

# Permit with introductory note

## The Environmental Permitting (England & Wales) Regulations 2016

---

Tawnywood Recycling Limited  
Phoenix Materials Recycling Facility  
Campbell Drive  
Barrow Hill  
Chesterfield  
Derbyshire  
S43 2PR

### **Permit number**

EPR/ZP3134DJ

# Phoenix Materials Recycling Facility

## Permit number EPR/ZP3134DJ

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

The permit allows the use of autoclave technology for the treatment of non-hazardous, mixed municipal/household wastes at the Phoenix Materials Recycling Facility site. The treatment operations involve the application of steam, pressure and agitation to facilitate rapid breakdown of organics in the waste and the recovery of inorganic recyclables (plastics, metals and other recyclables) that are subsequently removed off-site. The primary activity is the recovery of 'fibre' from the waste. The fibre when recovered is utilised as fuel in an R1 incineration or co-incineration plant. This activity falls under Section 5.4 A (1) (b) (ii) of the Environmental Permitting Regulations 2016 - pre-treatment of waste for incineration or co-incineration.

The waste treatment activities are carried out using two autoclaves that are designed to work side by side on a batch basis i.e. while one is being loaded/unloaded; the other is used for waste processing. The autoclaves have a theoretical/combined treatment capacity of about 175,200 tonnes per year (20 tonnes per hour) but the maximum quantity of waste that the site is allowed to receive under the conditions of this permit is limited to 100,000 tonnes per year. The limit on the quantity is mainly due to logistic constraint, projected downtime and restricted space at the site.

All operations that relate to waste reception, treatment and separation of recyclables are carried out within a purpose-built building. Waste that is received at the site is first deposited in a dedicated waste reception area where it is retained for a short period of time before being fed into the autoclaves. The autoclaves work in tandem on a batch feed basis and the cycle time of each autoclave is about 2 hours. Once waste is loaded into the autoclave, temperature and pressure are increased through the introduction of steam. To effectively sterilise the waste and recyclates, the autoclave is maintained at a temperature of 160°C and a pressure of 5 bars for about 45 minutes within the 2 hours cycle time.

The generation of steam required for the treatment is provided by two 7.9MW input rated boilers that are fired on natural gas. The boilers are designed to operate on 'duty and standby' mode. In normal operating conditions, only one boiler is fired at any one time. The boilers are integrated with a steam accumulator system that is used to temporarily manage steam storage and 'peaking' in steam demand.

The fibre that is recovered from the process is stored temporarily in the building before being transported off-site. The recyclables (metals, plastics) are stored in secured skips in a dedicated external storage area. Under normal working conditions, the vessels are designed to treat all waste delivered to the site on a daily basis without the need for waste accumulation within the reception area. The maximum storage time for waste within the building (in the reception, fibre and residual storage areas) is 72 hours. Storage within the external area for recyclables shall not exceed 7 days.

The waste reception and treatment area have the potential to generate odour, however there is an array of odour management and emission control systems which includes bio-filter, regenerative thermal oxidisers and waste water treatment plant.

Steam that is exhausted from the autoclaves is condensed as water. The recovered water is directed to an integrated effluent treatment plant together with mains water to recommence the steam generation process. The water treatment plant is used to treat malodorous components in the condensed steam. Any sludge or solids from the water treatment processes are collected and disposed off-site or recirculated in the treatment process.

Malodorous gases that are not condensable are collected through ductworks and managed through the bio-filtration and thermal oxidation processes. The process equipment is fitted with ductwork and canopies that are connected to the air extraction systems. Ventilation to the atmosphere from the gas fired boilers, biofilter

and the thermal oxidiser are directed to and nested within a common windshield. The process building does not have openings other than those that are used for vehicular access. The building is fitted with fast acting roller shutter doors and air extraction systems that helps to maintain it under negative pressure.

The Phoenix material Recycling Facility is located approximately 2.5km to the north-east of Staveley, 6km to the north-east of Chesterfield and 3km south of Eckington. The closest residential receptor is Barrow Hill that is located about 120m east of the site.

The environmental risk assessment and the air impact assessment conclude that the likelihood of impact is not significant given the control measures proposed. No relevant receptor is expected to be exposed to a ground level odour concentration greater than 1.3OU/m<sup>3</sup> at the modelled windshield height of 19m above ground level. To provide further reduction in exposure the proposal is to construct the windshield such that emissions are released at 20m above ground level.

The status log of the 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/ZP3134DJ/A001	Duly made 30/01/17	Application for the use of autoclaves to treat household/municipal solid waste.
Response to Schedule 5 Notice dated 24/04/17	09/06/17	Response to the Schedule 5 Notice providing additional information on fire prevention plan, odour management plan, storage capacity and arrangements, emission control measures, updated site plans etc.
Response to Schedule 5 Notice dated 09/05/17		
Response to Schedule 5 Notice dated 27/06/17	11/07/17	H1 screening for discharge to sewer
	14/07/17	Response to the extended Schedule 5 Notice providing additional information on fire prevention plan, odour management plan, storage arrangements, emission control, H1 risk assessment, waste acceptance procedure, amended site plans etc.
Additional information received	11/08/17	Additional information to demonstrate that proposed operations are designed to meet the criteria for pre-treatment of waste for incineration or co-incineration.
Additional information received	12/09/17	Evidence of technical competence
Additional information received	25/09/17	Email containing Odour Management Plan
Additional information received	28/09/17	Drawing showing monitoring point for the treated effluent
Additional information received	29/09/17	Email containing the agreed Fire Prevention Plan
Permit determined EPR/ZP3134DJ (PAS Billing ref. ZP3134DJ).	29/09/17	Permit issued to Tawnywood Recycling Limited.

End of introductory note

# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

### Permit number

**EPR/ZP3134DJ**

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

**Tawnywood Recycling Limited** (“the operator”),

whose registered office is

**Capstone House Dunston Way  
Dunston Road  
Chesterfield  
S41 9RD**

company registration number 09084089

to operate an installation at

**Phoenix Materials Recycling Facility  
Campbell Drive  
Barrow Hill  
Chesterfield  
Derbyshire  
S43 2PR**

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

Name	Date
Claire Roberts	29/09/2017

Authorised on behalf of the Environment Agency

# Conditions

## 1 Management

### 1.1 General management

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

### 1.2 Energy efficiency

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

### 1.3 Efficient use of raw materials

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

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

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
  - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
  - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

## **2 Operations**

### **2.1 Permitted activities**

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

### **2.2 The site**

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

### **2.3 Operating techniques**

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table S2.1; and
  - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.4 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.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

### **2.4 Improvement programme**

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

## **2.5 Pre-operational conditions**

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

## **3 Emissions and monitoring**

### **3.1 Emissions to water, air or land**

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 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.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

### **3.4 Noise and vibration**

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

approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

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

### **3.5 Bioaerosols**

3.5.1 The operator shall take all appropriate measures, to prevent or where that is not practicable to minimise the release of bioaerosols. Emissions of bioaerosols from the operational activities shall not exceed the emission threshold limits specified in tables S3.4 and S3.5.

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

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

### **3.6 Monitoring**

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

- (a) point source emissions specified in tables S3.1, and S3.2;
- (b) process monitoring specified in table S3.3;
- (c) bioaerosols monitoring in tables S3.4 and S3.5.

3.6.2 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.

3.6.3 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.

3.6.4 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, S3.4 and S3.5 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) 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;
- (b) 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 For the following activities referenced in schedule 1, table S1.1 (A1) 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.

### **4.3 Notifications**

- 4.3.1 In the event:
  - (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
    - (i) inform the Environment Agency,
    - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
    - (iii) take the measures necessary to prevent further possible incidents or accidents;
  - (b) of a breach of any permit condition the operator must immediately—
    - (i) inform the Environment Agency, and
    - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
  - (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
  - Where the operator is a registered company:
    - (a) any change in the operator's trading name, registered name or registered office address; and
    - (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
  - Where the operator is a corporate body other than a registered company:
    - (a) any change in the operator's name or address; and
    - (b) any steps taken with a view to the dissolution of the operator.
  - In any other case:

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

## **4.4 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>
A1	Section 5.4 A(1) (b) (ii) - pre-treatment of waste for incineration or co-incineration	R3: Recycling/reclamation of organic substances which are not used as solvents	Treatment operations shall be limited to autoclaving of household/municipal solid wastes only. Treatment operations shall take place in a building and on an impermeable surface with sealed drainage system. Waste types as specified in Table S2.1.
<b>Directly Associated Activity</b>			
A2	Storage of waste pending recovery	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)	From receipt of waste to treatment in the autoclave vessel, including storage of recovered fibre and recyclables. Storage of non-hazardous waste prior to and after on-site treatment. Storage operations shall take place in a building and on an impermeable surface with sealed drainage system. Storage time shall not exceed 72 hours for waste in the reception and treatment areas. Waste types consisting of the types and quantities specified in condition 2.3.4 and Table S2.1.
A3	Storage of waste resulting from the autoclave treatment process	Temporary storage, pending collection, on the site where it is produced	Storage operations for the recovered fibre shall take place in a building and on an impermeable surface with sealed drainage system. Storage operations for the recovered recyclables and residual wastes shall take place on an impermeable surface with sealed drainage system. Storage time for residual waste shall not exceed 72 hours. Storage time for recovered recyclables shall not exceed 7 days.
A4	Physical treatment of treated waste	R5: Recycling/reclamation of other inorganic compounds R4: Recycling/reclamation of metals and metal compounds	Physical separation of treated wastes from the autoclave system. Separation of treated wastes by screening, magnetic separation, eddy current separation and hand picking. Treatment operations will take place in a building and on an impermeable surface with sealed drainage system.
A5	Steam supply	2 x 7.9MW input gas-fired steam generating boilers	From receipt of natural gas to the generation of steam.

<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>
A6	Treatment and discharge of treated effluent	Treatment and discharge of treated effluent to foul sewer	Treatment of site derived effluent only. Discharge from the effluent treatment tank to the point of entry to sewer.
A7	Surface water collection and storage	Collection and storage of uncontaminated roof and site surface water.	From the collection of uncontaminated roof and site surface water to discharge off-site.
A8	Storage of site derived sludge	Storage prior to disposal of site derived sludge	Sludge to be stored in sealable containers. Storage time shall not exceed 72 hours for sludge stored in full sealable containers.
A9	Wheel washing facility	Wheel washing facility for vehicles used to deliver waste to the site	Wheel washing of vehicles and disposal of wash water.
A10	Air treatment	Collection and treatment of air from the buildings or plant using abatement system – [biofilters, thermal oxidiser] prior to release to atmosphere.	Undertaken in relation to autoclaving activity. From the collection of air from site processes to treatment and release of treated air to atmosphere.

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	Application documents provided in response to section 3a – technical standards, Part B3 of the application form.	15/11/17
	Items 2 and 3 of the response to the 'not duly made request' received on the 26/01/17.	26/01/17
Response to Schedule 5 Notice dated 24/04/17	Response to the Schedule 5 Notice providing additional information in support of the Fire Prevention Plan, Odour Management Plan, waste types and quantities, storage arrangements, capacity and emission control measures, updated site plans etc.	09/06/17
Response to Schedule 5 Notice dated 09/05/17		
Response to Schedule 5 Notice dated 27/06/17	Response to the extended Schedule 5 Notice providing additional information in support of the Fire Prevention Plan, Odour Management Plan, waste types and quantities, storage arrangements, emission control, H1 screen/discharge to sewer, waste acceptance procedure, amended site plans etc.	14/07/17
Additional information	Odour Management Plan	25/09/17
Additional information	Drawing showing monitoring point for the treated effluent	28/09/17
Additional information	Approved Fire Prevention Plan	29/09/17

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1	<p>The Operator shall carry out monitoring of emissions from the thermal oxidiser using methods and standards specified in Table S3.1 and shall submit to the Environment Agency for written approval proposals for the monitoring methods to be used in emissions of odour from the bio-filter.</p> <p>The operator shall undertake 6 months of abatement system monitoring for the biofilter and thermal oxidiser to demonstrate that the systems are achieving the emission limits and odour threshold stated in the document reference Air Impact Assessment; Emissions, Monitoring and Resource Efficiency and the approved Odour Management Plan submitted with application EPR/ZP3134DJ/A001.</p>	8 months following the commissioning of the plant
IC2	The operator shall provide a written report detailing the results and conclusions of the monitoring undertaken in accordance with IC1 to the Environment Agency for approval.	9 months following the commissioning of the plant
IC3	<p>If the report provided under IC2 shows any of the abatement systems are not achieving the stated emission limits and/or odour threshold, the operator shall review their air impact assessment and submit to the Environment Agency for approval an amended Odour Management Plan and written proposals for alternative abatement systems and/or improvement to the existing systems with timescales for implementation.</p> <p>The site shall implement the proposals for alternative abatement systems and/or improvement to the existing systems within the timescales agreed with the Environment Agency.</p>	10 months following the commissioning of the plant
IC4	<p>The operator shall submit written proposals to the environment agency for approval detailing a monitoring programme for characterising the facility's effluent discharge to sewer.</p> <p>The proposal shall identify the parameters to be monitored, the location and frequency at which the monitoring will be undertaken and the methods that will be used.</p> <p>These proposals shall ensure that the operator collects at least 12 sets of monitoring data over a period of 6 months.</p> <p>The monitoring proposals shall have regard to the Environment Agency's M18 guidance document and the web based guidance - 'Surface water pollution risk assessment for your environmental permit'.</p>	2 months following the commissioning of the plant
IC5	<p>The Operator shall undertake the monitoring programme approved by the Environment Agency under IC4.</p> <p>Using the data obtained from the monitoring programme, the operator shall submit to the Environment Agency for approval an H1 assessment for the discharge to sewer and a written report detailing the methods, results and conclusions of the monitoring undertaken.</p> <p>If the concentration of any of the assessed substances is found to be 'not insignificant' from the H1 assessment, the operator shall include in the report proposed limits for the relevant substances and proposals for ongoing monitoring.</p>	8 months following the completion of IC4
IC6	The Operator shall prepare and submit a comprehensive noise assessment report undertaken by an experienced and suitably qualified person in accordance with the procedures given in BS4142:2014 (Methods for rating and assessing industrial and commercial sound). The assessment shall include the identification	4 months following the commissioning of the plant

<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<p>and assessment of the impact of noise emissions upon sensitive receptors arising from the operation of the permitted facility.</p> <p>In the event that the report shows that the assessed noise levels could have an adverse impact, the report shall include proposals for the further attenuation and/or management of noise and shall include a timescale, to be agreed with the Environment Agency, for the implementation of the proposed measures.</p>	
IC7	<p>The operator shall submit to the Environment Agency a report for written agreement, outlining the specific operating parameters of the biofilter system with detailed information on how the parameters will be monitored and maintained to ensure optimal treatment of the odour emissions in the biofilter system.</p> <p>The parameters to be monitored shall include but not limited to:</p> <ul style="list-style-type: none"> <li>▪ Residence time</li> <li>▪ Air flow</li> <li>▪ pH</li> <li>▪ Temperature</li> <li>▪ Moisture</li> <li>▪ Thatching/compaction</li> </ul>	3 months following the commissioning of the plant
IC8	<p>The operator shall undertake a quantitative impact assessment (dispersion modelling) of emissions of bioaerosols (total bacteria and <i>Aspergillus fumigatus</i>) from the biofilter stack. The environmental impact assessment report and model input files shall be submitted in writing to the Environment Agency for review.</p>	12 months following the commissioning of the plant

<b>Reference</b>	<b>Pre-operational measures</b>
PO1	<p>Prior to the commencement of the activities authorised in this permit the operator shall notify the Environment Agency by providing details of the designated R1 incineration facility where the fibre will be delivered. The operator shall provide proof to show that there is a contract in place to supply the fibre as fuel to an incinerator with R1 status.</p>
PO2	<p>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.</p>
PO3	<p>No combustible waste shall be stored or treated in the building until:</p> <ul style="list-style-type: none"> <li>▪ the detection and suppression systems specified in sections R and S of the approved Fire Prevention Plan are installed and commissioned;</li> <li>▪ a commissioning plan for the detection and suppression systems is submitted to the Environment Agency that includes, but not limited to, the design layout, performance and operating procedure of the systems;</li> <li>▪ the operator has provided evidence to the Environment Agency to show that the design, installation and maintenance will be covered by an appropriate UKAS accredited third party certified scheme; and</li> </ul>

<b>Table S1.4 Pre-operational measures</b>	
<b>Reference</b>	<b>Pre-operational measures</b>
	<ul style="list-style-type: none"> <li>▪ the Environment Agency has agreed in writing that combustible waste acceptance and treatment may commence.</li> </ul>
PO4	<p>No combustible waste shall be stored or treated at the site until:</p> <ul style="list-style-type: none"> <li>▪ the operator has submitted the design specifications and construction details of the firewalls to the Environment Agency. The firewalls must meet the requirements in Section 11.2 of the Fire Prevention Plan guidance.</li> <li>▪ the Environment Agency has agreed in writing that combustible waste acceptance and treatment may commence.</li> </ul>
PO5	<p>No combustible waste shall be stored or treated at the site until:</p> <ul style="list-style-type: none"> <li>▪ a detailed calculation of the fire water supply and information about the locations of the site mains water and hydrant is provided to the Environment Agency.</li> <li>▪ the Environment Agency has agreed in writing that combustible waste acceptance and treatment may commence.</li> </ul>
PO6	<p>Prior to the discharge of treated effluent to sewer, the operator shall provide a copy of a Trade Effluent Consent obtained from a sewerage undertaker to the Environment Agency and amend the drainage drawing (FPP01-02A) to indicate the location of the emission point/the point of entry of the site effluent to sewer.</p>



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

Table S2.1 Permitted waste types and quantities for treatment using autoclaves	
Maximum quantity	The total quantity of waste accepted at the site for the above activity shall not exceed 100,000 tonnes per year.
Exclusions	Wastes having any of the following characteristics shall not be accepted: <ul style="list-style-type: none"> <li>▪ Hazardous waste</li> <li>▪ Liquid waste</li> <li>▪ Consisting solely or mainly of dusts, powders or loose fibres</li> </ul>
Waste code	Description
<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
<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 05</b>	<b>wastes from aerobic treatment of solid wastes</b>
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
<b>19 12</b>	<b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>
19 12 01	paper and cardboard
<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
<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

## 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) [Note <sup>1</sup> ]	Reference period	Monitoring frequency	Monitoring standard or method
At the boiler duct shown on drawing no. FPP01-03(b) dated 08 June, 2017	Boiler Plant	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	No limit set	Spot sampling	Monthly unless another frequency is agreed in writing by the Environment Agency	BS EN 14792 or as agreed in writing with the Environment Agency
		CO				BS EN 15058 or as agreed in writing with the Environment Agency
		Sulphur dioxide				BS EN 14791 or as agreed in writing with the Environment Agency
At the thermal oxidiser duct shown on drawing no. FPP01-03(b) dated 08 June, 2017	Thermal oxidiser	Oxides of Nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	No limit set	Daily average [Note <sup>2</sup> ]	Continuous	BS EN 14181 BS EN 15267-3 [Note <sup>3</sup> ]
		CO				
		Sulphur dioxide				
		VOC				
At the biofilter boiler duct shown on drawing no. FPP01-03(b) dated 08 June, 2017	Biofilter	Odour	No limit set	-	-	-
<p>[Note<sup>1</sup>]: Limits to be reviewed following the completion of the action required under IC1, IC2 and IC3 in Table S1.3.</p> <p>[Note<sup>2</sup>]: Daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid. The half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour.</p> <p>[Note<sup>3</sup>]: Certification to the MCERTS performance standards indicates compliance with BS EN 15267-3.</p>						

<b>Table S3.2 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>
In line with PO6	Site effluent treatment plant	Note 1	Note 1	Note 1	Note 1	Note 1
Note 1 – To be agreed in writing following completion of IC 5.						

<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>
Biofilter	Temperature	Weekly unless another frequency is agreed in writing by the Environment Agency	Temperature probe	Biofilter shall be regularly checked and maintained to ensure appropriate temperature and moisture content.
	Moisture		None specified	
	Thatching/compaction			
Waste reception and treatment building	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary

<b>Location or description of point of measurement</b>	<b>Parameter</b>	<b>Bioaerosols threshold limits (CFU m<sup>-3</sup>)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Ambient monitoring Upwind of the operational area, as described in the Technical Guidance Note M9  Downwind of the operational area, as described in the Technical Guidance Note M9	Total bacteria	1000	Quarterly for the first year of operation and annually thereafter, unless another frequency is agreed 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	500			

<b>Location or description of point of measurement</b>	<b>Parameter</b>	<b>Bioaerosols threshold limits (CFU m<sup>-3</sup>)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
Biofilter (stack)	Total bacteria	[Note 1]	[Note 1]	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	[Note 1]			
Note 1 – Bioaerosols threshold limits and monitoring frequency to be set following the completion of Improvement condition IC8.					

## 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 Parameters as required by condition 3.6.1.	At the boiler, thermal oxidiser and biofilter ducts	Every 6 months	1 January, 1 July
Emissions to sewer Parameters as required by condition 3.6.1	At the 'effluent monitoring point'	Every 6 months	1 January, 1 July
Process monitoring Parameters as required by condition 3.6.1	Biofilter duct	Every 6 months	1 January, 1 July
Bioaerosols monitoring Parameters as required by condition 3.6.1	As specified in schedule 3 tables S3.4 and S3.5 or as described in the Technical Guidance Note M9 At the biofilter duct	Every 6 months	1 January, 1 July

<b>Table S4.2 Annual production/treatment</b>	
<b>Parameter</b>	<b>Units</b>
Fibre	tonnes
Recyclables	tonnes
Residual waste	tonnes

<b>Table S4.3 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Water usage	Annually	tonnes
Energy usage	Annually	MWh
Total raw material used	Annually	tonnes
Total mass release of oxides of sulphur	Annually	tonnes
Total mass release of oxides of nitrogen	Annually	tonnes

<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	29/09/17
Sewer	Form sewer 1 or other form as agreed in writing by the Environment Agency	29/09/17
Water usage	Form water usage 1 or other form as agreed in writing by the Environment Agency	29/09/17
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	29/09/17
Bioaerosols	As specified in the Technical Guidance Note M9 or other form as agreed in writing by the Environment Agency	29/09/17
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	29/09/17
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.

“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.

“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.

“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 or background concentration limit.

“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.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

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

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

“Pests” means Birds, Vermin and Insects.

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

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

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

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

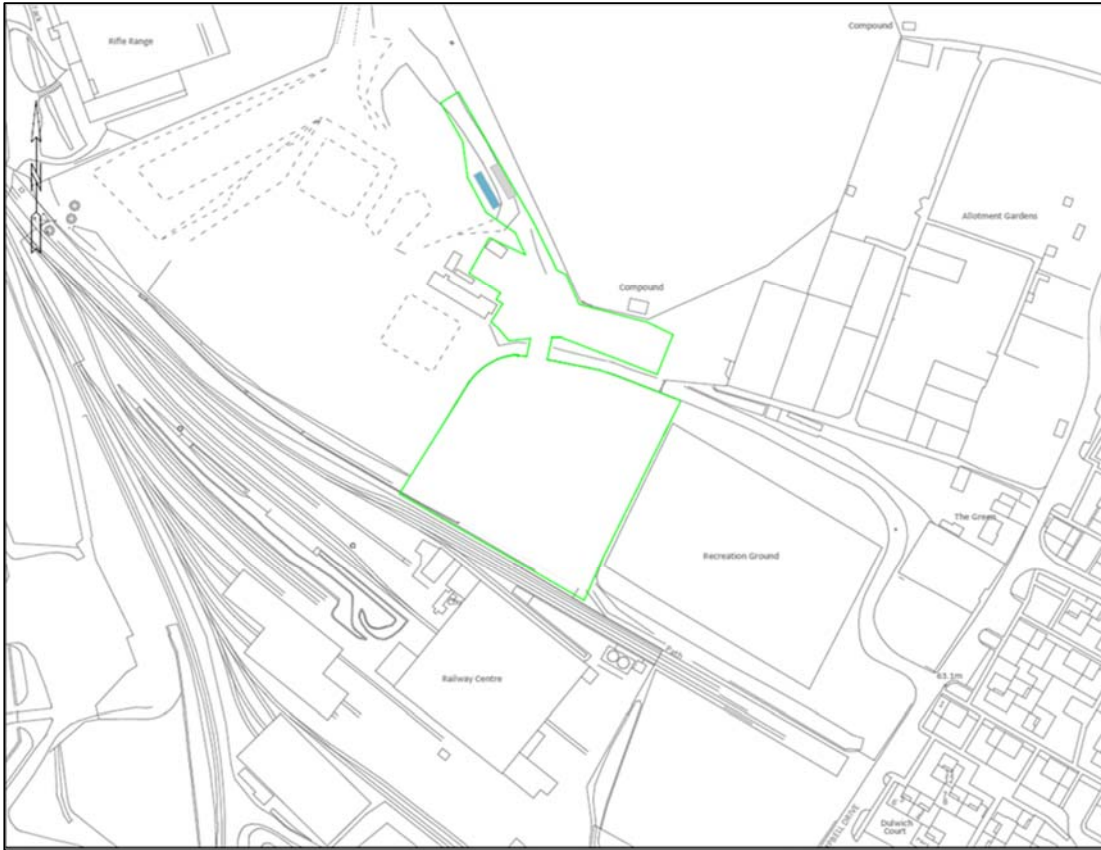
Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

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

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

“year” means calendar year ending 31 December.

# Schedule 7 – Site plan



“©Crown Copyright. All rights reserved. Environment Agency, 100024198, 2017.”

END OF PERMIT