



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Brosters Environmental Limited

Sharneyford Works
Bacup Road
Todmorden
OL14 7AF

Variation application number

EPR/DB3107XR/V004

Permit number

EPR/DB3107XR

Sharneyford Works

Permit number EPR/DB3107XR

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. All the conditions of the permit have been varied and are subject to the right of appeal.

Changes introduced by this variation notice/statutory review

The Industrial Emissions Directive (IED) came into force on 7 January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) Conclusions as described in the Commission Implementing Decision. Article 21(3) of the IED requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

The scope of the permit review also covers the assessment of:

- the bioaerosols monitoring and compliance with M9 bioaerosols monitoring requirements;
- the design and construction of secondary containment and storage lagoons;
- the available storage facilities and measures to reduce ammonia emissions from storage; and
- information on existing medium combustion plant and/or specified generators on site.

This variation has been issued to update some of the conditions following a statutory review of the permits in the industry sector for biowaste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations.

Brief description of the process

Sharneyford Works is located 4.5 km west of Todmorden, West Yorkshire, centred approximately on National Grid Reference SD 89390 24204. The site operates in-vessel composting facility (IVC), which falls under a Section 5.4 Part A(1)(b)(i) installation activity. The previous variation (V003) authorised an increase in the annual throughput of waste from 125,000 tonnes to 200,000 subject to Pre-operational Condition PO1, which has been completed.

Waste is received, shredded, mixed and composted within vessels to produce a sanitised compost material that is dispatched off-site to be further stabilised and matured. Operations are carried out within buildings constructed of an impermeable concrete floor and walls which are double clad to provide a water and air-tight structure. Liquid wastes arising from the composting process, vehicle steam cleaning, and biofilters are collected and pumped into sealed holding tanks prior to being removed by tanker for disposal. The building's air extraction process removes air from the building and through odour abatement plant prior to discharge to air.

The nearest human receptors are within 75m of the facility. There are two Special Areas of Conservation (SACs) and one Special Protection Area (SPA) within 10km of the facility and one Local Nature Reserve (LNR), for Local Wildlife Sites (LWS) and one Ancient Woodland (AW) within 2km of the facility.

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 EAWML 65537	Duly made 12/10/2006	Application for an in-vessel composting facility. (EPR reference SP3096ZY/A001).
Permit determined EAWML 65537	29/03/2007	Original permit issued to TEG Environmental Plc (EPR/SP3096ZY).
Regulator initiated variation determined EAWML 65537	13/09/2007	Varied permit issued to amend condition 3.6.1 Pests and Table 2.1 Licensed activities (EPR/SP3096ZY/V002).
Application variation EAWML 65537	19/02/2008	Varied permit issued to amend condition 2.2.1 Perst and Table 2.2 Licensed waste types and quantities (EPR/SP3099ZY/V003).
Variation determined EAWML 65537	16/07/2008	Varied permit issued to amend condition 2.2.1 Waste acceptance and Table 2.2 Licensed waste types and quantities (EPR/SP3096ZY).
Application EPR/SP3096ZY/V004	Duly made 19/05/2010	Application to use end-of-life tyres complying with PAS 108 in the construction of walls for a biofilter.
Additional information received	09/06/2010	Environmental risk assessment.
Variation determined EPR/SP3096ZY	16/06/2010	Varied permit issued.
Application EPR/DB3107XR/T001 (full transfer of permit EPR/SP3096ZY)	Duly made 30/05/2015	Application to transfer the permit in full to Brosters Environmental Limited.
Transfer determined EPR/DB3107XR	25/06/2015	Full transfer of permit.
Application EPR/DB3107XR/V003 (variation and consolidation)	Duly made 17/09/2014	Application to vary and update the permit to modern conditions to reflect changes under IED.
Additional information received	17/08/2015	Information to support change in application type.
Additional information received	25/04/2017	Information to support change in application type.
Variation determined EPR/DB3107XR/V002	04/08/2017	Varied and consolidated permit issued in modern condition format.
Application EPR/DB3107XR/V003 (variation and consolidation)	Duly made 14/03/2019	Application to vary the permit to increase the annual waste throughput, install three new in vessel tunnels and implement process and abatement improvements.
Additional information received	31/05/2019	Response to Schedule 5 Notice including information about odour impact assessment, biofilter humidity, scrubber system, processing times, air extraction system, ventilated floor, new doors, effluents and odour emergencies.
Additional information received	16/08/2019	Response to Schedule 5 Notice including information about scrubber and humidification system, air handling system and biofilter sizing and monitoring.
Additional information received	14/10/2019	Further information on fan controls and design.

Status log of the permit		
Description	Date	Comments
Additional information received	30/10/2019	Submission of revised Odour Management Plan.
Additional information received	08/11/2019	Clarification on completed improvements.
Additional information received	18/12/2019	Submission of revised Odour Management Plan.
Variation determined EPR/DB3107XR	20/12/2019	Varied permit issued.
Regulation 61 Notice sent to Operator	22/04/2021	Regulation 61 Notice requiring information for statutory review of permit.
Regulation 61 Notice response	21/10/2021	Response received from the operator.
Application EPR/DB3107XR/V004 (variation and consolidation)	Environment Agency Initiated Variation	Statutory review of permit occasioned by Waste Treatment BAT Conclusions published on 17 August 2018.
Environment Agency Biowaste Treatment Sector Review Permit reviewed Variation determined EPR/DB3107XR (Billing Ref: WP3401MB)	04/07/2023	Varied and consolidated permit issued.

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/DB3107XR

Issued to

Brosters Environmental Limited (“the operator”)

whose registered office is

5A The Common

Parbold

Wigan

Lancashire

WN8 7HA

company registration number 09552812

to operate a regulated facility at

Sharneyford Works

Bacup Road

Todmorden

OL14 7AF

to the extent set out in the schedules.

The notice shall take effect from 04/07/2023

Name	Date
Beccy Brough	04/07/2023

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/DB3107XR

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/DB3107XR/V004 authorising,

Brosters Environmental Limited (“the operator”),

whose registered office is

5A The Common

Parbold

Wigan

Lancashire

WN8 7HA

company registration number 09552812

to operate an installation at

Sharneyford Works

Bacup Road

Todmorden

OL14 7AF

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

Name	Date
Beccy Brough	04/07/2023

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”).
- 2.1.2 The activities shall be undertaken in accordance with best available techniques.
- 2.1.3 All process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer’s recommendations.
- 2.1.4 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

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.
 - (c) the facility has sufficient free capacity to store and treat the waste.
- 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.

- 2.3.7 Waste pre-acceptance and acceptance procedures shall be undertaken in accordance with best available techniques.

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 operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table 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 and S3.2.
- 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.

3.5 Monitoring

3.5.1 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 S3.2;
- (b) process monitoring specified in table S3.3;
- (c) bioaerosols monitoring specified in table S3.4.

3.5.2 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.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 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 and S3.2 unless otherwise agreed in writing by the Environment Agency.

3.6 Bioaerosols

3.6.1 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 action levels specified in table S3.4.

3.6.2 The operator shall where the emission action levels 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.

3.7 Pests

3.7.1 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.

3.7.2 The operator shall:

- (a) only use approved products for pest control;
- (b) treat pest infestations promptly;

- (c) reject pest-infected incoming waste;
- (d) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
- (e) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8 Fire prevention

- 3.8.1 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.
- 3.8.2 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.

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 annual production/treatment data set out in schedule 4 table S4.2; and

- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 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 S4.4; 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 1 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 a bi-annual report of the efficiency of the biofilter in the first year of compost operations. 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. Thereafter the operator shall submit the report within one month of the end of each year, unless otherwise agreed in writing by the Environment Agency.

4.2.7 The operator shall keep records of non-waste materials leaving the site, including the type of material, the batch number, the date of export off-site and the tonnage exported on that date. These records shall be maintained for at least 2 years.

4.2.8 The operator shall submit an annual report detailing the efficiency of removal of non-compostable materials from feedstock prior to processing and the level of contamination in the final recovered compost.

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 Following the detection of an issue listed in condition 4.3.1, the operator shall review and revise the management system and implement any changes as necessary to minimise the risk of reoccurrence of the issue.
- 4.3.4 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.
- 4.3.5 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.
- 4.3.6 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.
- 4.3.7 The Environment Agency shall be given at least 14 days' notice before implementation of any part of the site closure plan.

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 "immediately", 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
AR1	S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment.	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From receipt of waste through to composting and recovery of by-products.</p> <p>Composting of waste under aerobic conditions in 9 closed composting reactors or in closed vessels/buildings fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
Directly Associated Activity			
AR2	Storage of waste pending recovery or disposal	R13: Storage of waste pending the R3 operation (excluding temporary storage, pending collection, on the site where it is produced)	<p>From the receipt of waste to despatch for composting or despatch off site for recovery and/or disposal.</p> <p>Storage of waste in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
AR3	Physical treatment for the purposes of recycling	R3: Recycling/reclamation of organic substances which are not used as solvents	<p>From the receipt of waste to despatch for composting or despatch off site for recovery.</p> <p>Pre-treatment of waste prior to composting in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system</p>

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
			<p>including shredding and screening.</p> <p>Post-treatment of processed compost in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system including screening to remove contraries.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
AR4	Raw material storage	Storage of raw materials including lubrication oil, antifreeze, activated carbon, diesel.	From the receipt of raw materials to despatch for use within the facility.
AR5	Storage of finished compost and non-composted fraction	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)	<p>From the receipt of processed uncertified compost and non-composted fraction produced at the facility to treatment on site and despatch for use off-site.</p> <p>Storage of processed uncertified compost in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system.</p>
AR6	Process water collection and storage	Collection and storage of compost liquor/leachate in 3 storage tanks.	From the receipt of compost leachate produced at the facility to despatch for treatment at the facility or despatch off site for recovery or disposal.
AR7	Air treatment	Collection and treatment of air from the buildings or plant using abatement system – (wet scrubbers, biofilters) prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Updated application forms and supporting documents	24/04/2017
Response to Schedule 5 Notice dated 17/08/2015	Odour management plan reference OMP V1 062015 in response to section 5B, Table 3 – General Requirements, Part B of the application form	17/08/2015
Variation Application EPR/DB3107XR/V003 Response to Schedule 5 Notice dated 30/04/19	Responses to questions 1.2.1 to 1.2.5, 1.4.1 to 1.4.5, 2.1.1, 2.1.2, 3, 3.1.1 to 3.1.3, 4.1.1, 5, 6 and 7.	31/05/2019
Variation Application EPR/DB3107XR/V003 Response to request for further information dated 03/10/19	E-mail response to questions 1, 2 and 3 submitted 14/10/19.	14/10/2019
Variation Application EPR/DB3107XR/V003 Response to request for further information dated 25/11/2019	Odour Management Plan, Version 4.5, dated 19 December 2019, submitted via e-mail on 18/12/19 (or otherwise revised, updated and approved OMP)	18/12/2019
Response to Regulation 61 Notice dated 22/04/2021	Annex 1 Returns Spreadsheet Compliance and operating techniques identified in response to BAT Conclusions 1 to 8, 10 to 24 and 33 to 38 in the Waste Treatment BREF published on 17 August 2018.	Received 22/10/2021

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall install three new IVC vessels as described in a response to question 3 of the Schedule 5 Notice dated 30 April 2019.	Completed
IC2	The operator shall refresh, re-install and renew the biofilters as described in a response to question 10 of the Schedule 5 Notice dated 17 July 2019.	Completed
IC3	The operator shall install the new ducting and fans as described in document Building Ventilation Scheme-bw-v3-Aug 2019 submitted in a response to question 7 of the Schedule 5 Notice dated 17 July 2019.	Completed
IC4	The operator shall install electronic monitoring systems within the Biofilters 1 and 2 for monitoring of the following biofilter parameters: <ul style="list-style-type: none"> • Plenum Pressure • Plenum air temperature • Plenum air RH% • Biofilter media temperature • Biofilter media moisture 	Completed
IC5	Following the completion of installation/renewal of all odour abatement and air handling units including in accordance with IC2, IC3 and IC4, the operator shall carry out a review of the odour abatement systems in	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	<p>order to determine whether the systems have been effective in minimising odorous emissions.</p> <p>The operator shall submit a written report to the Environment Agency following this review for written approval.</p> <p>This report shall include the following:</p> <ul style="list-style-type: none"> • A minimum of 2 months of daily odour monitoring results at the site boundary • For each odour abatement system, at least three inlet and outlet monitoring results for all odorous compounds shall be taken during full operation using MCERTS methods and in line with M2 monitoring guidance • For each odour abatement system, based on inlet and outlet monitoring, calculations of the percentage treatment efficiency for each odorous component of the gas stream shall be provided and • Recommendations for improvement <p>In the event:</p> <ul style="list-style-type: none"> • odour is detected at the boundary of the site; or • inlet and outlet monitoring and/or process monitoring does not indicate effective BAT treatment of odour in line with the efficiency and process monitoring figures; or • improvements are identified <p>the report shall include timescales for implementation of improvements to the abatement system for agreement with the Environment Agency.</p> <p>Once approved and from the date stipulated by the Environment Agency, the report outcomes shall be implemented in accordance with the agreed timescales, subject to such amendments or additions as notified by the Environment Agency.</p>	
IC6	<p>Following the completion of IC5, an updated Odour Management Plan shall be submitted to the Environment Agency approval. Once approved and from the date stipulated by the Environment Agency, the plan shall be implemented in accordance with the agreed timescales, subject to such amendments or additions as notified by the Environment Agency.</p>	Completed
IC7	<p>The operator shall update the preventative maintenance programme to include the inspection, cleaning and maintenance of the humidification system, water scrubber, misting units and fans/air handling system. This should include details of the methods and a frequency of the checks to be undertaken.</p>	Completed

Table S1.4 Pre-operational measures for future development			
Reference	Operation	Pre-operational measures	Completed
PO1	Increase in throughput	The operator is not allowed to increase the annual throughput from 125 000t to 200 000t until the Environment Agency has given a written permission under this condition. This is subject to improvement requirements IC1, IC2, IC3, IC4, IC5, IC6 and IC7 being completed and approved by the Environment Agency. Condition IC5 will be considered complete when the final report and any identified improvements have been approved by the Environment Agency and completed in accordance with the approval.	Approved 20/01/2021 (ref. CARform FP3637WZ/0383274)

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel oil	Sulphur content not exceeding 0.1% by mass

Table S2.2 Permitted waste types and quantities for composting in closed systems	
Maximum quantity	Annual throughput shall not exceed 200,000 tonnes.
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • waste consisting solely or mainly of dusts (except sawdust), powders or loose fibres • hazardous wastes • wastes that are in liquid form • wastes containing wood-preserving agents or other biocides and treated wood and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013. • pest infested waste
Waste code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning – vegetables, fruit and other crops
02 01 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled fully biodegradable animal bedding)
02 01 07	wastes from forestry

02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning, peeling, centrifuging and separation including wash waters and sludges from secondary food processing or the cook chill sector
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 01	sludges from washing, cleaning peeling, centrifuging and separation (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 04	materials unsuitable for consumption or processing (including waste from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 03 05	sludges from on-site effluent treatment (including sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch only)
02 04	wastes from sugar processing
02 04 03	sludges from on-site effluent treatment
02 05	wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 03	sludges from on-site effluent treatment
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa))
02 07 02	wastes from spirits distillation – spent grains, hops and whisky filter sheets and cloths, yeast and yeast like residues, sludge from production process, or malt husks, malt sprouts, yeasts and yeast-like residues only

02 07 04	materials unsuitable for consumption or processing – biodegradable wastes from the processing of the raw materials used in the production of such beverages only (wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa))
02 07 05	sludges from on-site effluent treatment – sludges from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork – virgin timber only
03 01 05	sawdust, shavings, cuttings, wood and particle board other than those mentioned in 03 01 04 – virgin timber only
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood – virgin timber only
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 09	lime mud waste
03 03 10	fibre rejects, fibre-, filler-, and coating-sludges from mechanical separation
03 03 11	Sludges from on-site effluent treatment other than those mentioned in 03 03 10
04	Wastes from the leather, fur and textile industries
04 01	wastes from the leather and fur industry
04 01 01	fleshings and lime split wastes
04 01 02	liming waste
04 01 05	tanning liquor free of chromium
04 01 07	sludges, in particular from on-site effluent treatment free of chromium
04 01 09	waste from dressing and finishing
04	Wastes from the leather, fur and textile industries
04 02	Waste from the textile industry
04 02 10	organic matter from natural products (un-dyed and untreated only)
04 02 20	sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21	wastes from unprocessed textile fibres

04 02 22	wastes from processes textile fibres
07	Wastes from organic chemical processes
07 01	wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 12	sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 12	sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 03	wastes from the MFSU of organic dyes and pigments (except 06 11)
07 03 12	sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 05	wastes from the MFSU of pharmaceuticals
07 05 12	sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14	solid wastes other than those mentioned in 07 05 13
07 06	wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12	sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 07	wastes from the MFSU of fine chemicals and chemical products not otherwise specified
07 07 12	sludges from on-site effluent treatment other than those mentioned in 07 07 11
08	Waste from the manufacture, formulation, supply and use (MFSU) of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
08 02	wastes from MFSU of other coatings (including ceramic materials)
08 02 01	waste coating powders
08 02 02	aqueous sludges containing ceramic materials
08 02 03	aqueous suspensions containing ceramic materials
08 03	wastes from MFSU of printing inks
08 03 07	aqueous sludges containing ink
10	Wastes from thermal processes
10 01	wastes from power stations and other combustion plants (except 19)
10 01 26	wastes from cooling-water treatment
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable standard
15 01 03	wooden packaging – virgin timber only
15 01 09	textile packaging (made entirely from biodegradable fibres only)
15 02	absorbents, filter materials, wipingcloths and protective clothing

15 02 03	absorbents, filter materials and cloths from the production of alcoholic and non-alcoholic beverages other than those mentioned in 15 02 02 – hops and whisky filter sheets and cloths made from compostable material only
16	Wastes not otherwise specified in the list
16 03	off-specification batches and unused products
16 03 06	organic wastes other than those mentioned in 16 03 05 – untreated wool fleece only (excludes hides and skins)
16 10	aqueous liquid wastes destined for off-site treatment
16 10 02	aqueous liquid wastes other than those mentioned in 16 10 01
16 10 04	aqueous concentrates other than those mentioned in 16 10 03
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 02	wood, glass and plastic
17 02 01	wood – allowed if biodegradable material only, with no chemical additives or preservative, and no persistent organics present. Untreated wood only. Not allowed if treated, for example contains veneers, other coatings or preserving substances.
17 08	Gypsum-based construction material
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed from waste types listed in this table only
19 02 06	sludges from physico/chemical treatment other than those mentioned in 19 02 05 (only if derived solely from physical treatment and/or pH adjustment of waste input types listed in this table)
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes from a composting process that accepts waste input types listed in this table
19 05 02	non-composted fraction of animal and vegetable wastes from a composting process that accepts waste input types listed in this table
19 05 03	off-specification compost from a composting process that accepts waste input types listed in this table, made up of previously sanitised batches only
19 06	wastes from anaerobic treatment of waste

19 06 03	liquor from anaerobic treatment of municipal waste from a process that accepts waste input types listed in this table or anaerobic digestion permit, and made up of previously pasteurised and stabilised batches only
19 06 04	digestate from anaerobic treatment of municipal waste from a process that accepts waste input types listed in this table or anaerobic digestion permit, and made up of previously pasteurised and stabilised batches only
19 06 06	digestate from anaerobic treatment of animal and vegetable waste from a process that accepts waste input types listed in this table or anaerobic digestion permit, and made up of previously pasteurised and stabilised batches only
19 08	wastes from waste water treatment plants not otherwise specified
19 08 01	screenings
19 08 02	waste from desanding
19 08 05	sludges from treatment of urban waste water
19 08 12	sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14	sludges from other treatment of industrial waste water other than those mentioned in 19 08 13
19 09	wastes from the preparation of water intended for human consumption or water for industrial use
19 09 01	solid waste from primary filtration and screenings
19 09 02	sludges from water clarification
19 09 03	sludges from decarbonation
19 09 04	spent activated carbon
19 09 05	saturated or spent ion exchange resins
19 09 06	solutions and sludges from regeneration of ion exchangers
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable packaging only
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (and only including wastes types listed in this table)
19 13	wastes from soil and groundwater remediation
19 13 02	soild wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
19 13 08	aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07

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 (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified compostable packaging only
20 01 08	compostable kitchen and canteen waste – containing compostable plastics certified to EN 13432 or equivalent certified compostable only (Category 3 ABPR waste only)
20 01 25	edible oil and fat
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 38	wood other than that mentioned in 20 01 37 – Allowed if biodegradable material only, with no chemical additives or preservative, and no persistent organics present. Non treated wood waste. Not allowed if any non-biodegradable coating or preserving substance present.
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste (plant matter only)
20 03	other municipal wastes
20 03 01	mixed municipal waste – only separately collected biodegradable wastes of types listed within this table
20 03 02	waste from markets – allowed only if source segregated biodegradable fractions
20 03 06	waste from sewage cleaning

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Biofilter 1 [as shown in Schedule 7 Site Plan]	Channelled emissions such as odour abatement stack or vent(s)	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling NIOSH 6013 for analysis
		Ammonia	20 mg/m ³	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	No limit set	--	Once every 6 months	BS EN 13725
Biofilter 2 [as shown in Schedule 7 Site Plan]	Channelled emissions such as odour abatement stack or vent(s)	Hydrogen sulphide	No limit set	Average over sample period	Once every 6 months	CEN TS 13649 for sampling NIOSH 6013 for analysis
		Ammonia	20 mg/m ³	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	No limit set	--	Once every 6 months	BS EN 13725

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Outlet to Midgelden Brook, south of Bacup Road as indicated on site plan in application EPR/DB3107XR/V002	Uncontaminated site surface water from roofs and non-operational areas via an interceptor	Oil or grease	No visible oil or grease	--	Weekly	Visual assessment

Note 1 – Clean surface water from roofs, or from areas of the site that are not being used in connection with storing and treating waste can be discharged directly to surface waters, or to groundwater by seepage through the soil via a soakaway.

.Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Meteorological conditions	Wind speed, Air temperature, Wind direction	Continuous	As specified in the Environmental Management System	Weather station or anemometer and wind sock
Stockpiles prior to composting including screened and shredded material	Temperature	Daily prior to processing	Temperature probe	Monitoring equipment shall be available on site and used as required to maintain aerobic conditions and ensure compliance with this permit.
	Moisture	Daily prior to processing	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	
	C:N Total Organic Carbon and Total Kjeldahl Nitrogen	On acceptance or as agreed in an approved odour management plan	Total Organic Carbon using recognised industry method Total Kjeldahl Nitrogen in accordance with BS EN 13654-1	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency. Uncontrolled self-heating and decomposition must be prevented in accordance with the Accident Management Plan and/or Fire Prevention Plan. Process shall be controlled in accordance with permit condition 3.3 and the Odour Management Plan. Sampling of waste shall be in accordance with EN14899.

				Anaerobic conditions shall be prevented.
	Fly infestation or pupa formation	Daily – for stockpiles in storage prior to preparation and stockpiles in sanitisation stage Weekly – for stockpiles in stabilisation stage	Visual inspection	Records of fly count must be maintained as necessary and infested waste should be rejected in accordance with waste acceptance procedures and in accordance with permit condition 3.7.
Representative internal core for each composting batch during sanitisation and stabilisation stage	Temperature	Continuous during sanitisation stage for IVC treating animal by-products Daily during stabilisation stage	Temperature probe Temperature probe shall record core waste temperature and probe placement must be sufficient to record temperature uniformly.	Monitoring equipment shall be available on site and used as required to maintain aerobic conditions and ensure compliance with this permit. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Moisture	On acceptance or prior to loading vessel during sanitisation stage At least daily during stabilisation stage	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	Process shall be controlled in accordance with permit condition 3.3 and the Odour Management Plan. Sampling of waste shall be in accordance with EN14899.
	C:N Total Organic Carbon and Total Kjeldahl Nitrogen	Weekly or as agreed in an approved odour management plan	Total Organic Carbon using recognised industry method	

			Total Kjeldahl Nitrogen in accordance with BS EN 13654-1	Anaerobic conditions shall be prevented.
Representative internal core for each composting batch during further maturation stage	Temperature	Once per week	Temperature probe Temperature probe shall record core waste temperature and probe placement must be sufficient to record temperature uniformly	Process shall be controlled in accordance with permit condition 3.3 and the Odour Management Plan.
	Moisture	Once per week	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	
Internal core for oversize storage piles	Temperature	Once per week	Temperature probe As specified in the Environmental Management System	Uncontrolled self-heating and decomposition must be prevented in accordance permit condition 3.8, the Fire Prevention Plan and/or Accident Management Plan.
Leachate storage tanks	Volume	At least daily	Visual or capacity measurement	750 mm freeboard must be maintained for storage lagoons. Records of volume must be maintained.

Waste reception building; storage tank(s); maturation area	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary
Storage tank(s)	Integrity checks	Weekly	Visual assessment	--
Odour abatement plant				
Open biofilters				
Biofilter 1 & 2	Surface condition (signs of vegetation and channelling)	Daily	Visual assessment	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content.
	Gas temperature – inlet and outlet	Continuous	Temperature probe / Traceable to national standards	
	Biofilter media moisture	Daily	Moisture meter, Grab test, oven drying or recognised industry method	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	pH (biofilter drainage effluent)	Weekly	pH metre or litmus paper	
	Efficiency assessment	Annual	Media health, air-flow distribution and emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the	As agreed in the odour management plan and	Action levels to be agreed in writing by the

		Environment Agency.	approved by the Environment Agency	Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	As agreed in the odour management plan and approved by the Environment Agency	Action levels to be agreed in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Scrubbers (water)				
Scrubbers (when in use)	Gas temperature	Continuous	Temperature probe / traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content.
	Gas flow rate	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	Moisture content or humidity – outlet (for	Daily	Moisture meter	

	wet scrubbers if used before other abatement systems)			3.3, the odour management plan and manufacturer's recommendations.
	Back pressure	Weekly	Pressure differential using sensors	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.

Table S3.4 Bioaerosols monitoring requirements – ambient monitoring					
Location or description of point of measurement	Parameter	Bioaerosols action levels (CFU m⁻³)	Monitoring frequency	Monitoring standard or method	Other specifications
Upwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000 ^{Note 1}	Twice a year, unless otherwise advised in writing by the Environment Agency ^{Note 2}	In accordance with Technical Guidance Note M9 – Environmental monitoring of bioaerosols at regulated facilities.	As described in the Technical Guidance Note M9, including all the additional data requirements specified therein.
Downwind of the operational area, as described in the Technical Guidance Note M9	Aspergillus Fumigatus	500 ^{Note 1}			
<p>Note 1 – The bioaerosols action levels are only applicable at downwind sampling locations equivalent to the distance of the nearest sensitive receptor. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors. Assessment of compliance will be based on risk and in line with guidance.</p> <p>Note 2. Where the bioaerosols action levels are exceeded, then monitoring shall be quarterly until such time that it is demonstrated that the site has adequate mitigation for a 12 month period.</p>					

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	Biofilters 1 and 2	Every 6 months	1 January, 1 July
Process monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.3	Every 12 months	1 January
Bioaerosols monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.4	Twice a year unless otherwise advised in writing by the Environment Agency	1 January, 1 July
Biofilter efficiency Parameters as required by condition 4.2.6	Biofilters	Every 12 months	1 January
Non-compostable contamination removal efficiency Parameters as required by conditions 2.3.4 and 2.3.7	--	Every 12 months Yearly report of detailing contamination removal efficiency and progress with plastic reduction contamination	1 January

Table S4.2 Annual production/treatment	
Parameter	Units
Processed compost	tonnes
Recovered outputs	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes or m ³
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	04/07/2023
Bioaerosols	As specified in the Technical Guidance Note M9 or other form as agreed in writing by the Environment Agency	---
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	04/07/2023
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	04/08/2017
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	04/08/2017
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	04/08/2017
Waste Returns	E-waste Returns 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	
Name of operator	
Location of Facility	
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.

“accident management plan” means a plan that identifies risks and failures which can have an impact on the environment or have environmental consequences. The plan forms part of the management system. The plan must minimise the potential causes and consequences and identify clearly the roles, responsibilities and action to be taken to minimise the consequences of accidents. This includes measures to prevent and control fires on site, DSEAR assessment and clearly marked zones.

“Animal By-Products Regulations” means The Animal By-Products (Enforcement) (England) Regulations 2013 (SI 2013 No. 2952).

“animal waste” means any waste consisting of animal matter that has not been processed into food for human consumption. This does include blood, feathers, uncooked butchers waste and any other animal waste that is not catering waste or former foodstuffs. This does not include faecal matter from animals (e.g. chicken litter or farmyard manure).

“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.

“best available techniques” means the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for providing the basis for emission limit values and other permit conditions designed to prevent and, where that is not practicable, to reduce emissions and the impact on the environment as a whole:

- a. ‘techniques’ includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned;
- b. ‘available techniques’ means those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and the advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator;
- c. ‘best’ means most effective in achieving high general level of protection of the environment as a whole.

“bioaerosols action levels” 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*. Where these action levels are elevated, the operator must take action to mitigate the impact on sensitive receptors.

“biodegradable” means a material is capable of undergoing biological anaerobic or aerobic degradation leading to the production of CO₂, H₂O, methane, biomass and mineral salts depending on the environmental conditions of the process.

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

“capacity” means the potential capacity and not historical or actual production levels or throughput. This means that the designed capacity is the maximum rate at which the site can operate. Biological treatment of waste usually takes place over more than one day, so the physical daily capacity can be calculated by dividing the maximum quantity of waste that could be subject to biological treatment at any one time by the minimum residence time. For in-vessel composting, the residence time for sanitisation should be calculated separately and then aggregated to the complete composting time. Further guidance [‘RGN2: Understanding the meaning of regulated facility Definition of regulated facility’](#) is available.

“channelled emissions” means the emissions of pollutants into the environment through any kind of duct, pipe, stack, etc. This also includes emissions from open top biofilters.

“closed system” means a closed composting reactor or closed area (such as a building) in which waste is fully contained and efficient air management abatement systems are demonstrated. This may cover a wide range of technology and where necessary is in compliance with the Animal By-Products Regulations.

“competent persons and resources” means that a technically competent person accredited to a relevant scheme must attend site and record their attendance, and that all roles and responsibilities are clearly stated in the management systems along with records of operatives’ training. See the guidance on the level of competence and duration of attendance

“compost” means solid particulate material that is the result of composting, which has been sanitised and stabilised, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

‘compostable plastics’ means waste containing packaging or non-packaging items (or both) with a valid certificate of conformity to EN 13432 or an equivalent standard for compostable and digestible items, the certificate issued by an independent certification body capable of fully biodegrading by a biological process to create compost or digest.

“composting” means the biological decomposition of organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat and that result in compost.

“composting batch” means an identifiable quantity of material that progresses through the composting system and when fully processed has similar characteristics throughout. For composting systems that operate on a continuous or a plug-flow basis, batches will be taken to mean a series of “portions of production”.

‘direct discharge’ means discharge to a receiving water body

“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.

“hazardous waste” has the meaning given in the Hazardous Waste (England and Wales) Regulations as amended.

‘impermeable surface’ means a surface or pavement constructed in accordance with CIRIA 736 or a demonstrated equivalent and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term ‘sealed drainage system’.

“incidental contamination” means low levels of incidental waste, for example plastic that may be contained within the feedstock waste.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“maturation” means a stage when by agitating and turning the compost, it no longer results in reheating and the monitored temperature falls to ambient without the compost being too dry or anaerobic. Phytotoxins that

are formed during the active composting phase are metabolised by microorganisms, which will result in the final material not being too harmful to plants. This usually coincides with a drop in pH toward neutral, and the conversion of ammonia into nitrates and recolonization of beneficial microorganisms. The maturation phase may need active management by turning to prevent the material becoming anaerobic.

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

‘nearest sensitive receptor’ means the nearest place to the permitted activities where people are likely to be for prolonged periods. This term would therefore apply to dwellings (including any associated gardens) and to many types of workplaces. We would not normally regard a place where people are likely to be present for less than 6 hours at one time as being a sensitive receptor. The term does not apply to those controlling the permitted facility, their staff when they are at work or to visitors to the facility, as their health is covered by Health and Safety at Work legislation, but would apply to dwellings occupied by the family of those controlling the composting facility.

“operational area” means any part of a facility used for the handling, storing and treatment of waste.

“operator” means in relation to a regulated facility:

1. the person who has control over the operation of the regulated facility,
2. if the regulated facility has not yet been put into operation, the person who will have control over the regulated facility when it is put into operation, or
3. if a regulated facility authorised by an environmental permit ceases to be in operation, the person who holds the environmental permit

“pests” means birds, vermin and insects.

“pollution” means emissions as a result of human activity which may-:

1. be harmful to human health or the quality of the environment,
2. cause offence to human sense.
3. result in damage to material property, or
4. impair or interfere with amenities and other legitimate uses of the environment.

“post-consumer wood” means manufactured treated wooden materials and products that have been discarded.

“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.

“representative internal” means representative monitoring at a point internally of the windrows that will give a representative assessment of temperature. Note: Larger windrows will require more bespoke temperature equipment to adequately assess temperature profiles accurately.

“sanitisation” means the actively managed and intensive stage of composting, lasting for at least five days, characterised by high oxygen demand and temperatures of over 55 °C, during which biological processes, together with conditions in the composting mass, eradicate human and animal pathogens or reduce them to acceptably low levels. The operator also needs to meet ABPR requirements.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- a. no liquids will run off the surface otherwise than via the system
- b. all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

“secondary containment” – means a systems that is capable of containing loss from all above ground and underground storage tanks and that complies with CIRIA standard 736 or equivalent standard of design and construction.

“stable, stabilised” means the degree of processing and biodegradation at which the rate of biological activity has slowed to an acceptably low and consistent level and will not significantly increase under favourable, altered conditions.

“stabilisation stage” means the stage of composting following sanitisation, during which biological conditions in the composting mass, give rise to compost that is nominally stable. Soluble carbon is usually not fully used and material is still considered to be in treatment. This stage is a managed process to prevent odours, dust and bioaerosols. There is also a residual risk of reheating and leachate breakout.

“treated wood” means any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, water-borne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and venner).

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, 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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

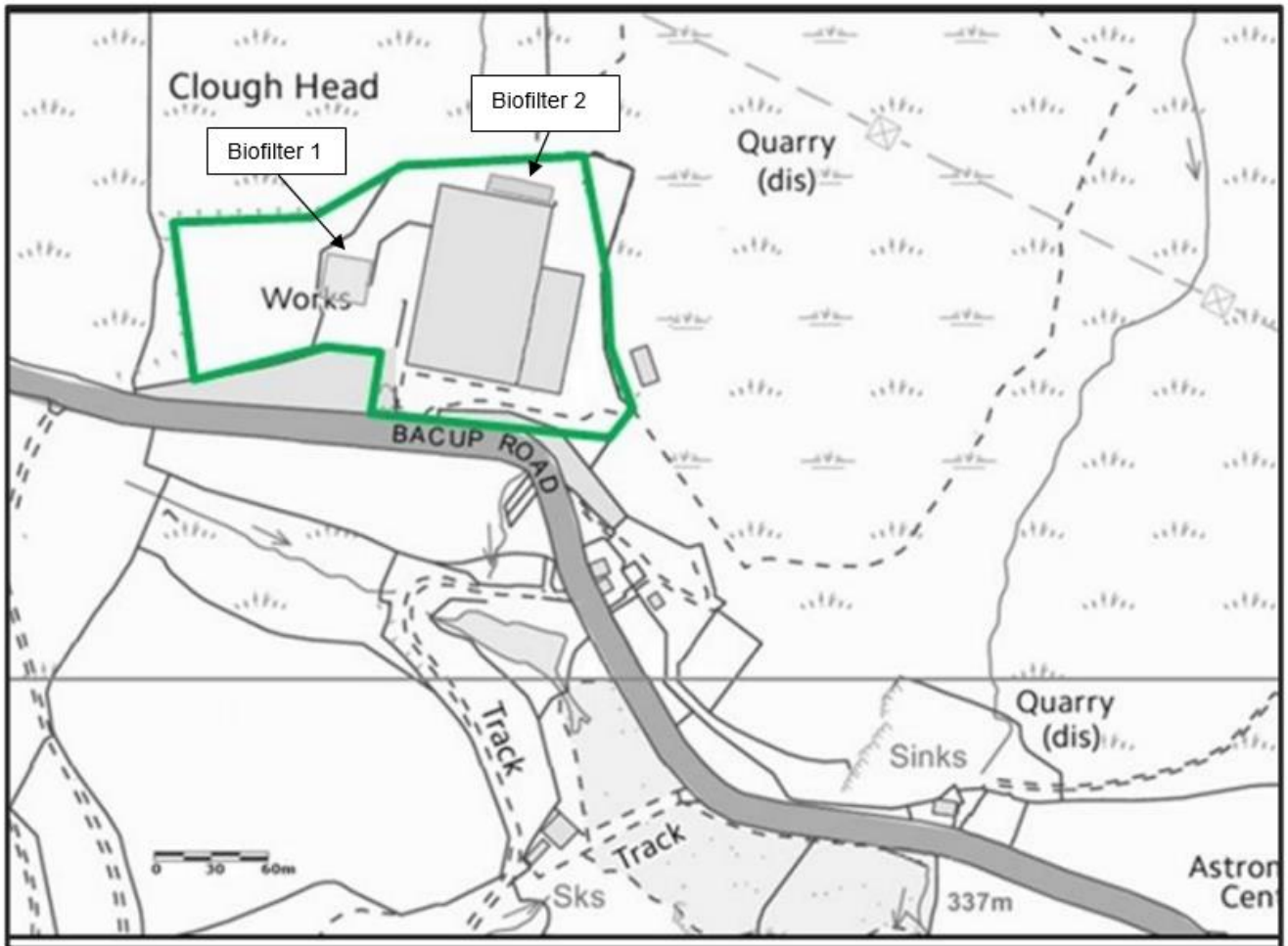
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

1. 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 fuels and gaseous fuels, 6% dry for solid fuels; and/or
2. 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.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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