

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Shanks Waste Management Limited

Sowerby Woods Resource Park
Bouthwood Road
Sowerby Woods Industrial Estate
Barrow-in-Furness
LA14 4QR

Variation application number

EPR/XP3839FJ/V003

Permit number

EPR/XP3839FJ

Sowerby Woods Resource Park

Permit number EPR/XP3839FJ

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to a right of appeal.

Sowerby Woods Resource Park is a Mechanical Biological Treatment (MBT) facility for up to 75,000 tonnes per year of municipal waste. The facility is located approximately 3 miles north of Barrow-in-Furness town centre. The site is located on an industrial estate which includes a waste transfer station.

The process itself is undertaken in a single building. All incoming wastes are deposited in a reception pit from where they are shredded and transferred by crane to a "biodrying hall". In this hall the wastes are dried aerobically by drawing air from the building through the shredded wastes for around 12 to 15 days. This process reduces the waste mass by approximately 25% and stabilises the waste. The extracted air is fed into a wood chip-filled biofilter to control odours and is emitted from here to atmosphere via a stack. The biofilter is enclosed and discharges to a stack.

The dried waste is removed from the biodrying hall by crane into a refinement area where it is segregated by size and type into different fractions. The main fraction is the Solid Recovered Fuel (SRF) which goes through a further shredding process. Each fraction is stored within the building pending off-site recovery or disposal. Air is emitted to atmosphere from the refinement area via a bag filter to control particulate levels.

Any leachate or polluted run-off from the biofilter and biodrying areas drains to an effluent tank from where it is removed from site for disposal. Roof and yard water drain to surface water sewer via an oil interceptor.

This variation is for the following changes:

- Installation and operation of a chemical scrubber using sulphuric acid to pre-treat the extracted air to remove ammonia prior to the biofilter;
- Installation and operation of an irrigation system within the biofilter;
- Modification of the design of the biofilter and biofilter roof;
- An increase in biofilter stack height from 18 m to 28 m;
- Changes to the emissions monitoring requirements;
- Addition of an additional point source emission A3 for the Carbon Monoxide monitor vent.

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	Date	Comments
Application EPR/XP3839FJ/A001	Duly made 11/07/11	Application for mechanical biological treatment facility.
Permit determined	21/03/12	Permit issued to Shanks Waste Management Limited
Agency variation determined EPR/XP3839FJ/V002	29/01/14	Agency variation to implement the changes introduced by IED

Status log of the permit		
Description	Date	Comments
Application EPR/XP3839FJ/V003 (variation)	Duly made 25/01/2016	-
Additional Information received	21/10/2016	Revised site plan.
Additional Information received	08/05/2017	Alteration to application to include stack height increase.
Variation determined EPR/XP3839FJ (billing ref: EP3139RB)	21/08/2017	Varied and consolidated permit issued in modern condition format.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies and consolidates

Permit number

EPR/XP3839FJ

Issued to

Shanks Waste Management Limited ("the operator")

whose registered office is

Dunedin House

Auckland Road

Milton Keynes

MK1 1BU

company registration number 2393309

to operate regulated facilities at

Sowerby Woods Resource Park

Bouthwood Road

Sowerby Woods Industrial Estate

Barrow-in-Furness

LA14 4QR

to the extent set out in the schedules.

The notice shall take effect from 21/08/2017

Name	Date
Philip Lamb	21/08/2017

Authorised on behalf of the Environment Agency

Schedule 1

Only the following conditions have been varied by the consolidated permit EPR/XP3839FJ.

1.3.1, 2.3.1, 2.3.2, 2.3.3, 2.3.4, 3.1.3, 3.2.2, 3.4.2, 3.5.1, 3.5.2, 3.6.1, 3.7.1, 3.7.2, 4.2.2, 4.2.3, 4.2.6, 4.3.1, 4.3.2, Table S1.1, Table S1.2, Table S1.3, Table S1.4, Table S2.1, Table S3.1, Table S3.3, Table S3.4, Table S3.5, Table S4.1, Table S4.2, Table S4.3, Schedule 6 (Interpretations) and Schedule 7 (Site Plan).

The following conditions were varied as a result of an Environment Agency initiated variation:

1.3.1, 3.1.3, 3.4.2, 3.5.1, 3.5.2, 3.6.1, 3.7.1, 3.7.2, 4.3.1, 4.3.2, Table S1.1, Table S1.3, Table S1.4, Table S3.1, Table S3.4, Schedule 6 (Interpretations).

The following conditions were varied as a result of the application made by the operator:

2.3.1, 2.3.2, 2.3.3, 2.3.4, 3.2.2, 4.2.2, 4.2.3, 4.2.6, Table S1.2, Table S1.3, Table S1.4, Table S2.1, Table S3.1, Table S3.3, Table S3.5, Table S4.1, Table S4.2, Table S4.3, Schedule 7 (Site Plan).

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/XP3839FJ

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Shanks Waste Management Limited (“the operator”),

whose registered office is

**Dunedin House
Auckland Road
Mount Farm
Milton Keynes
MK1 1BU**

company registration number 2393309

to operate an installation and waste operations at

**Sowerby Woods Resource Park
Bouthwood Road
Sowerby Woods Industrial Estate
Barrow-in-Furness
LA14 4QR**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Philip Lamb	21/08/2017

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.4 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:

- (a) the nature of the process producing the waste;
- (b) the composition of the waste;
- (c) the handling requirements of the waste;
- (d) the hazardous property associated with the waste, if applicable; and
- (e) the waste code of the waste.

2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

2.5 Pre-operational conditions

- 2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Bioaerosols

3.5.1 The operator shall take all appropriate measures, to prevent or where that is not practicable to minimise the release of bioaerosols. Emissions of bioaerosols from the operational activities shall not exceed the emission threshold limits specified in tables S3.1 and S3.3.

3.5.2 The operator shall where the emission threshold limits are exceeded:

- (a) notify the Environment Agency and investigate and take remedial action;
- (b) submit to the Environment Agency for approval within the period specified, a bioaerosols management plan which identifies and minimises the risks of pollution from bioaerosols; and
- (c) implement the bioaerosols management plan from the date of approval and revise the plan periodically, unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.7 Fire prevention

3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.7.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
- (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8 Monitoring

3.8.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- (a) point source emissions specified in tables S3.1 and S3.3;
- (b) ambient air monitoring specified in table S3.4;
- (c) process monitoring specified in table S3.5.

3.8.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

- 3.8.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.7.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.8.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2, S3.3 and S3.5 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 of that schedule.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
 - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.3; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report

assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

- 4.2.5 Within one month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.
- 4.2.6 The operator shall submit to the Environment Agency an annual report of the efficiency of the biofilter. This shall include but not be limited to, the assessment of the efficiency to reduce odours, the summary of maintenance and any re-commissioning planned or conducted, assessment of back pressure, venting and cracking. The operator shall submit the report within one month of the end of each year, unless otherwise agreed in writing by the Environment Agency.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
- (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
 - (b) any change in the operator's name(s) or address(es); and
 - (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.
- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:
- (a) the Environment Agency shall be notified at least 14 days before making the change; and
 - (b) the notification shall contain a description of the proposed change in operation.
- 4.3.6 The Environment Agency shall be given at least 14 days' notice before implementation of any part of the site closure plan.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
- (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity and WFD Annex I and II operations	Limits of specified activity and waste types
A1	Section 5.4 A(1)(b) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities:	<u>i) biological treatment</u> D8: Biological treatment not specified elsewhere which results in final compounds or mixtures which are disposed of by any of the operations numbered D1 to D12. R3: Recycling/reclamation of organic substances which are not used as solvents.	From receipt of waste to despatch for other on-site operations and recovery of by-products. No more than 750 tonnes of waste to be stored within the waste reception pit at any one time. All waste activities shall be undertaken utilising the biodrying process and within a building that is maintained under negative pressure with an impermeable surface and sealed drainage system. All air drawn from the building to maintain negative pressure shall be discharged through the biofilter. Waste types suitable for acceptance are limited to those specified in Table S2.2.
Directly Associated Activity			
A2	Raw material storage.	Storage of raw materials including fuel and chemicals.	Includes receipt and storage. All oil to be stored in accordance with The Control of Pollution (Oil Storage) (England) Regulations 2001.
A3	Storage pending recovery or disposal.	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced). D15: Storage pending any of the operations number D1 to D14 (excluding temporary storage pending collection on the site where it is produced).	All activities shall be undertaken within a building that is maintained under negative pressure with an impermeable surface and sealed drainage system. All air drawn from the building to maintain negative pressure shall be discharged through the biofilter (waste reception area, shredding area and biodrying hall) or through the bag filter (refinement and internal storage areas). Waste types suitable for acceptance are limited to those specified in Table S2.2.
A4	Physical treatment for the purposes of recycling.	R3: Recycling/reclamation of organic substances which are not used as solvents. R4: Recycling/reclamation of metals and metal compounds. R5: Recycling/reclamation of other inorganic compounds.	Treatment including sorting, screening, shredding and compaction. All activities shall be undertaken within a building that is maintained under negative pressure with an impermeable surface and sealed drainage system. All air drawn from the building to maintain negative pressure shall be discharged through the biofilter (waste reception area, shredding area and biodrying hall) or through the bag filter (refinement and internal storage areas). Waste types suitable for acceptance are limited to those specified in Table S2.2.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Part 1 of response to Schedule 5 Notice dated 26/08/11 application EPR/XP3839FJ/A001	Response to question 3 detailing leachate removal by tanker Response to question 9 olfactory monitoring Response to question 14 Ecodeco document: Biofilter-Filtrating material specification, document reference S000-PR-10A-AS001-R00 dated 24/08/2010, revision 00 Response to question 24 fast-acting doors to tipping shed	26/08/11
Part 2 of response to Schedule 5 Notice dated 21/09/11	Response to question 22 replacement Site Condition Report Response to question 26 detailing baghouse alarms and reactions Response to question 27 regarding power loss	21/09/11
Part 3 of response to Schedule 5 Notice dated 02/11/11	Response to question 30 regarding inspection of waste	02/11/11
Operation of enclosed biofilter and emission to stack	E-mail outlining amended proposals	20/01/12
Operation of enclosed biofilter and emission to stack	E-mail outlining amended proposals	20/01/12
Application EPR/XP3839FJ/A001	The following sections of the report accompanying the application entitled ' <i>Environmental Permit Application</i> ' issue 2 received 27 January 2012: Section 1.6 detailing process operation Section 1.7 detailing emission control Section 1.8 detailing management of operations Section 1.9 detailing closure of the site Section 2.2 detailing energy management Section 2.3 detailing process risk management Section 2.5 detailing raw material usage Section 2.6 detailing water usage Section 4.4 detailing roles and responsibilities Section 4.5 detailing environmental training programme Section 4.6 detailing accident risk assessment and management, excluding reference to primary retention ponds p.31 Section 5.5 detailing surface water management	27/01/12
E-mail response to Environment Agency queries	Additional information on operation of biodrying hall and biofilter monitoring.	16/02/12
Environmental Monitoring Plan V4	All.	23/02/12
Approved Odour Management Plan	Odour Management Plan version 5/09/12 (as provided in response to permit condition 2.5.1 (pre-operational condition PO1)).	05/09/2012
Approved Fly Management Plan	Fly Management Plan Issue 11 Oct 2014.	06/10/2014

Table S1.2 Operating techniques		
Description	Parts	Date Received
Ammonia Scrubber Manual	Document "NH3 (ammonia) Abatement with Vertical Scrubber Use and Maintenance System Manual Output 54,000 – 70,000 m ³ /h." Including: Drawing: Layout – Removal NH3 System for composting SUR-54,000/70,000 mc/h, Ref: D1-085-15-Layout Rev. 2, date: 05-08-15 Drawing: Biodrying Ventilation P&ID, Ref: C155-PR-10E-A1001-R04 Rev 3, date 29-10-2015 Excluding: "management of the acid solution" in Design Data.	18/01/2016
Variation application EPR/XP3839FJ/V003	Responses to answers provided in Parts C2 and C3 of the application form and associated documents. Excluding: Odour Management Plan version V5.	25/01/2016
Response to Schedule 5 Notice dated 08/04/2016	Response to questions 1 – 8. Excluding: Odour Management Plan version V6.	09/05/2016
Additional Information received	Additional information in response to draft permit: revised site plan (Drawing No. Figure 5 version E) and Odour Management Plan version V7 Excluding: Odour Management Plan version V7.	21/10/2016
Additional Information received	Responses to answers provided in Parts C2 and C3 of the application form and associated documents regarding increased biofilter stack height. Excluding: Odour Management Plan version V8.	08/05/2017

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	<p>The operator shall review the results of 12 months of bioaerosol monitoring undertaken both from the biofilter stack A1 and off site (as stipulated in tables S3.1 and S3.4 of this permit). The review shall include an assessment of the validity of the qualitative bioaerosol risk assessment provided with the application number EPR/XP3839FJ/A001 when compared with actual results obtained during such monitoring, and propose emission limit values for total bacteria, <i>Aspergillus fumigatus</i> and gram negative bacteria emitted from the biofilter stack A1.</p> <p>A written summary report of the findings of this review shall be provided to the Environment Agency. The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the summary report. The emission limits from the biofilter stack A1 are to be agreed in writing with the Environment Agency.</p> <p>If the review demonstrates that the qualitative risk assessment does not remain valid, the operator shall submit proposals for a quantitative risk assessment (and proposed timetable for its implementation) to the Environment Agency for approval in writing.</p> <p>The operator shall undertake the quantitative risk assessment as approved, and from the date stipulated by the Environment Agency.</p>	n/a (Submitted but not yet approved).

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC2	<p>The operator shall provide copies of the following to the Environment Agency:</p> <p>1. Drawing(s) showing the location and unique id of the monitoring points relating to the biofilter (inlet, outlet, media and irrigation system) and the wet chemical scrubber that forms part of the written EMS.</p> <p>2. A copy of the monitoring schedule relating to the biofilter and the wet chemical scrubber that forms part of the written EMS and identifies for each unique id monitoring point shown in the drawing provided under 1 above the following:</p> <ul style="list-style-type: none"> • Parameter to be measured; • Units of measurement; • Operational range for parameter; • Monitoring frequency of parameter; • Monitoring method for parameter; • Design specification of each monitoring point; and • Drawing reference number showing location of unique id monitoring point. <p>The monitoring schedule shall have reference to values stated within the approved OMP.</p>	30/09/2017
IC3	<p>The operator shall submit a written odour management plan (OMP) to the Environment Agency for approval. The OMP shall take into account the appropriate measures for odour control specified in section 2.2.6 of Sector <i>Guidance Note IPPC S5.06 – Guidance for the Treatment of Hazardous and Non Hazardous Waste</i>. The OMP shall also incorporate all the required detailed information as specified in the Environment Agency's Horizontal <i>Guidance H4 – Odour Management</i></p> <p>Particular attention should be paid to the reduction of fugitive emissions from the installation.</p> <p>The OMP must contain dates for implementation of individual measures.</p> <p>The notification requirements of condition 2.4.2 will be deemed to have been complied with on submission of the plan.</p> <p>You must implement the plan as approved, and from the date stipulated by the Environment Agency.</p>	28/02/2018

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
PO1	COMPLETED

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
--	--

Table S2.2 Permitted waste types and quantities for mechanical biological treatment	
Maximum quantity	75,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: Hazardous wastes
Waste code	Description
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard
20 01 02	glass
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 32	medicines other than those mentioned in 20 01 31
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 03	other non-biodegradable waste
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 07	bulky waste

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in Schedule 7]	Biofilter stack	Ammonia	No limit set	Hourly average	Weekly until biofilter is demonstrated as operating within the parameters set in the Odour Management Plan to be approved under IC3, then monthly unless otherwise agreed by the Environment Agency	BS EN 14791 for sampling
		Odour	No limit set	Determined in accordance with BS EN 13725:2003 for Dynamic Dilution Olfactometry		BS EN 13725 and MID. Reporting requirements in accordance with the OMP or as otherwise agreed by the Environment Agency.
		Total Volatile organic compounds (VOCs)	No limit set	Hourly average	Monthly	BS CEN/TS 13649
		Total bacteria	No limit set	Hourly average	Six monthly	In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities
		Aspergillus fumigatus				
A2 [Point A2 on site plan in schedule 7]	Baghouse stack from refining area	Particulate matter	10 mg/m ³	Determined in accordance with BS EN 13284-1	Annually	BS EN 13284-1
A3 [Point A3 on site plan in schedule 7]	Carbon monoxide monitor vent	No parameter set	No limit set	--	--	--

Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point SW1 on site plan in schedule 7] emission of surface water to sewer in Bouthwood Road	Uncontaminated site source water from hardstanding and roofed areas	No parameter set	No limit set	--	--	--

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
Leachate sump prior to transfer off-site for disposal	Biodrying hall, Municipal Solid Waste reception pit, shredded waste pit, refinement area, biofilter leachate and spent scrubber liquor	Ammoniacal nitrogen	No limit set	--	Monthly	UKAS accredited laboratory
		Biochemical Oxygen Demand (BOD)				
		Chemical Oxygen Demand (COD)				
		Chloride				
		Electrical conductivity				
		Iron				
		pH				
		Suspended solids				
		Biodrying hall, Municipal Solid Waste reception pit, shredded waste pit, refinement area, biofilter leachate and spent scrubber liquor				
	Calcium					
	Chromium					
	Copper					
	Lead					
	Magnesium					
	Manganese					
	Nickel					
	Nitrate					
	Nitrite					
	Potassium					
Sodium						
Sulphate						
Total Alkalinity						
Total Organic Carbon (TOC)						
Total Oxidised Nitrogen (TON)						
Zinc						

Table S3.4 Ambient air monitoring requirements					
Location or description of point of measurement	Parameter	Bioaerosol threshold limit CFU/m³	Monitoring frequency	Monitoring standard or method	Other specifications
As detailed within the approved Fly Management Plan	Flies	Not applicable	Weekly	As detailed within the approved Environmental Monitoring Plan V4	From 1 st January to 31 st December.
Upwind of the operational area, as described in the Technical Guidance Note M9 Downwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000	Six monthly	In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities.	-
	Aspergillus fumigatus	500			

Table S3.5 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Scrubber system	pH	Continuous	None specified	Scrubber system shall be regularly checked and maintained in accordance with manufacturer's recommendations.
	Differential pressure	Continuous	None specified	
	Air flow	Continuous	None specified	
	Ammonia	Twice weekly at scrubber inlet	Spot check using sample tubes	
Biofilter	Temperature	Continuous	Temperature probe	Biofilter shall be regularly checked and maintained to ensure appropriate temperature and moisture content.
	Moisture	As required	None specified	
	Thatching/compaction	As required	None specified	

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.7.1.	A1, A2.	Quarterly	1 January, 1 April, 1 July, 1 October
Ambient air monitoring for bioaerosols Parameters as required by condition 3.7.1.	As specified in schedule 3 table S3.4.	Quarterly	1 January, 1 April, 1 July, 1 October
Biofilter efficiency Parameters as required by condition 4.2.6.	Biofilter.	Every 12 months	1 January

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes or m ³
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m ³

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Waste returns	E-Waste Return Form or other form as agreed in writing by the Environment Agency	--

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	EPR/XP3839FJ
Name of operator	Shanks Waste Management Limited
Location of Facility	Sowerby Woods Resource Park, Barrow-in-Furness, LA14 4QR
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Measures taken, or intended to be taken, to stop the emission	
Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“bioaerosols threshold limits” means the maximum acceptable bioaerosol concentrations at the nearest sensitive receptor, or at an equivalent distance downwind of the biowaste treatment operations, which are attributable to the biowaste treatment operations. The maximum acceptable concentrations are respectively 1000 and 500 CFU m⁻³ for total bacteria and *Aspergillus fumigatus*.

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“disposal” means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No. 1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

“Industrial Emissions Directive” means Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions.

“List of Wastes” means the list of wastes established by Commission Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste, as amended from time to time.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“pests” means Birds, Vermin and Insects.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

“year” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Permit Number: EPR/XP3839FJ

Operator:

**Shanks Waste
Management Limited**

**Facility: Sowerby Woods
Resource Park**

Form Number:

Air1 / DD/MM/YY

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
A1	Ammonia	--	1 hour period		BS EN 14791		
A1	Odour	--	Determined in accordance with BS EN 13725:2003 for Dynamic Dilution Olfactometry		BS EN 13725 and MID Triplicate samples reporting geometric mean		
A1	Total Volatile organic compounds (VOCs)	--	1 hour period		BS CEN/TS 13649		
A1	Total Bacteria	--	1 hour period		In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities.		
A1	Aspergillus fumigatus	--					
A2	Particulate Matter	10 mg/m ³	1 hour period		BS EN 13284-1		

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date

(Authorised to sign as representative of Operator)

Permit Number: **EPR/XP3839FJ**

Operator: **Shanks Waste
Management Limited**

Facility: **Sowerby Woods
Resource Park**

Form Number: **WaterUsage1 / DD/MM/YY**

Reporting of Water Usage for the year YYYY

Water Source	Usage (m³/year)	Specific Usage (m3/unit output)
Mains water		
Site borehole		
River abstraction		
TOTAL WATER USAGE		

Operator's comments:

Signed

Date

(authorised to sign as representative of Operator)

Permit Number: **EPR/XP3839FJ**

Operator: **Shanks Waste
Management Limited**

Facility: **Sowerby Woods
Resource Park**

Form Number: **Energy1 / DD/MM/YY**

Reporting of Energy Usage for the year YYYY

Energy Source	Energy Usage		Specific Usage (MWh/unit output)
	Quantity	Primary Energy (MWh)	
Electricity*	MWh		
Natural Gas	MWh		
TOTAL	-		

* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments:

Signed

Date

(Authorised to sign as representative of Operator)

Permit Number: EPR/XP3839FJ

**Operator: Shanks Waste
 Management Limited**

**Facility: Sowerby Woods
 Resource Park**

Form Number: Performance1 / DD/MM/YY

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units
Sulphuric acid used	tonnes

Operator's comments:

Signed

Date

(Authorised to sign as representative of Operator)