

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

---

Urbaser Environmental Limited  
Courtauld Road Waste Treatment Facility  
Courtauld Road  
Basildon  
Essex  
SS3 1FL

**Variation application number**

EPR/AP3138CM/V004

**Permit number**

EPR/AP3138CM

# Courtauld Road Waste Treatment Facility

## Permit number EPR/AP3138CM

### 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**

The Courtauld Road Waste Treatment Facility, operated by Urbaser Environmental Limited, is a mechanical and biological treatment plant (MBT) for the treatment of non-hazardous, residual municipal and commercial and industrial solid waste including bulky waste, street sweepings and waste from household waste recycling centres. The MBT facility is permitted to accept up to 420,000 tonnes of waste per year.

The facility comprises the following 4 processes:

##### **Pre-Processing**

Pre-processing allows for the recovery of recyclable material (such as metals, plastics, paper and card) from the residual waste stream with the fine organic fraction being passed through to the biostabilisation phase and certain wastes with low biodegradable content transferred to the quick solid recovered fuel (QSRF) line.

##### **Biostabilisation**

The biostabilisation process is for the treatment of waste under aerobic conditions. Each of the three biostabilisation halls has its own piling system. An automatic bucket wheel is fitted in each hall, to perform periodic turning cycles on the piles. The biostabilisation process lasts for six to seven weeks and the process controls air circulation and moisture levels to ensure aerobic conditions are maintained.

## Refining

After six to seven weeks, the treated waste will be either a stabilised output material (SOM) for disposal to landfill or a solid recovered fuel (SRF) for combustion off site. The waste is then subject to a refining process which involves the screening of the outputs into different sized materials dependent on the end use.

### Production of quick solid recovered fuel (QSRF)

After recyclable material recovery, which takes place during the pre-processing stage, certain waste streams with low biodegradable content will be transferred via conveyor to be shredded within the waste reception area and subsequently bulked for transfer off-site as QSRF. The QSRF will be capable of meeting the non-hazardous landfill waste acceptance criteria.

All waste reception, storage and treatment areas are within buildings to reduce the risk of fugitive emissions of dust, odour, litter, noise and pests. An air treatment system keeps the buildings under negative pressure, and routes the air from within through an acid scrubber to remove ammonia and a biofilter designed to biodegrade odorous and other volatile organic compounds. The treated air is then discharged through a 20.5 m high stack.

A Membrane Bioreactor (MBR) treatment plant will treat any excess liquid leachate generated. The treated effluent water produced by the treatment plant will be re-used in activities in various parts of the facility. Excess treated leachate will be discharged to foul sewer.

The facility will also undertake rainwater harvesting of building roof run-off and surface water from external areas to minimise mains water use. Excess uncontaminated water will be discharged to Nevendon Bushes Brook via an interceptor and balancing pond.

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/AP3138CM/A001	Duly made 01/06/2012	-
Additional information received following Schedule 5 Notice dated 14/08/2012	21/09/2012	-
Additional information received following Schedule 5 Notice dated 17/08/2012	21/09/2012	-
Additional information received following email dated 30/10/2012	07/11/2012	-
Additional information received	02/01/2013	Confirmation of planning permission.
Permit EPR/AP3138CM determined	01/03/2013	Permit issued to Urbaser Environmental Limited.
Notified of change of registered office address EPR/AP3138CM/V002	19/10/2015	Registered office address changed to First Floor, Westmoreland House, 80-86 Bath Road, Cheltenham, Gloucestershire, GL53 7JT
Variation determined EPR/AP3138CM	01/12/2015	Varied permit issued.
Application EPR/AP3138CM/V003 (variation and consolidation)	Duly made 25/07/2017	Application to vary the permit and add a new listed activity, and update the permit to modern conditions.
Additional information received	25/07/2017	Response to request for further information consisting a revised OPRA, updated Part A form

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
		and fugitive emissions risk assessment and management plan.
Schedule 5 notice response received	11/10/2017	Responses to questions 1 to 17 of the notice in relation to the fire prevention plan (FPP) and waste codes for the new activity.
Variation determined EPR/AP3138CM	16/11/2017	Varied and consolidated permit issued.
Regulation 61 Notice sent to Operator	19/07/2019	Regulation 61 Notice requiring information for statutory review of permit.
Regulation 61 Notice response	19/01/2020	Response received from the operator.
Application EPR/AP3138CM/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/AP3138CM (Billing Ref: DP3602BB)	29/09/2020	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/AP3138CM**

### Issued to

**Urbaser Environmental Limited** (“the operator”)

whose registered office is

#### First Floor

**Westmoreland House**

**80-86 Bath Road**

**Cheltenham**

**Gloucester**

**GL53 7JT**

company registration number 07888606

to operate a regulated facility at

**Courtauld Road Waste Treatment Facility**

**Courtauld Road**

**Basildon**

**Essex**

**SS3 1FL**

to the extent set out in the schedules.

The notice shall take effect from 29/09/2020

<b>Name</b>	<b>Date</b>
<b>Daniel Timney</b>	<b>29/09/2020</b>

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/AP3138CM**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/AP3138CM/V004 authorising,

**Urbaser Environmental Limited** (“the operator”),

whose registered office is

**First Floor  
Westmoreland House  
80-86 Bath Road  
Cheltenham  
Gloucester  
GL53 7JT**

company registration number 07888606

to operate an installation at

**Courtauld Road Waste Treatment Facility  
Courtauld Road  
Basildon  
Essex  
SS3 1FL**

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

Name	Date
Daniel Timney	29/09/2020

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 tables S2.2 and S2.3;
  - (b) it conforms to the description in the documentation supplied by the producer and holder; and
  - (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 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, S3.3 and S3.6.
- 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.
- 3.2.4 The operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources.

## **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 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, S3.2 and S3.3;
  - (b) process monitoring specified in table S3.4;
  - (c) bioaerosols monitoring specified in tables S3.5 and S3.6.
- 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, S3.2, S3.3 and S3.6 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 should not exceed the emission action levels specified in tables S3.5 and S3.6.
- 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.

# **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 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.

### 4.3 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 involving biological treatment.	R3: Recycling/reclamation of organic substances which are not used as solvents  D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12	From receipt of waste to despatch for other on-site operations (aerobic composting) and recovery of by-products.  Treatment of waste in closed buildings fitted with appropriate odour abatement.  All activities shall be undertaken within a building with an impermeable surface and a sealed drainage system.  Waste types suitable for acceptance are limited to those specified in Table S2.2.  No more than 9,000 m <sup>3</sup> of waste to be stored within the waste reception bunkers at any one time.
AR2	Section 5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment.	R3: Recycling/reclamation of organic substances which are not used as solvents  D8: Biological treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12	Treatment of leachate from the facility using Advanced Membrane Bioreactor (MBR). From leachate collection to storage prior to re-use on site or discharge to sewer.  Including reuse of treated leachate on site and storage of sludge as Directly Associated Activities and discharge of excess treated leachate to sewer.

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity and waste types</b>
AR3	Section 5.4 A (1) (a) (ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving physico-chemical treatment	D9: Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12	<p>Production of quick solid recovered fuel (QSRF) in an enclosed building maintained under negative pressure.</p> <p>All activities shall be undertaken within a building with an impermeable surface and a sealed drainage system.</p> <p>Waste types as specified in Table S2.3.</p> <p>No more than 115,000 tonnes of QSRF to be produced on site per annum.</p>
<b>Directly Associated Activity</b>			
AR4	Storage of waste pending recovery or disposal	<p>R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p>D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where the waste is produced)</p>	<p>Undertaken in relation to Activity AR1, AR2 and AR3.</p> <p>From the receipt of permitted waste to pre-treatment and despatch to other on-site operations.</p> <p>Storage of residual wastes from pre-treatment to despatch off-site for recovery.</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 and S2.3.</p>



<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity and WFD Annex I and II operations</b>	<b>Limits of specified activity and waste types</b>
AR5	Physical treatment for the purpose of recycling	<p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R4: Recycling/reclamation of metals and metal compounds</p> <p>R5: Recycling/reclamation of other inorganic compounds</p> <p>R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced).</p>	<p>From waste reception to submission of the waste to the biostabilisation process; including storage and dispatch of recyclable materials and other segregated wastes.</p> <p>Pre-treatment of waste in enclosed building and on impermeable surface with a sealed drainage system including shredding, sorting, screening, compaction, baling.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2 and S2.3.</p>
AR6	Raw material storage	Storage of raw materials for use at the facility	From the receipt of raw materials to despatch for use within the facility.
AR7	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water in sustainable drainage system lagoon.	From the collection of uncontaminated roof and site surface water from non-operational areas only to re-use within the facility or discharge off-site to Nevenden Bushes Brook.
AR8	Air treatment	Collection and treatment of air from the buildings or plant using abatement system – biofilters and acid scrubbers prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.
AR9	Back-up generator	Back-up generator for emergency use.	--

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	Environmental Permit Application EPR/AP3138CM/A001 Amended Submission May 2012 dated 29/05/2012 in response to parts B2 and B3 of the application form. Excluding: Section 4 – Impact on the environment; Annex C – Odour Management Plan.	01/06/2012
Response to Schedule 5 Notice dated 14/08/2012	Responses to questions 1 to 11	21/09/2012
Response to Schedule 5 Notice dated 17/08/2012	Responses to questions 1 to 16	21/09/2012
Request for additional information (email dated 25/10/2012)	Responses to questions 1 to 7 Excluding: Response 7	07/11/2012
EPR/AP3138CM/V003	Response to question on form C3, Question 3a (operating techniques)	25/10/2017
Response to Schedule 5 notice dated 19/09/2017	Responses to questions 1 – 16 of the notice in relation to the Fire Prevention Plan (FPP)	Response to Schedule 5 notice dated 19/09/2017
Response to Regulation 61 Notice dated 19/07/2019	<ul style="list-style-type: none"> <li>• Annex 1 Returns Spreadsheet</li> <li>• Compliance and operating techniques identified in response to BAT Conclusions 1 to 8, 10 to 24 and 33 to 39 in the Waste Treatment BREF published on 17 August 2018.</li> </ul>	Received 19/01/2020
Response to e-mail dated 12/03/2020	Compliance and operating techniques in response to BAT Conclusion 20 and BAT-AEL Table 6.2.	Received 19/03/2020

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1	The operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Completed
IC2	<p>The operator shall review the results of 12 months of bioaerosols monitoring undertaken both from the biofilter stack A1 and the ambient locations as stipulated in tables S3.5 and S3.6 of this permit (formerly S3.1 and S3.4). The review shall include an assessment of the validity of the qualitative bioaerosols risk assessment provided with the permit application when compared with actual results obtained during such monitoring, and shall propose emission limit values for total bacteria and <i>Aspergillus fumigatus</i> emitted from the biofilter stack.</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 for the biofilter stack are to be agreed in writing by 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>	Completed
IC3	The operator shall carry out a noise assessment for installation in accordance with the requirements of BS4142:1997 – Method for Rating Industrial Noise affecting mixed Residential and Industrial Areas. The assessment shall include the impact of operations during day-time and night-time periods, in comparison with the estimated noise impact within the permit application. A written report, summarising the outcome of the assessment, including a timetable for the implementation of any improvements identified, shall be submitted to the Environment Agency.	Completed
<b>Improvement condition for progress report to achieve BAT-AELs</b>		
IC4	<p>The operator shall submit, for approval by the Environment Agency, a report setting out progress to achieving the Best Available Techniques Conclusion Associated Emission Levels (BAT-AELs) where BAT is currently not achieved, but will be achieved before 17 August 2022. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1) Current performance against the BAT-AELs.</li> <li>2) Methodology for reaching the BAT-AELs.</li> <li>3) Associated targets /timelines for reaching compliance by 17 August 2022.</li> <li>4) Any alterations to the initial plan (in progress reports).</li> </ol>	<p><b>BATc 20</b></p> <p>Progress reports at six monthly intervals upon completion of PO1 (Table S1.4).</p>

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<p>The report shall address the BAT Conclusions for Waste Treatment with respect to the following:</p> <ul style="list-style-type: none"> <li>• BAT 20 Table 6.2 (compliance with BAT-AELs for indirect discharges to a receiving water body)</li> <li>• BAT 34 Table 6.7 (compliance with BAT-AELs for channelled NH<sub>3</sub>, odour, dust and TVOC emissions to air from the biological treatment of waste)</li> </ul> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	<p><b>BATc 34</b></p> <p>Progress reports at six monthly intervals from date of permit issue:</p> <p>29/03/2021</p> <p>29/09/2021</p> <p>29/03/2022</p>
<b>Improvement condition for progress report to achieve Narrative BAT</b>		
IC5	<p>The operator shall submit, for approval by Environment Agency, a report setting out progress to achieving the 'Narrative' BAT where BAT is currently not achieved, but will be achieved before 17 August 2022. The report shall include, but not be limited to, the following:</p> <ol style="list-style-type: none"> <li>1) Methodology for achieving BAT</li> <li>2) Associated targets /timelines for reaching compliance by 17 August 2022</li> <li>3) Any alterations to the initial plan (in progress reports).</li> </ol> <p>The report shall address the BAT Conclusions for Waste Treatment with respect to BAT 2a, 6, 7, 8, 19c.</p> <p>Refer to BAT Conclusions for a full description of the BAT requirement.</p>	<p>Progress reports at six monthly intervals from date of permit issue:</p> <p>29/03/2021</p> <p>29/09/2021</p> <p>29/03/2022</p>
<b>Improvement condition for secondary containment design</b>		
IC6	<p>The operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of a review conducted, by a competent person, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The review shall consider, but not limited to, the storage vessels, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site.</p> <p>The plan must contain dates for the implementation of individual improvement measures necessary for the secondary and tertiary containment systems to adhere to the standards detailed/referenced within CIRIA C736 (2014) guidance, or equivalent.</p> <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	<p>29/09/2021 or other date as agreed in writing with the Environment Agency</p>
<b>Improvement condition for review of effectiveness of abatement plant</b>		
IC7	<p>The operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia.</p>	<p>29/09/2021 or other date as agreed in writing with the</p>

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<p>The operator shall submit a written report to the Environment Agency following this review for assessment and approval.</p> <p>The report shall include but not limited to the following aspects:</p> <ul style="list-style-type: none"> <li>• Full investigation and characterisation of the waste gas streams.</li> <li>• Abatement stack monitoring results (not limited to odour and ammonia)</li> <li>• Abatement process monitoring results (not limited to odour and ammonia)</li> <li>• Details of air quality quantitative impact assessment including modelling and a proposal for site-specific “action levels” (not limited to odour concentration, hydrogen sulphide and ammonia).</li> <li>• Odour monitoring results at the site boundary</li> <li>• Records of odour complaints and odour related incidents</li> <li>• Recommendations for improvement including the replacement or upgrading the abatement plant</li> <li>• Timescales for implementation of improvements to the abatement plant</li> </ul> <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p>	Environment Agency
<b>Improvement condition for review of abatement plant design</b>		
IC8	<p>The operator shall submit to the Environment Agency a written review report of the design details of the site ventilation system and abatement plant and obtain the Environment Agency’s written approval to it.</p> <p>The report shall include but not limited to:</p> <ol style="list-style-type: none"> <li>a) Ventilation design performance criteria for effective fugitive odorous emission control</li> <li>b) Design of the abatement systems that will ensure compliance with the odour condition 3.3. The report shall include a demonstration (whether by a detailed review of technical papers or by trial results) that all odorous chemical compounds and their loading rates expected in the relevant air streams have been considered in the design; and supporting evidence that the odorous compounds will be controlled and/or abated either by operating techniques or by the proposed abatement systems.</li> <li>c) Design alarms and triggers for each relevant scenario to alert the operator to the malfunction of both ventilation and abatement systems. The report should further list all relevant contingency mitigation actions to minimise risk of elevated odour pollution from the installation linked to each malfunction scenario and detail the actions to restore systems to normal operating conditions for effective odour control.</li> </ol> <p>Ventilation and abatement systems should be designed by suitably qualified named engineers who can supervise and sign-off on construction quality assurance.</p>	29/09/2021 or other date as agreed in writing with the Environment Agency

<b>Table S1.4 Pre-operational measures for future development</b>		
<b>Reference</b>	<b>Operation</b>	<b>Pre-operational measures</b>
1	Advanced membrane bio-reactor waste water treatment operation (AR2)	<p>At least 6 months prior to restarting, the advanced membrane bio-reactor waste water treatment operation, the operator shall submit a BAT report to the Environment Agency for review and approval.</p> <p>The report shall include but not limited to an assessment of compliance of the advanced membrane bio-reactor waste water treatment operation against the Waste Treatment BAT Conclusions and BAT-AELs (current at the time).</p> <p>The advanced membrane bio-reactor waste water treatment operation shall not be restarted until agreed and approved by the Environment Agency.</p>

## Schedule 2 – Waste types, raw materials and fuels

Raw materials and fuel description	Specification
-	-

<b>Maximum quantity</b>	<b>The total annual throughput in Tables S2.2 and S2.3 shall not exceed 420,000 tonnes per year.</b>
<b>Exclusions</b>	Wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> <li>previously separated waste</li> </ul>
<b>Waste code</b>	<b>Description</b>
<b>02</b>	<b>WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING</b>
<b>02 01</b>	<b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>
02 01 03	plant-tissue waste
02 01 07	wastes from forestry
<b>02 03</b>	<b>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</b>
02 03 04	materials unsuitable for consumption or processing
<b>02 05</b>	<b>wastes from the dairy products industry</b>
02 05 01	materials unsuitable for consumption or processing
<b>02 06</b>	<b>wastes from the baking and confectionery industry</b>
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
<b>02 07</b>	<b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>
02 07 04	materials unsuitable for consumption or processing
<b>03</b>	<b>WASTES FROM WOOD PROCESSING AND THE PRODUCTION OF PANELS AND FURNITURE, PULP, PAPER AND CARDBOARD</b>
<b>03 03</b>	<b>wastes from pulp, paper and cardboard production and processing</b>
03 03 01	waste bark and wood
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
<b>15</b>	<b>WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED</b>
<b>15 01</b>	<b>packaging (including separately collected municipal packaging waste)</b>

15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 04	metallic packaging
15 01 06	mixed packaging
<b>19</b>	<b>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</b>
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS</b>
<b>20 01</b>	<b>separately collected fractions (except 15 01)</b>
20 01 01	paper and cardboard
20 01 08	biodegradable kitchen and canteen waste
20 01 39	plastics
20 01 40	metals
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>
20 02 01	biodegradable waste
<b>20 03</b>	<b>other municipal wastes</b>
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 07	bulky waste



<b>Table S2.3 Permitted waste types and quantities for Activity AR3</b>	
<b>Maximum quantity</b>	The total annual throughput in Tables S2.2 and S2.3 shall not exceed 420,000 tonnes per year.
<b>Exclusions</b>	Wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> <li>• <b>consisting solely or mainly of dusts (except sawdust), powders, or loose fibres</b></li> <li>• <b>wastes containing treated wood, wood-preserving agents or other biocides, persistent organic pollutants, Japanese Knotweed</b></li> <li>• <b>sludges (except gully and street cleaning wastes)</b></li> <li>• <b>drummed wastes</b></li> </ul>
<b>Waste code</b>	<b>Description</b>
<b>19</b>	<b>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</b>
<b>19 12</b>	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
<b>20</b>	<b>MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPERATELY COLLECTED FRACTION</b>
<b>20 03</b>	<b>other municipal wastes</b>
20 03 01	mixed municipal waste
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 (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan in schedule 7]	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 <sup>3</sup>	Average over sample period	Once every 6 months	EN ISO 21877
		Odour Concentration	No limit set	-	Once every 6 months	BS EN 13725
		Dust	5 mg/m <sup>3</sup>	Average over sample period	Once every 6 months	EN 13284-1
		TVOC	40 mg/m <sup>3</sup>	Average over sample period	Once every 6 months	EN 12619
A2 [Point A2 on site plan in schedule 7]	Back-up diesel generator	No parameter set	No limit set	--	--	--

<b>Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. unit)</b>	<b>Reference Period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
W1 on site plan in schedule 7 emission to Nevendon Bushes Brook	Uncontaminated site surface water from roofs and non-operational areas	Oil and 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.						

<b>Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
S1 on site plan in schedule 7 emission to Basildon Sewage Treatment Plant [Note 2]	Site effluent /process water	Arsenic [Note 1]	0.05 mg/l	Spot sample or flow-proportional composite sample	Once every month	BS EN ISO 11885 or BS EN ISO 17294-2 or BS EN ISO 15586
		Cadmium [Note 1]	0.05 mg/l			
		Chromium [Note 1]	0.15 mg/l			
		Copper [Note 1]	0.5 mg/l			
		Nickel [Note 1]	0.5 mg/l			
		Lead [Note 1]	0.1 mg/l			
		Zinc [Note 1]	1 mg/l			
		Mercury [Note 1]	5 µg/l			
Note 1 – The monitoring only applies when the substance concerned is identified as relevant in the waste water inventory.						
Note 2 – Upon completion of Pre-operational measure 1, Table S1.4.						

<b>Table S3.4 Process monitoring requirements</b>				
<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Waste reception building area and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Biofilter	Gas temperature – inlet and outlet	Daily	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content.  Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.
	Biofilter media moisture	Daily	Moisture meter or recognised industry method	
	Thatching /compaction	Weekly	Back pressure	
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	pH (biofilter drainage effluent)	Daily	pH metre	In accordance with manufacturer's recommendations.
	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 Environment Agency.	CEN TS 13649 for sampling  NIOSH 6013 for analysis	Action levels to be agreed on completion of IC7 as approved 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 on completion of IC7 as approved in

<b>Table S3.4 Process monitoring requirements</b>				
<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
				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 on completion of IC7 as approved in writing by the Environment Agency.  Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Scrubber	Gas temperature – inlet and outlet	Continuous	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content.  Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.  Equipment shall be calibrated on a 4 monthly basis, or as agreed in
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	Moisture content or humidity – outlet (for wet scrubbers if used before other abatement systems)	Daily	Moisture meter	
	Back pressure	Weekly	Pressure differential using sensors	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for	

<b>Table S3.4 Process monitoring requirements</b>				
<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
			odour removal)	writing by the Environment Agency.
	pH scrubber solution (pre-abatement)	Continuous	pH meter	
	pH scrubber solution (post-abatement)	Continuous	pH meter	
	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 on completion of IC7 as approved 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 on completion of IC9 as approved in writing by the Environment Agency.  Action levels to be achieved in accordance with permit condition 3.2 and the odour management plan.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	In accordance with the LDAR programme	Leak detection and repair (LDAR) programme in accordance with permit condition 3.2.4.
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records.

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.
Storage lagoons and storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons.

Table S3.5 Bioaerosols monitoring requirements – ambient monitoring					
Location or description of point of measurement	Parameter	Bioaerosols action levels (CFU m <sup>-3</sup> )	Monitoring frequency	Monitoring standard or method	Other specifications
Upwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000 <sup>Note 1</sup>	Every 6 months unless otherwise advised in writing by the Environment Agency <sup>Note 2</sup>	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 <sup>Note 1</sup>			
<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 remain quarterly until such time that it is demonstrated that the site has adequate mitigation for a 12 month period.</p>					

<b>Table S3.6 Bioaerosols monitoring requirements – point and area sources</b>					
<b>Location or description of point of measurement</b>	<b>Parameter</b>	<b>Bioaerosols action levels (CFU m<sup>-3</sup>)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Biofilter (stack)	Total bacteria	50,000 [note 1]	Annually, unless otherwise advised in writing by the Environment Agency	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.
	Aspergillus Fumigatus	5,000 [note 1]			
Note 1 - +/- 25% Variability					



## Schedule 4 – Reporting

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

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	A1	Every 6 months	1 January, 1 July
Emissions to water and land Parameters as required by condition 3.5.1	W1	Every 12 months	1 January
Emissions to sewer Parameters as required by condition 3.5.1	S1	Every 12 months	1 January
Process monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.4	Every 12 months	1 January
Bioaerosols monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.5 and S3.6	Twice a year, unless otherwise advised in writing by the Environment Agency	1 January, 1 July

<b>Table S4.2 Annual production/treatment</b>	
<b>Parameter</b>	<b>Units</b>
Stabilised output material	tonnes
Solid recovered fuel	tonnes
Quick solid recovered fuel	tonnes
Non-waste outputs	tonnes

<b>Table S4.3 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Water usage	Annually	tonnes or m <sup>3</sup>
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m <sup>3</sup>

<b>Table S4.4 Reporting forms</b>		
<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Air	Form air 1 or other form as agreed in writing by the Environment Agency	29/09/2020
Bioaerosols	As specified in the Technical Guidance Note M9 or other form as agreed in writing by the Environment Agency	29/09/2020
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	29/09/2020
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	29/09/2020
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	29/09/2020
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	29/09/2020
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	29/09/2020
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	
Name of operator	
Location of Facility	
Time and date of the detection	

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

<b>(b) Notification requirements for the breach of a limit</b>	
<b>To be notified within 24 hours of detection unless otherwise specified below</b>	
Measures taken, or intended to be taken, to stop the emission	

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.

“animal waste” means any waste consisting of animal matter that has not been processed into food for human consumption.

“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 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 a high general level of protection of the environment as a whole.

“bioaerosols action levels” mean the acceptable bioaerosols 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 acceptable concentrations are respectively 1000 and 500 CFU m<sup>-3</sup> 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 CO<sub>2</sub>, H<sub>2</sub>O, 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.

“diffuse emissions” mean non-channelled emissions (e.g. of dust, organic compounds, odour) which can result in ‘area’ sources (e.g. tanks) or ‘point’ sources (e.g. pipe flanges). This also includes emissions from open-air windrow composting.

“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

“Leak detection and repair (LDAR) programme” means a structured approach to reduce fugitive emissions of organic compounds by detection and subsequent repair or replacement of leaking components. Currently, sniffing (described by EN 15446) and optical gas imaging methods are available for the identification of leaks as set out in BAT 14 and section 6.6.2 of the Waste Treatment BAT Conclusions.

“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:

- (a) the person who has control over the operation of the regulated facility,
- (b) 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
- (c) 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—

- (a) be harmful to human health or the quality of the environment,
- (b) cause offence to a human sense,
- (c) result in damage to material property, or
- (d) impair or interfere with amenities and other legitimate uses of the environment.

“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 5 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.

“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:

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

“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.

“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).

“VOC” means Volatile organic compounds as defined in Article 3(45) of Directive 2010/75/EU – ‘volatile organic compound’ means any organic compound as well as the fraction of creosote, having at 293.15K a vapour pressure of 0.01 kPa or more, or having a corresponding volatility under the particular conditions of use.

“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.

“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 fuels 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

# Schedule 7 – Site plan



END OF PERMIT

Permit number  
EPR/AP3138CM