequately characterising the waste (acceptance procedures)
- appropriate and safe storage of wastes (storage)
- provision and maintenance of suitable infrastructure
- operational control of the treatment process
- disposal of effluents.

## B. Waste Streams management and monitoring

The spent 'SmartSponge' media arising from the hydrocarbon and heavy metal treatment stage of the plant requires testing by the operator to determine the end route for appropriate disposal or recovery.

The spent material will be stored awaiting collection within containers at the installation. A composite sample of the material will be analysed per batch before disposal is arranged. The analysis and result will be assessed according to our guidance document 'Hazardous Waste: interpretation of the definition and classification of hazardous waste' (WM2) to determine if the spent media is hazardous. The material will be sent to a off-site hazardous waste transfer station (within the Biffa group). If the waste is classified as non-hazardous it will be sent for landfill disposal and if it is classified as hazardous will be sent for energy recovery.

The lightweight organics arising from the integrated upwards flow classification process and the silt arising from the flocculent and centrifuge process will also be sampled in a similar way. The samples will be subject to landfill waste acceptance criteria (WAC) analysis and assessed in accordance with WM2 to determine whether the waste is hazardous. Any hazardous wastes identified will be removed from the site and sent to one of Biffa's Biogenie soil treatment facilities for further treatment and subsequent disposal. If the material is assessed to be non-hazardous the leachate

analytic data for it will be compared to the inert leachable WAC criteria of existing hydro-geological risk assessment (HRA) for phase 4 of the landfill activity at the site. If the material meets the criteria it will be deposited for landfill within phase 4 of the installation landfill activity. If the criteria is not met it will be removed from the site for disposal at an alternative non-hazardous landfill facility.

We have incorporated an improvement condition within the permit (IP9) for the operator to assess and demonstrate to the Environment Agency within 4 months of completion of commissioning of the new plant that the characteristics of the wastes produced by the new soils and aggregates processing facility are suitable and stable for the planned disposal routes identified above.

### **C. Potential Noise emission impacts**

Given the previous history of noise complaints resulting from other activities taking place at the site we have given consideration to the potential impact of noise emissions from the operation of the new soils and aggregate treatment operation.

The plant is situated within the north western extent of the quarry, adjacent to the quarry rock face. The nearest residential properties to the new operational area are in Grasswell at 235 meters to the north west and Houghton Le Spring at 270 meters to the south west of the site. The quarry rock wall face will offer a significant level of shielding for the nearby residential receptors. The historic noise complaints are associated with night-time disturbance from the landfill gas engines which operate continuously, the engines are located within a different area to the proposed soils and aggregate treatment plant and the engine stacks are located at a higher elevation.

The hours of operation (deliveries, treatment/transfer and export) will be restricted to sociable hours as determined by the current planning permission requirements. All machinery and plant will be fitted with noise attenuation equipment and/or noise screens and will be regularly maintained to minimise noise emission levels where possible.

The landfill site has a wider scale and longer term redevelopment and restoration plan which is subject to an appropriate Planning Authorisation. The Environmental Impact Assessment (EIA) associated with this Planning Application included a detailed noise impact assessment considering noise emissions from the current activities at the site and those predicted from future developments (including site restoration work and the operation of an aggregate crushing plant located at the south east of the installation). The operator provided a copy of the EIA and associated noise impact assessment during the course of determination.

We have however included an improvement condition (IP8) within the variation notice. This requires the operator to monitor the noise emission levels from the new equipment and report the findings to the Environment

Agency within 3 months of completion of commissioning of the new plant. This will identify any difference in actual noise emissions from the new equipment relative to the levels predicted.

#### **D. Contamination to soil, surface run off and groundwater.**

The operation of the new plant will be conducted on concrete or impermeable hardstanding surfaces as appropriate.

The main elements of the soils and aggregate treatment plant are designed as a closed loop re-circulating system in respect to the process water used within the plant. It will be a net consumer of water with no point source discharge of process water from the process.

Surface and storm water run-off will be directed to a specific surface water management system (sump) situated within the waste treatment operations area. The sump will be monitored and fitted with an isolation valve, before any discharge into the wider site drainage system which includes a surface water holding lagoon.

The liquid effluent produced by the treatment process will be removed offsite by tanker, as there is no residual capacity left for discharge to the sites existing sewer connection. The effluent will be held within a closed loop system with effluent from the washing and dewatering process being fed back to the combined water and buffer tank. This water is recycled in the process, and is changed periodically, typically once per month, being removed by tanker and replaced with fresh water.

We are satisfied that the techniques and containment measures proposed by the operator for the new soils and aggregate recycling facility will present a minimal risk of contamination to the soil and groundwater at the site.

## 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
<b>Consultation</b>		
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	The consultation responses (Annex 2) were taken into account in the decision.  The decision was taken in accordance with our guidance.	✓
<b>Operator</b>		
Control of the facility	We are satisfied that 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.	✓
<b>European Directives</b>		
Applicable directives	All applicable European directives have been considered in the determination of the application.	✓
<b>The site</b>		
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. The extent of the facility has not changes as a result of this variation.	✓
Biodiversity, Heritage, Landscape and Nature Conservation	The application is within the relevant distance criteria of a site of landscape, nature conservation, and protected habitat. <ul style="list-style-type: none"> <li>• A special area of conservation (SAC) is located within 10km of the installation, Durham Coast.</li> <li>• A special protected area (SPA) and RAMSAR site is</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>located within 10km of the installation, Northumbria Coast.</p> <ul style="list-style-type: none"> <li>Four sites of special scientific interest (SSSI) are located within 2km of the installation: Herrington Hill, Joe's Pond, Hetton Bogs and High Haining Hill.</li> <li>One local nature reserve (LNR) is located within 2km of the installation, Hetton Bogs.</li> <li>9 local wildlife sites (LWS) and three ancient woodlands are located within 2km of the installation.</li> </ul> <p>A full assessment of the application and its potential to affect the sites/habitats has been carried out as part of the permitting process. We consider that the application will not affect the features of the sites/habitats.</p> <p>Formal consultation has been carried out with Natural England, an Appendix 4 and 11 have been completed for information. The consultation responses (Annex 2) were taken into account in the permitting decision.</p>	
<b>Environmental Risk Assessment and operating techniques</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> <p>The risk assessment concludes the following:</p> <ul style="list-style-type: none"> <li>There are no new point source emissions to air or groundwater.</li> <li>There is no change to discharges to sewer, land or surface water, effluents from the process will be tankered offsite using existing site arrangements.</li> <li>We do not believe that there will be any significant increase in the risk of odour release from the revised operations and waste material being handled at the site.</li> <li>We are satisfied that fugitive emissions to air (dust) will be minimised by appropriate management and operating techniques for the additional operations taking place at the facility. See operating techniques section below for more information.</li> <li>Some of the processed inert wastes will be discharged within the sites landfill (after analysis to ensure their</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>characteristics meet the existing phase 4 HRA requirements)</p> <p>Improvement condition (IP10) has been incorporated within the permit for the operator to update the accident management plan (AMP) within 6 months of completion of commissioning of the soils and aggregate processing facility. The AMP is to be regularly reviewed and updated.</p> <p>See key issues for further information.</p>	
Operating techniques	<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 with your environmental permit</li> <li>• Sector guidance note S5.06: recovery and disposal of hazardous and non-hazardous waste.</li> </ul> <p>The proposed techniques/ emission levels for priorities for control are in line with the benchmark levels contained in the TGN and we consider them to represent appropriate techniques for the facility. The permit conditions ensure compliance with relevant BREFs and BAT Conclusions.</p> <p>The operator proposes the following techniques to minimise environmental risk of the operations carried out at the site:</p> <ul style="list-style-type: none"> <li>• Mist and water sprays to minimise potential dust from screening, crushing and other waste handling operations</li> <li>• Water sprays will be utilised where required to dampen surfaces and reduce dust emissions</li> <li>• All light fraction waste will be stored and transported within enclosed containers or sheeted.</li> <li>• Visual inspections of the site (storage and treatment processing areas and access routes) and boundary are carried out on a daily basis to ensure dust emissions are minimised from the site activities.</li> <li>• All wastes will be stored in containers and/or on suitably engineered areas of impermeable pavement with drainage control.</li> <li>• All bund side walls and bases will be impermeable.</li> <li>• Spill kits are available at the site and staff suitably trained.</li> </ul>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<ul style="list-style-type: none"> <li>All vehicles hauling wastes or recycled materials will be fitted with sheeting/netting or will be enclosed.</li> </ul>	
<b>The permit conditions</b>		
Waste types	<p>We have specified the permitted waste types, descriptions and quantities, which can be accepted at the regulated facility.</p> <p>Five additional waste codes have been added to table S2.2 'permitted waste types and quantities for inert and excavation waste treatment process'.</p> <p>We are satisfied that the operator can accept four additional wastes (17 09 04, 19 12 05, 20 01 02 and 20 03 03) for inert treatment, we consider they are suitable for treatment within the soils and aggregate recycling operation. The new waste codes are all considered non-hazardous and will not present any new or additional risk to the facility.</p> <p>A additional waste code (19 12 12) has been added to the permit for disposal to landfill, to cover wastes (inert silt and lightweight fractions) produced from the soils and aggregate recycling facility.</p> <p>We made these decisions with respect to waste types in accordance with SGN S5.06</p>	✓
Improvement conditions	<p>Based on the information on the application, we consider that we need to impose improvement conditions.</p> <p>We have imposed improvement conditions to ensure that:</p> <ul style="list-style-type: none"> <li>the appropriate measures are in place to prevent annoyance from noise and vibration.</li> <li>the appropriate measures are in place to monitor wastes produced from the new operation.</li> <li>appropriate measures are in place to ensure that accidents that may cause pollution are minimised.</li> </ul> <p>IP8 – The operator shall complete a noise impact assessment of the new soils and aggregate recycling facility within 3 months of completion of commissioning.</p>	✓

Aspect considered	Justification / Detail	Criteria met Yes
	<p>IP9 – The operator shall demonstrate to the Environment Agency that the soils and aggregate recycling facility is producing a suitable steady material based, the report will be submitted to the Environment Agency within 4 months of completion of commissioning of the new plant.</p> <p>IP10 – The operator shall update the accident management plan to incorporate the new activities at the installation within 6 months of completion of commissioning of the new plant.</p>	
Incorporating the application	<p>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.</p> <p>These descriptions are specified in the Operating Techniques table in the permit.</p>	✓
Emission limits	There are no new emission limits as a result of this variation.	✓
Monitoring	There is no change to the monitoring requirements of the permit as a result of this variation application.	✓
Reporting	There is no change to the reporting requirements of the permit as a result of this variation application.	✓
Operator Competence		
Environment management system	There is no known reason to consider that the operator will not have the management systems to enable it to comply with the permit conditions. The decision was taken in accordance with RGN 5 on Operator Competence.	✓

## **Annex 2: Consultation, web publicising and newspaper advertising responses**

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

### **A) Advertising and Consultation on the Application**

Receipt of the application was publicised on our website between 27/03/14 and 27/04/14 and a copy of the application was placed on our Public Register.

Copies of the application were sent to the following organisations for Consultation:

- Public Health England
- Food Standards Agency
- Health and Safety Executive
- Natural England
- Sunderland City Council (Planning Department)
- Sunderland City Council (Director of Public Health)

Response received from
Health & Safety Executive, response received 2 <sup>nd</sup> April 2014
Brief summary of issues raised
The HSE does not propose to comment on the application.
Summary of actions taken or show how this has been covered
No further action required.

Response received from
Natural England, response received 3 <sup>rd</sup> April 2014.
Brief summary of issues raised
An Appendix 4 and 11 were sent to Natural England for information. Natural England does not consider that this application poses any likely or significant risk to those features of the natural environment for which we would otherwise provide a more detailed consultation response and so does not wish to make specific comment on the details of this consultation.
Summary of actions taken or show how this has been covered
No further action required.

Response received from
Public Health England (PHE), response received 8 <sup>th</sup> April 2014
Brief summary of issues raised
Provided the applicant adheres to the management procedures detailed in the application and operates in accordance with relevant industry guidelines and

best practice, the proposal is unlikely to adversely affect human health. This consultation response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance and industry best practice.

**Summary of actions taken or show how this has been covered**

No further action required.

**Response received from**

Sunderland City Council

**Brief summary of issues raised**

No response received.

**Summary of actions taken or show how this has been covered**

No further action required.

**Response received from**

Food Standards Agency

**Brief summary of issues raised**

No response received.

**Summary of actions taken or show how this has been covered**

No further action required.

Responses received from members of the public and resulting from public notification of the application.

**Response received from**

Residents group RATS (residents against toxic site), response received 2<sup>nd</sup> April 2014

**Brief summary of issues raised**

RATS object to the Permit Variation application on the basis of the concerns expressed below:

1. The toxicity of the new wastes (potential for hazardous and heavy metal content)
2. Potential contamination to the quarry floor, surface water run-off and ultimately the localised groundwater.
3. Local health and environment impacts.

**Summary of actions taken or show how this has been covered**

1. Inert wastes no new or additional risks (see sections B of the key issues for further information).
2. Containment water (see section D of the key issues for further information).
3. Dust / noise (see section C of the key issues and the operational techniques section of Appendix 1 for further information).

No other responses were received from members of the public or local organisations as a result of public notification of receipt of the application.