

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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Riverside Bio Limited  
Mitcham Waste Treatment Centre  
43 Willow Lane  
Willow Lane Industrial Estate  
Surrey  
CR4 4NA

**Variation application number**

EPR/JB3737WE/V004

**Permit number**

EPR/JB3737WE

# Mitcham Waste Treatment Centre

## Permit number EPR/JB3737WE

### 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**

Riverside Bio operate an in-vessel accelerated biological treatment facility at Mitcham Waste Treatment Centre at Willow Lane Industrial Estate, Mitcham, Surrey. To the immediate north and east of the site are various industrial businesses, while to the south and west are the River Wandle and sports ground facilities.

The facility operates an aerobic waste treatment operation in the liquid (wet) phase. It is permitted to accept up to 100,000 tonnes a year of non-hazardous waste. The operation consists of:

- reception of raw incoming wastes;
- pulping and pre-processing of raw wastes;
- conversion of biodegradable wastes into a liquid slurry;
- accelerated in-vessel biological treatment in an aerobic environment created by a combination of mechanical mixers and addition of compressed air; and
- dewatering of treated materials followed by temporary storage of dewatered product prior to dispatch off-site; or
- temporary storage of liquid slurry prior to dispatch off-site and/or to an on-site anaerobic digester operated under a separate permit by a different operator.

The biological in-vessel treatment activity falls under a scheduled list activity under the Environmental Permitting Regulations (EPR) namely:

Section 5.4 Part A(1) (b) (i) 'Recovery or 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'.

In addition to the above, the facility also accepts processed digestate from the anaerobic digestion facility, operated by Riverside AD Limited on the same site, for storage and separation prior to dispatch off-site for use. This activity is included in this permit as a waste operation.

Operations take place within an enclosed building. Air from the building is extracted and abated prior to discharge to air via a stack.

The Operator has an Environmental Management System in place.

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.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/EP3792SX/A001 received (EAWML101177)	Duly made 08/09/2009	Application for an accelerated in vessel biological treatment facility.
Permit determined	08/01/2010	Permit issued to Vertal Limited.
Application EPR/JB3737WE/T001	Duly made 30/07/2012	Application to transfer permit EPR/EP3792SX to Riverside Bio Limited.
Transfer application EPR/JB3737WE determined	08/08/2012	Permit transferred to Riverside Bio Limited.
Environment Agency initiated variation EPR/JB3737WE/V002 determined	19/09/2014	Agency initiated variation to update the permit to modern conditions.
Application EPR/JB3737WE/V003 received	Duly made 17/03/2015	Application to vary permit to include a waste operation and a newly prescribed activity under the Industrial Emissions Directive (IED).
Variation determined EPR/JB3737WE/V003 Billing ref YP3939AD	07/07/2016	Variation notice issued.
Regulation 61 Notice sent to Operator	21/10/2019	Regulation 61 Notice requiring information for statutory review of permit.
Regulation 61 Notice response	22/04/2020	Response received from the operator.
Application EPR/JB3737WE/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/JB3737WE (Billing Ref: SP3502SG)	07/10/2021	Varied and consolidated permit issued.

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit number</b>	<b>Date of issue</b>
Riverside AD Limited	EPR/AB3307LK	07/10/2021

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/JB3737WE

### Issued to

**Riverside Bio Limited** (“the operator”)

whose registered office is

**10 Osier Way**

**Mitcham**

**Surrey**

**CR4 4NF**

company registration number 08104799

to operate a regulated facility at

**Mitcham Waste Treatment Centre**

**43 Willow Lane**

**Willow Lane Industrial Estate**

**Mitcham**

**Surrey**

**CR4 4NA**

to the extent set out in the schedules.

The notice shall take effect from 07/10/2021.

Name	Date
Louise Hann	07/10/2021

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/JB3737WE**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/JB3737WE/V004 authorising,

**Riverside Bio Limited** (“the operator”),

whose registered office is

**10 Osier Way**

**Mitcham**

**Surrey**

**CR4 4NF**

company registration number 08104799

to operate an installation and waste operations at

**Mitcham Waste Treatment Centre**

**43 Willow Lane**

**Willow Lane Industrial Estate**

**Mitcham**

**Surrey**

**CR4 4NA**

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

Name	Date
Loiuse Hann	07/10/2021

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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6), 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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6), 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.

## **1.5 Multiple operator installations**

- 1.5.1 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6), where the operator notifies the Environment Agency under condition 4.3.1 (a) or 4.3.1 (c), the operator shall also notify without delay the other operator of the installation of the same information.

## **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 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR6), 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.

### **2.2 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, which is within the area edged in red on the site plan that represents the extent of the installation covered by this permit and that of the other operator of the installation.

### **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; 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.

## **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.

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 Pests**

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

3.6.2 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.

### **3.7 Fire prevention**

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

3.7.2 The operator shall:

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

## **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

<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>
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 biological treatment and recovery of by-products.</p> <p>The digestion of waste shall be under aerobic conditions in closed controlled reactor vessels fitted with suitable abatement for the off-gas.</p> <p>The aerobic digestion of wastes including pasteurisation and chemical addition.</p> <p>The treatment building shall be provided with suitable negative air extraction that is directed to an abatement system.</p> <p>The biological treatment of wastes under anaerobic conditions shall be prevented, or where that is not practicable, minimised.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p>
<b>Directly Associated Activity</b>			
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 biological treatment 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>Liquid waste received in sealed tankers shall be</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>
			<p>transferred directly via pipeline to an enclosed liquid storage tank prior to digestion. The transfer of waste shall be within an enclosed building on an impermeable surface with sealed drainage.</p> <p>The treatment building shall be provided with suitable negative air extraction that is directed to an abatement system.</p> <p>The storage of wastes under anaerobic conditions shall be prevented, or where that is not practicable, minimised.</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 biological treatment or despatch off site for recovery.</p> <p>Pre-treatment of waste prior to biological treatment including sorting and screening to remove plastics, metals and non-food wastes shall be in an enclosed building and on an impermeable surface with a sealed drainage system.</p> <p>Post-treatment of liquid slurry (digestate) including centrifuge or pressing, addition of thickening agents (polymers) or drying shall be in an enclosed building and on an impermeable surface with a sealed drainage system.</p> <p>Emissions from the dewatering of liquid digestate shall be directed</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>
			<p>to a suitable abatement system.</p> <p>The physical treatment of wastes under anaerobic conditions shall be prevented, or where that is not practicable, minimised.</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 chemicals for the waste treatment processes, chemicals for air abatement equipment, cleaning fluids, fuels and lubricants.	From the receipt of raw materials to despatch for use within the facility.
AR5	Treated liquid slurry (digestate) and dewatered solid digestate storage.	Storage of processed dewatered, solid digestate and liquid slurry (digestate) in an enclosed building.	<p>From the receipt of processed liquid slurry (digestate) or dry, dewatered solid digestate produced at the facility to despatch for use off-site or to the on-site anaerobic digester operated by a different operator under a separate permit.</p> <p>All treated liquid slurry (digestate) shall be stored in tanks in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with sealed drainage system.</p> <p>All dry, dewatered, solid digestate shall be stored in an enclosed building fitted with an appropriate abatement system and on an impermeable surface with sealed drainage system.</p>
AR6	Air treatment	Collection and treatment of air from the buildings or plant using abatement system prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.

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
Activity reference	Description of activities for waste operations		Limits of activities
AR7	<p><u>Management of digestate</u> Physical treatment for the purpose of recovery</p> <p>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> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p>		<p>From the receipt of digestate produced by the adjacent anaerobic digestion facility to treatment and despatch for use off-site.</p> <p>The storage and treatment of digestate shall be in an enclosed building and on an impermeable surface with sealed drainage system. Storage of whole and liquid digestate shall be in enclosed storage tanks connected to a suitable abatement system.</p> <p>Treatment of digestate shall be limited to screening to remove contraries, centrifuge or pressing.</p> <p>Emissions from the de-watering of liquid digestate shall be directed to a suitable abatement system.</p> <p>Waste types as specified in Table 2.3.</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/EP3792SX/A001	Section B Part 5, table 2 of the application document in response to section 5a – technical standards, Part B of the application form, or otherwise agreed in writing by the Environment Agency.	25/08/2009
Environment Agency initiated variation EPR/JB3737WE/V002	Response to request for additional information dated 13/02/14 – points 1 to 5; 11 and 12.	31/03/2014
Additional information	Clarification of point source emission to air and revised Drawing No 1220P-0101-LAY-1 Rev H.	16/06/2014
Additional information	<p>Document reference - CRM 10306 004 PE R 002 B – Fugitive Emissions Management Plan Version B (September 2015), or as otherwise agreed in writing by the Environment Agency.</p> <p>Document reference – CRM 1036 004 PE R 001 B – Odour Management Plan version B (September 2015), or as otherwise agreed in writing by the Environment Agency.</p> <p>Document reference - Noise Management Plan Riverside Bio WC Draft 27 Nov12, reviewed May 2013, or as otherwise agreed in writing by the Environment Agency.</p> <p>Document reference – RSBIOSHEMS-WR/V001 - Operating Procedure – Risk Assessment OP-1 Waste reception, January 2015, or as otherwise agreed in writing by the Environment Agency.</p>	17/09/2015

Table S1.2 Operating techniques		
Description	Parts	Date Received
Additional information	Document reference – Operating Procedure – Risk Assessment OP-10 Pollution Prevention, January 2016, or as otherwise agreed in writing by the Environment Agency.	21/03/2016
Addiction information	Document reference – Operating Procedure – Risk Assessment OP-17 Fibre separation and Liquor removal for PAS:110, January 2016, or as otherwise agreed in writing by the Environment Agency.	12/04/2016
Response to Regulation 61 Notice dated 21/10/2019	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 22/04/2019

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1-7	Complete	07/10/2016
<b>Improvement condition for progress report to achieve BAT-AELs</b>		
IC8	<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-AEL.</li> <li>2) Methodology for reaching the BAT-AEL.</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>The report shall address the BAT Conclusions for Waste Treatment with respect to the following:</p> <ul style="list-style-type: none"> <li>• <b>BAT 34 Table 6.7</b> (compliance with BAT-AEL for channelled NH<sub>3</sub> to air from the biological treatment of waste)</li> </ul> <p><b>Refer to BAT conclusions 2018/1147 issued 17.08.2018 for a full description of the BAT requirement.</b></p>	<p>Progress reports at three monthly intervals from date of permit issue:</p> <p>07/01/2022 07/04/2022 07/07/2022</p>
<b>Improvement condition for progress report to achieve Narrative BAT</b>		
IC9	<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:</p> <p><b>BAT 1 XII – residues management plan</b></p>	<p>Progress reports at three monthly intervals from date of permit issue:</p> <p>07/01/2022 07/04/2022 07/07/2022</p>

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<p>Draw up and implement a residue management plan, having regard to</p> <p>(1) minimising the generation of residues arising from the treatment of waste;</p> <p>(2) optimising the reuse, regeneration, recycling and/or recovery of energy of the residues, and</p> <p>(3) ensuring the proper disposal of residues.</p> <p><b>BAT 4 (b)(c) – adequate storage capacity/safe storage</b></p> <p>Refer to IC13</p> <p><b>BAT 14 (a), (b), (d) and (f) – Reduce diffuse emissions to air</b></p> <p>Carry out a detailed assessment of the integrity of all above ground pipework. Identify any improvements required to ensure their integrity and provide timescales for making improvements. (see also IC10).</p> <p>Submit assessment and improvement plan to the Environment Agency for approval.</p> <p><b>BAT 14(h) – Leak detection and repair (LDAR) programme</b></p> <p>Write and implement a leak detection and repair programme and prepare a LDAR plan (a structured approach to reduce fugitive emissions of organic compound by detection and subsequent repair or replacement of leaking components, reference 6.2 Diffuse emissions of organic compounds to air in BAT conclusions document).</p> <p>Submit a copy of the LDAR plan to the Environment Agency for approval.</p> <p><b>BAT 19 (c)(d)(g) – prevent emissions to water</b></p> <p>Refer to IC10 &amp; IC11</p> <p><b>BAT 23(a) – Energy efficiency plan.</b></p> <p>Write and implement an Energy Efficiency Plan that demonstrates compliance with the techniques prescribed in BAT conclusion 23(a).</p> <p>Submit a copy of the plan to the Environment Agency.</p> <p><b><i>Refer to BAT conclusions 2018/1147 issued 17.08.2018 for a full description of the BAT requirement.</i></b></p>	
<b>Improvement condition for primary containment</b>		
IC10	<p>The operator shall submit a written report detailing the inspection and assessment of the primary containment and shall obtain the Environment Agency's written approval to it. The inspection of primary containment shall be undertaken by an appropriately qualified engineer and shall assess the condition of the containment against its design specification and relevant industry standards. The inspection shall include all associated pipework and primary containment systems (e.g. tanks, vessels) where polluting liquids and solids are being stored, treated, and/or handled.</p> <p>The report shall include:</p> <ul style="list-style-type: none"> <li>an assessment of the physical condition of all primary containment systems (storage and treatment vessels) using a Written Scheme of Examination and assessment of their suitability for providing primary containment in accordance with relevant industry standards</li> </ul>	07/07/2022 or other date as agreed in writing with the Environment Agency

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<ul style="list-style-type: none"> <li>a program of works with timescales for the implementation of individual improvement measures necessary to demonstrate that the primary containment is fit for purpose or alternative appropriate measures to ensure all polluting materials will be contained on site; and</li> <li>a summary of the preventative maintenance and inspection regime</li> </ul>	
<b>Improvement condition for secondary containment</b>		
IC11	<p>The operator shall submit a written report detailing the inspection and assessment of the secondary containment and shall obtain the Environment Agency's written approval to it. The report shall contain the results of a detailed visual integrity assessment of the condition of the secondary containment system, having particular regard to the yard surface which forms the base of the secondary containment (bund).</p> <p>The report shall:</p> <ul style="list-style-type: none"> <li>photographically identify all improvement works that need to be undertaken and provide dates for when the work will be carried out.</li> <li>include a summary of the preventative maintenance and inspection regime</li> </ul> <p>The operator shall implement the improvements identified in the report and demonstrate to the Environment Agency the secondary containment system complies with the standards detailed/referenced within the CIRIA C736 (2014) guidance, or equivalent.</p>	07/07/2022 or other date as agreed in writing with the Environment Agency
<b>Improvement condition for review of effectiveness of abatement plant</b>		
IC12	<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. (Relevant existing information can be used to help inform the review).</p> <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 consideration of the following aspects:</p> <ul style="list-style-type: none"> <li>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>Odour monitoring results at the site boundary;</li> <li>Records of odour complaints and odour related incidents;</li> <li>Details of air quality quantitative impact assessment including modelling (i.e.H1) and a proposal for site-specific "action levels" (not limited to odour concentration, hydrogen sulphide and ammonia);</li> </ul>	07/07/2022 or other date as agreed in writing with the Environment Agency

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<ul style="list-style-type: none"> <li>• Recommendations for improvement including the replacement or upgrading the abatement plant; and</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>	
<b>Improvement condition for operational storage capacity</b>		
IC 13	<p>The operator shall provide a written “digestate storage contingency plan” and shall obtain the Environment Agency’s written approval to it. The plan shall contain the results of a review of the current storage of digestate produced from site operations. The review shall examine and include details of:</p> <ul style="list-style-type: none"> <li>• the existing site storage arrangements associated with Riverside AD Limited, including: i) infrastructure layout, design and configuration, ii) capacities of tanks, iii) process flow (digestate and emissions) iv) calculations that demonstrate the storage capacity for digestate is adapted to, and consistent with the processing capability of the AD based on maximum daily feed rate, hydraulic retention time and permitted limits</li> <li>• safe storage considerations, including health, safety and environmental risks associated with digestate storage, separation and dispatch</li> <li>• site contingency arrangements in the event of closed landspreading periods, extreme weather conditions, site closure, disease outbreak etc.</li> </ul> <p>The storage contingency plan shall include:</p> <ul style="list-style-type: none"> <li>• Identification of alternative outlets for digestate – identifying companies/permitted waste facilities that would be able to manage the digestate, taking into account their permits and capacity constraints.</li> </ul>	07/07/2022 or other date as agreed in writing with the Environment Agency

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

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

Maximum quantity	Annual throughput shall not exceed 100,000 tonnes.
<b>Exclusions</b>	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> <li>separately collected loads of plastic unless the whole load is certified compostable to BS EN13432</li> <li>co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432</li> <li>food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 2025.</li> <li>wastes containing wood-preserving agents or other biocides and post-consumer wood</li> <li>wastes containing persistent organic pollutants</li> <li>wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014</li> <li>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.</li> </ul>
Waste code	Description
<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 02	animal-tissue waste
02 01 03	plant-tissue waste
02 01 06	animal faeces, urine and manure (including spoiled straw) only
02 01 07	wastes from forestry (biodegradable only)
<b>02 02</b>	<b>wastes from the preparation and processing of meat, fish and other foods of animal origin</b>
02 02 01	sludges from washing and cleaning (biodegradable only)
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	Sludges from on-site effluent treatment (biodegradable only)
<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 01	sludges from washing, cleaning, peeling, centrifuging and separation
02 03 04	materials unsuitable for consumption or processing (biodegradable only)

<b>Table S2.2 Permitted waste types and quantities for composting in closed systems</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 100,000 tonnes.</b>
<b>Exclusions</b>	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> <li>separately collected loads of plastic unless the whole load is certified compostable to BS EN13432</li> <li>co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432</li> <li>food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 2025.</li> <li>wastes containing wood-preserving agents or other biocides and post-consumer wood</li> <li>wastes containing persistent organic pollutants</li> <li>wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014</li> <li>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.</li> </ul>
<b>Waste code</b>	<b>Description</b>
02 03 05	sludges from on-site effluent treatment (biodegradable only)
<b>02 04</b>	<b>wastes from sugar processing</b>
02 04 03	sludges from on-site effluent treatment (biodegradable only)
<b>02 05</b>	<b>wastes from the dairy products industry</b>
02 05 01	materials unsuitable for consumption or processing (biodegradable only)
02 05 02	sludges from on-site effluent treatment (biodegradable only)
<b>02 06</b>	<b>wastes from the baking and confectionery industry</b>
02 06 01	materials unsuitable for consumption or processing (biodegradable only)
02 06 03	sludges from on-site effluent treatment (biodegradable only)
<b>02 07</b>	<b>wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)</b>
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials (biodegradable only)
02 07 02	wastes from spirits distillation (biodegradable only)
02 07 04	materials unsuitable for consumption or processing (biodegradable only)
02 07 05	sludges from on-site effluent treatment (biodegradable only)
<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 10	fibre rejects only – virgin timber only
<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 (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent standard
15 01 02	plastic packaging – compostable plastics only certified to EN 13432 or equivalent standard



<b>Table S2.2 Permitted waste types and quantities for composting in closed systems</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 100,000 tonnes.</b>
<b>Exclusions</b>	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> <li>• separately collected loads of plastic unless the whole load is certified compostable to BS EN13432</li> <li>• co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432</li> <li>• food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 2025.</li> <li>• wastes containing wood-preserving agents or other biocides and post-consumer wood</li> <li>• wastes containing persistent organic pollutants</li> <li>• wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014</li> <li>• 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.</li> </ul>
<b>Waste code</b>	<b>Description</b>
15 01 03	wooden packaging – virgin timber only
15 01 05	composite packaging – only biodegradable organic packaging certified to EN 13432 or equivalent standard
<b>19 05</b>	<b>wastes from aerobic treatment of solid wastes</b>
19 05 01	non-composted fraction of municipal and similar wastes from a composting process that accepts waste input types listed in this table, made up of previously sanitised batches only
19 05 02	non-composted fraction of animal and vegetable wastes from a composting process that accepts waste input types listed in this table, made up of previously sanitised batches only
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 05 03	off-specification compost (previously composted sewage sludge only)
<b>19 06</b>	<b>wastes from anaerobic treatment of waste</b>
19 06 05	liquor 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 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 06 06	digestate from anaerobic treatment of animal and vegetable waste (previously digested sewage sludge only)
<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 (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified standard
20 01 08	biodegradable kitchen and canteen waste – containing compostable plastics meeting EN 13432 or equivalent certified standard
<b>20 02</b>	<b>garden and park wastes (including cemetery waste)</b>

<b>Table S2.2 Permitted waste types and quantities for composting in closed systems</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 100,000 tonnes.</b>
<b>Exclusions</b>	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> <li>• separately collected loads of plastic unless the whole load is certified compostable to BS EN13432</li> <li>• co-mingled green and food waste containing more than 5% w/w plastic, unless the plastic is certified compostable to BS EN 13432</li> <li>• food wastes containing more than 5% w/w plastic unless there is sufficient technology to remove non-compostable plastic prior to treatment from package food waste to a processing limit of 1% w/w or decreasing year on year by 2025.</li> <li>• wastes containing wood-preserving agents or other biocides and post-consumer wood</li> <li>• wastes containing persistent organic pollutants</li> <li>• wastes containing Japanese Knotweed or other invasive plant species listed in the Alien Invasive Species Regulations 2014</li> <li>• 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.</li> </ul>
<b>Waste code</b>	<b>Description</b>
20 02 01	biodegradable waste
<b>20 03</b>	<b>other municipal wastes</b>
20 03 02	waste from markets (biodegradable only)

<b>Table S2.3 Permitted waste types and quantities for waste operations</b>	
<b>Maximum quantity</b>	<b>Annual throughput shall not exceed 77,500 tonnes.</b>
<b>Exclusions</b>	<p>Only digestate from the digesters at the adjacent AD facility (operated by Riverside AD Limited) shall be accepted for processing at this facility. No other waste shall be received for processing at this facility.</p> <p>Wastes having any of the following characteristics shall not be accepted at the facility:</p> <ul style="list-style-type: none"> <li>• consisting solely or mainly of dusts, powders or loose fibres</li> <li>• hazardous waste</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 06</b>	<b>wastes from anaerobic treatment of waste</b>
19 06 03	liquor from anaerobic treatment of municipal waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste

## Schedule 3 – Emissions and monitoring

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 [RBL EP1 on site plan in schedule 7]	Combined carbon filter and wet scrubber	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> [Note 1]	Average over sample period	Once every 6 months	EN ISO 21877
		Odour concentration	No limit set	--	Once every 6 months	BS EN 13725

Note 1 – applicable from 17<sup>th</sup> August 2022

<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>
SW1 and SW2 on site plan in schedule 7 emission to River Wandle via ditch system	Uncontaminated site surface water from roofs and non-operational areas only	No parameter set	No limit set	--	Weekly	Visual assessment – no visible oil or grease

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>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>
Meteorological conditions	Wind speed, Air temperature, Wind direction	Continuous	As specified in the Environmental Management System	Weather station or anemometer and wind sock
Biological treatment tanks, pre-treatment processing	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary

<b>Table S3.3 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>
area, waste reception, waste storage area and storage tanks	Integrity checks (all tanks, pipework and silos)	Weekly	Visual assessment	--
Internal for each enclosed biological treatment vessel (digester tanks)	Temperature	Continuous	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.
	Oxygen distribution	--	--	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.  As agreed with the Environment Agency
<b>Odour abatement plant</b>				
<b>Scrubbers (water/chemical/dry)</b>				
<b>Scrubber (wet scrubber)</b>	Gas temperature – inlet and outlet	Continuous	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure

<b>Table S3.3 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>
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	appropriate temperature and moisture content.
	Moisture content or humidity – outlet (for wet scrubbers if used before other abatement systems)	Daily	Moisture meter	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.
	Back pressure	Weekly	Pressure differential using sensors	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	Equipment shall be calibrated on a 4 monthly basis, or as agreed in 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 IC12 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 and outlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC12 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.

<b>Table S3.3 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>
<b>Carbon filters</b>				
<b>Carbon filter</b>	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit condition 3.3, the odour management plan and manufacturer's recommendations.  Carbon filter(s) to be replaced in accordance with manufacturer's recommendations.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	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 IC12 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 IC12 as approved in writing by the Environment Agency.  Action levels to be achieved in accordance with permit condition

<b>Table S3.3 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>
				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	



## Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air from odour abatement plant Parameters as required by condition 3.5.1.	A1	Every 6 months	1 January, 1 July
Emissions to water Parameters as required by condition 3.5.1	SW1, SW2	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

Parameter	Units
Processed liquid slurry digestate	tonnes
Processed dewatered product	tonnes

Parameter	Frequency of assessment	Units
Water usage	Annually	tonnes or m <sup>3</sup>
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes

Media/parameter	Reporting format	Date of form
Air	Form air 1 or other form as agreed in writing by the Environment Agency	07/10/2021
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	07/10/2021
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	07/07/2016
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	07/07/2016
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	07/07/2016
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	

<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.

“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 2011 (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.

“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.

“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.

“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 plastics that are certified to meet the standards of EN 13432, EN 14995 or equivalent.

“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.

“digestate” means material resulting from an anaerobic digestion process.

“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.

“ground water” 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 and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

“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.

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

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

“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 human sense.
- (c) result in damage to material property, or
- (d) 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.

“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.

“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.

“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.

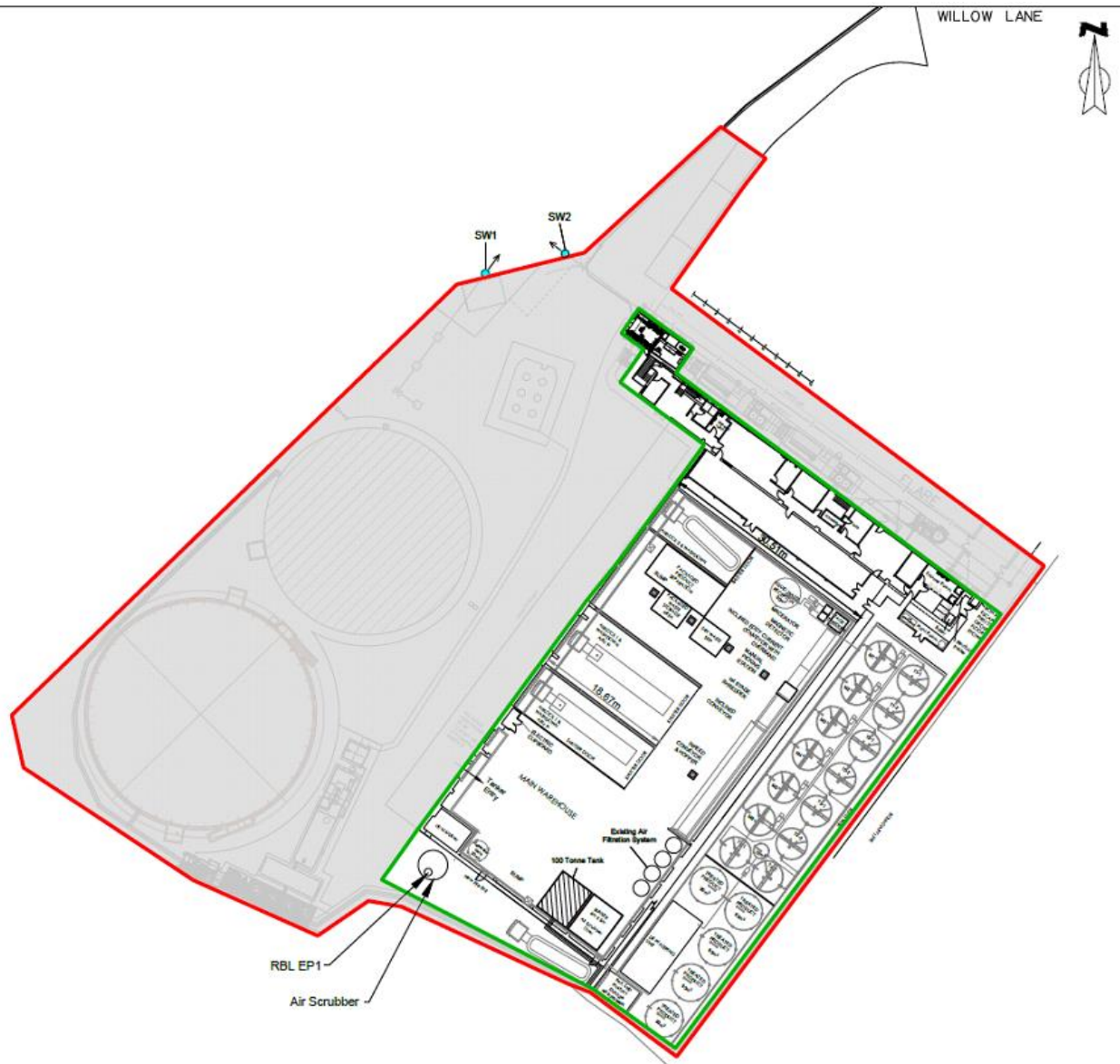
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

- 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.

“year” means calendar year ending 31 December.

# Schedule 7 – Site plan



END OF PERMIT