

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Crapper & Sons Landfill Limited

Park Grounds Farm
Wootton Bassett
Swindon
Wiltshire
SN4 8DW

Variation application number

EPR/DP3797SE/V009

Permit number

EPR/DP3797SE

Park Grounds Farm

Permit number EPR/DP3797SE

Introductory note

This introductory note does not form a part of the notice

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

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

This variation is to authorise the inclusion of hazardous waste wood for screening and shredding treatment (activity AR21 of Table S1.1). The hazardous waste wood shall be stored on an impermeable surface with sealed drainage prior to being shredded. Hazardous waste shall be stored segregated from non-hazardous waste. The shredded waste wood shall then be processed through the gasification activity (AR3).

Waste code EWC 17 02 04*, treated wood containing hazardous substances, has been added to Table S2.4 and S2.7.

Including hazardous waste does not change the activity types for AR3 or AR21. This variation will not lead to any changes to the air emissions from the gasification activity or Syngas combustion, as it formalises what was already allowed to be done on the site under Regulatory Position Statement 250, and there will be no changes to the types of waste types received by the plant.

Gas produced by the gasifiers is subject to a multi-stage gas clean-up process prior to being transferred to the gas engines. The gas is subject to the cleaning process in order to ensure that it is comparable in composition to that of natural gas and that combustion of the gas does not result in emissions higher than those from burning natural gas. These requirements must be met for the gas to be considered as a non-waste material and for the burning of the waste not to be considered a waste incineration activity.

The gasification plant will be monitored and controlled continuously using a SCADA system and central control room. The system will continuously monitor syngas quality and gas engine emissions. The syngas will also be monitored periodically in order to assess and confirm that it meets the relevant end-of-waste specification, as required by the conditions of the Environmental Permit.

The Syngas monitoring requirements remain unchanged in Table S3.3 of the permit.

There is no increase in the storage or treatment of waste wood as a result of this variation.

Brief description of the process

The facility, operated by Crapper and Sons Landfill Limited, is located at Park Grounds Farm, near Wootton Bassett, approximately 10 km west of Swindon Town Centre and 2km northwest of Wootton Bassett. The site is located immediately adjacent to the existing Crapper and Sons non-hazardous waste landfill site.

The site lies to the south of Brinkworth Road. The areas to the north, east and west of the site comprise largely open farmland, whilst the main landfill mass extends to the south, with the M4 motorway beyond. The nearest residential property to the site is located approximately 250m to the north-west of the installation boundary. The nearest controlled watercourse is the Thunder Brook (a tributary of Brinkworth Brook), located approximately 550m south of the site at its closest point, flowing in a south-westerly direction. The regulated facility is located approximately 9.7km to the south of North Meadow & Clattinger Farm SAC and within 2km of 14 non-statutory local wildlife and conservation sites.

The site is not located within an Air Quality Management Area.

The permit authorises several scheduled listed activities as below:

- S5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment – open windrow composting with an annual throughput not exceeding 180,000 tonnes.
- S5.1 A(1)(b) - the incineration of non-hazardous waste in a waste incineration plant with a capacity of 3 tonnes per hour or more – incineration of non-hazardous waste in a moving grate waste incineration plant with a maximum throughput of 76,000 tonnes per annum
- S1.2 A(1)(f)(iv) - Activities involving the pyrolysis, carbonisation, distillation, partial oxidation or other heat treatment of other carbonaceous material – gasification of waste wood using three gasifiers with a maximum throughput of 50,000 tonnes per annum
- S5.4 A(1)(a)(ii) - Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment – drying of waste soils for disposal with a maximum 20,000 tonnes per annum

These processes are supported by directly associated activities (DAAs).

The permit also includes waste operations.

The schedules specify the changes made to the permit.

We consider that in reaching our decision to vary the permit we have taken into account all relevant considerations and legal requirements. We are satisfied that the permit will ensure that a high level of protection is provided for the environment and human health and that the activities will not give rise to any significant pollution of the environment or harm to human health.

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

Status log of the permit		
Description	Date	Comments
Application EAWML 26200 determined	22/09/2006	
Variation application EPR/DP3797SE/V002	Duly Made 01/12/2008	
Additional information received	05/01/2009	
Variation determined EPR/DP3797SE	20/01/2009	
Variation application EPR/DP3797SE/V003 received	18/08/2010	
Variation determined EPR/DP3797SE	24/08/2010	
Environment Agency variation EPR/DP3797SE/V004	07/10/2011	
Variation determined EPR/DP3797SE	15/12/2011	
Application EPR/DP3797SE/V005 (variation and consolidation)	Duly made 29/09/2014	Application to vary and update the permit to modern conditions.
Variation determined EPR/DP3797SE	23/06/2016	Varied and consolidated permit issued in modern condition format.
Variation application EPR/DP3797SE/V006	Duly made 29/06/2017	Substantial variation application to add waste incineration, waste gasification and waste drying activities.
Additional information received	25/08/2017	Response to questions detailed in Schedule 5 Schedule 5 Notice, dated 03/08/2017.

Status log of the permit		
Description	Date	Comments
Additional information received	15/09/2017	Response to questions detailed in Schedule 5 Schedule 5 Notice, dated 03/08/2017.
Additional information received	02/11/2017	Response to questions detailed in Schedule 5 Notice, dated 04/10/2017, including provision of updated Fire Prevention Plan (Nov 2017) and Odour Management Plan (Version 4).
Additional information received	01/12/2017	Additional information regarding syngas clean-up and revised air quality assessment, including assessment of abnormal emissions.
Additional information received	18/12/2017	Clarification regarding definition of operator. Confirmation that incineration plant will have back-up CEMS.
Additional information received	12/01/2018	Analysis of syngas composition and comparison to proposed syngas specification.
Additional information received	06/04/2018	Information regarding additional filters for removing aromatic hydrocarbons from syngas.
Additional information received	13/04/2018	Further information regarding plant trials using additional syngas filter, including syngas analysis.
Variation determined EPR/DP3797SE	05/06/2018	
Variation application EPR/DP3797SE/V007	Duly made 19/10/2020	Application to increase waste quantities accepted by the MRF and waste incineration plant, change the flue gas cleaning process of the combustion plant to selective catalytic reduction, amend the technology to be used by the MRF and include additional waste types, change the odour treatment system for the MRF. Amend part of the technology to be used within the gasification plant including the addition of an ash smelter as a Small Waste Incineration Plant.
Additional information received	26/11/2020	Change in the technology provider for the MRF, and an increase in the amount of waste the MRF will be processing.
Additional information received	01/12/2020	Clarification on the scope of the Air Quality Assessment and the Environmental Risk Assessment in relation to local nature conservation sites.
Additional information received	09/12/2020	Revised Environmental Risk Assessment and Application Support Document
Additional information received	11/02/2021	The Operator provided further information on the new odour control technology for the Materials Recycling Facility.
Additional information received	29/04/2021	The Operator provided further information including: - the design of the Gasification Plant and operation of ash smelter (AR16), - disposal of liquid effluent from Gasification Plant, - change from SNCR to SCR NOx abatement for the Incineration, - revised site plan, - change from the Char Combustor to an Ash Smelter.
Additional information received	10/12/2021	The Operator provided further information including:

Status log of the permit		
Description	Date	Comments
		• an updated Application Support Document • design details of the Ash Smelter • confirmation that the stack emissions from the Ash Smelter are lower than the previously proposed Char Combustor • details of the Waste Water treatment Plant • confirmation of waste codes for the MRF.
Variation determined and consolidation issued EPR/DP3797SE	23/03/2022	Varied and consolidated permit issued in modern format.
Regulation 61 Notice response (Biowaste review)	21/02/2023	Response received from the operator.
Environment Agency Biowaste Treatment Sector Review Permit reviewed Variation determined EPR/DP3797SE	13/07/2023	Varied and consolidated permit issued.
Application EPR/DP3797SE/V009 (variation and consolidation)	Duly made 05/06/2024	Application to add the hazardous waste wood code 17 02 04* to the waste wood treatment activity.
Variation determined and consolidation issued EPR/DP3797SE	18/06/2024	Varied and consolidated permit issued.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2016

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

Permit number

EPR/DP3797SE

Issued to

Crapper & Sons Landfill Limited (“the operator”)

whose registered office is

**Park Grounds
Brinkworth Road
Wootton Bassett
Swindon
Wiltshire
SN4 8DW**

company registration number **03707005**

to operate a regulated facility at

**Park Grounds Farm
Wootton Bassett
Swindon
Wiltshire
SN4 8DW**

to the extent set out in the schedules.

The notice shall take effect from 13/07/2023

Name	Date
Peter Maksymiw	18/06/2024

Authorised on behalf of the Environment Agency

Schedule 1

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

- Condition 2.6.1 has been included for hazardous waste storage.
- Table S1.1, as referenced in several conditions, has been amended to add the limit 'no more than 10 tonnes per day of hazardous waste to be treated at the site', to Activity AR21.
- Waste code 17 02 04* has been added to Table S2.4 and S2.7 of the permit.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/DP3797SE

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/DP3797SE/V009 authorising,

Crapper & Sons Landfill Limited (“the operator”),

whose registered office is

**Park Grounds
Brinkworth Road
Wootton Bassett
Swindon
Wiltshire
SN4 8DW**

company registration number 03707005

to operate a regulated facility at

**Park Grounds Farm
Wootton Bassett
Swindon
Wiltshire
SN4 8DW**

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

Name	Date
Peter Maksymiw	18/06/2024

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 [or other approval issued by the Environment Agency].

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and 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.
- 1.2.2 For the following activities referenced in schedule 1, table S1.1 (AR2), the operator shall provide and maintain steam and/or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable.
- 1.2.3 For the following activities referenced in schedule 1, table S1.1 (AR2), the operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:
- (a) new plans for significant developments within 15 km of the installation;
 - (b) changes to the Local Plan;
 - (c) changes to the DECC UK CHP Development Map or similar; and
 - (d) new financial or fiscal incentives for CHP.

The results shall be reported to the Agency within 2 months of each review, including where there has been no change to the original assessment in respect of the above factors.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;

- (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
- (d) take any further appropriate measures identified by a review.

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

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

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).
- 2.1.2 For the following activities referenced in schedule 1, table S1.1 (AR1 to AR4), waste authorised by this permit shall be clearly distinguished from any other waste on the site.

2.2 The site

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

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
 - (a) it is of a type and quantity listed in schedule 2 tables S2.2 to S2.8; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.

- 2.3.5 Waste paper, metal, plastic or glass that has been separately collected for the purpose of preparing for re-use or recycling shall not be accepted. Waste from the treatment of these separately collected wastes shall only be accepted if incineration delivers the best environmental outcome in accordance with regulation 12 of the Waste (England and Wales) Regulations 2011.
- 2.3.6 Separately collected fractions other than those listed in condition 2.3.5 shall not be accepted unless they are unsuitable for recovery by recycling.
- 2.3.7 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.
- 2.3.8 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.
- 2.3.9 For the following activities referenced in schedule 1, table S1.1 (AR2 and AR16), waste shall not be charged, or shall cease to be charged, if:
- (a) the combustion chamber temperature is below, or falls below, 850°C; or
 - (b) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded; or
 - (c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than under abnormal operating conditions; or
 - (d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under abnormal operating conditions; or
 - (e) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than under abnormal operating conditions.
- 2.3.10 For the following activities referenced in schedule 1, table S1.1 (AR2 and AR16), the operator shall have at least one auxiliary burner in each line which shall be operated at start up, shut down and as required during operation to ensure that the operating temperature specified in condition 2.3.9 is maintained as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.9 is maintained in the combustion chamber, such burner(s) shall be fed only with fuels which result in emissions no higher than those arising from the use of gas oil, liquefied gas or natural gas.
- 2.3.11 For the following activity referenced in schedule 1, table S1.1 (AR2), the operator shall record the beginning and end of each period of “abnormal operation”.
- 2.3.12 For the following activity referenced in schedule 1, table S1.1 (AR2), during a period of “abnormal operation” or OTNOC the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.
- 2.3.13 For the following activity referenced in schedule 1, table S1.1 (AR2), where, during “abnormal operation”, on an incineration line, any of the following situations arise, waste shall cease to be charged on that line until normal operation can be restored:
- (a) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 due to stoppages, disturbances or failures of the abatement plant, or continuous emission monitor(s) are out of service, as the case may be, for a total of 4 hours uninterrupted duration;
 - (b) there is a technically unavoidable stoppage, disturbance or failure of the activated carbon abatement system for a total of 4 hours uninterrupted duration;

- (c) the cumulative duration of “abnormal operation” periods over 1 calendar year has reached 60 hours;
- (d) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 (a).
- (e) continuous emission monitors or alternative techniques to demonstrate compliance with the emission limit value(s) for particulates, TOC and / or CO in schedule 3 table S3.1 (a), as agreed in writing with the Environment Agency, are unavailable.

2.3.14 For the following activity referenced in schedule 1, table S1.1 (AR2), the operator shall interpret the end of the period of “abnormal operation” as the earliest of the following:

- (a) when the failed equipment is repaired and brought back into normal operation;
- (b) when the operator initiates a shut down of the waste combustion activity, as described in the application or as agreed in writing with the Environment Agency;
- (c) when a period of four hours has elapsed from the start of the “abnormal operation”;
- (d) when, in any calendar year, an aggregated period of 60 hours “abnormal operation” has been reached on an incineration line.

2.3.15 Bottom ash and APC residues shall not be mixed.

2.3.16 For the following activity referenced in schedule 1, table S1.1 (AR3), waste shall not be charged to the gasification plant, or shall cease to be charged, if:

- (a) any monitoring limit in schedule 3 table S3.3 is exceeded for any two consecutive samples. The gasification plant shall not be brought back into operation until the cause of the exceedance is found and rectified.
- (b) syngas is being burned in the flare, except during start up or shut down/ or recognised safety related OTNOC activity.
- (c) written approval from the Environment Agency under improvement condition IC3, in table S1.3, has not been received within the timescale set out in table S1.3; unless otherwise agreed in writing with the Environment Agency.

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.

2.5.2 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table have been completed.

2.6 Technical requirements

Hazardous waste storage and treatment

2.6.1 Hazardous waste shall not be mixed, either with a different category of hazardous waste or with other waste, substances or materials, unless it is authorised by schedule 1 table S1.1 and appropriate measures are taken.

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 except in “abnormal operation”, when 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(a), S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S3.5. Additional samples shall be taken and tested and appropriate action taken, whenever:
- (a) disposal or recovery routes change; or
 - (b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.
- 3.1.4 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.
- 3.1.5 The operator shall carry out monitoring of soil and groundwater in accordance with IED articles 14(1)(b), 14(1)(e) and 16(2) to the protocol approved in writing with the Environment Agency under Improvement Condition IC14.

3.2 Emissions limits and monitoring for emission to air for incineration plant

- 3.2.1 The limits for emissions to air apply as follows:
- (a) The limits in table S3.1 shall not be exceeded except during periods of abnormal operation or OTNOC.
 - (b) The limits in table S3.1 (a) shall not be exceeded.
 - (c) The limits in table S3.1 (b) shall not be exceeded except during abnormal operation.
- 3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1, S3.1(a) and S3.1(b); the Continuous Emission Monitors shall be used such that;
- (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages of the emission limit values:

• Carbon monoxide	10%
• Sulphur dioxide	20%
• Oxides of nitrogen (NO & NO ₂ expressed as NO ₂)	20%
• Particulate matter	30%
• Total organic carbon (TOC)	30%
• Hydrogen chloride	40%
• Ammonia	40%
 - (b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.2.2 (a).

- (c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, 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. The number of half-hourly averages so validated shall not exceed 5 per day;
- (d) daily average values shall be calculated as follows:
 - (i) for the daily average values in table S3.1, the average of valid half hourly averages over a calendar day excluding half hourly averages during periods of abnormal operation and OTNOC. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;
 - (ii) for the daily average values in table S3.1(b), the average of valid half hourly averages over a calendar day excluding half hourly averages during periods of abnormal operation. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;
- (e) no more than ten daily average values per year shall be determined not to be valid.

3.3 Emissions of substances not controlled by emission limits

- 3.3.1 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.
- 3.3.2 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.
- 3.3.3 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.

3.4 Odour

- 3.4.1 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.
- 3.4.2 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.

3.5 Noise and vibration

- 3.5.1 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.
- 3.5.2 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.

3.6 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, S3.1(a), 3.1(b) and S3.2;
 - (b) syngas monitoring requirements in table S3.3;
 - (c) process monitoring specified in table S3.4;
 - (d) residue quality in table 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 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.
- 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, S3.1(a), 3.1(b), S3.2, S3.3 and S3.4 unless otherwise agreed in writing by the Environment Agency.
- 3.6.5 The syngas monitoring frequency for total sulphur, hydrogen sulphide, total halogenated hydrocarbons, heavy metals and total aromatic hydrocarbons as referred to in Table S3.3 shall be:
- (a) Daily. After 7 successive daily samples in which the limit is not exceeded, monitoring frequency can be carried out as specified in 3.6.5 (b);
 - (b) Weekly. After 4 successive weekly samples in which the limit is not exceeded, monitoring frequency can be carried out as specified in 3.6.5 (c). If a weekly sample exceeds the limit then monitoring shall be carried out as specified in 3.6.5 (a).
 - (c) Monthly. After 3 monthly successive samples in which the limit is not exceeded, monitoring frequency can be carried out as specified in 3.6.5 (d). If a monthly sample exceeds the limit then monitoring shall be carried out as specified in 3.6.5 (b).
 - (d) Quarterly. If a Quarterly sample exceeds the limit then monitoring shall be carried out as specified in 3.6.5 (b).

- 3.6.6 If any sample exceeds a limit in Table S3.3 then a further sample for that parameter shall be taken within 1 week or sooner if required by condition 3.6.5.

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 (AR1 to AR19), 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.
 - (d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Chapter IV of the Industrial Emissions Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the IED.
- 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 For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall keep records of non-waste materials leaving the site, including the type of material, the batch number, the date of export off-site and the tonnage exported on that date. These records shall be maintained for at least 2 years.
- 4.2.7 For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall submit an annual report detailing the efficiency of removal of non-compostable materials from feedstock prior to processing and the level of contamination in the final recovered compost.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

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

4.3.3 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

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
AR1	S5.4 A(1)(b)(i) Recovery or a mix of recovery and disposal of non-hazardous waste with a capacity exceeding 75 tonnes per day involving biological treatment.	Recycling/reclamation of organic substances which are not used as solvents (R3)	From receipt of waste through to composting and recovery of by-products. Composting of waste under aerobic conditions in outdoor turned windrows on an impermeable surface with sealed drainage system. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR2	S5.1 A(1)(b) The incineration of non-hazardous waste in a waste incineration plant with a capacity of 3 tonnes per hour or more	Incineration of non-hazardous waste in a moving grate waste incineration plant (D10)	From receipt of waste to emission of exhaust gas and disposal of waste arisings. Maximum treatment capacity of 9.4 tonnes per hour, 76,000 tonnes per annum. The incineration of non-hazardous waste including the operation of incineration line, boiler and auxiliary burners; facilities for the treatment of exhaust gases; on-site facilities for the treatment and storage of residues, surface water and waste water; systems for controlling and monitoring incineration operations; and receipt, storage and handling of wastes and raw materials (including fuels). Waste incinerated limited to waste received from the on-site materials recovery facility (AR9) and types and quantities as specified in Table S2.3 of this permit.
AR3	S1.2 A(1)(f)(iv) Activities involving the pyrolysis, carbonisation, distillation, partial oxidation or other heat treatment of other carbonaceous material	Gasification of waste wood using three gasifiers (R1)	From the receipt of waste for charging into the gasification system to the transfer of syngas to engines or flare for combustion and storage/handling of wastes and residues. Includes combustion with LPG or syngas to heat the gasification unit. Total treatment capacity of 6 tonnes per hour, 50,000 tonnes per annum. Only syngas which complies with table S3.3 of this permit [i.e. that which results in emissions no higher than those from the combustion of natural gas] shall be burned onsite.

Table S1.1 activities			
			Waste gasified is limited to the waste types and quantities as specified in table S2.4 and received from activity AR21.
AR4	S5.4 A(1)(a)(ii) Disposal of non-hazardous waste with a capacity exceeding 50 tonnes per day involving physico-chemical treatment	Drying of waste soils for disposal (D9)	From receipt of waste to storage and handling of waste output materials. Maximum treatment capacity of 5 tonnes per hour (120 tonnes per day) and 20,000 tonnes per annum. Waste types and quantities as specified in Table S2.5 of this permit and non-odorous trommel fines produced from on-site screening equipment only.
Directly Associated Activities			
AR5	Storage of waste pending recovery (DAA to AR1)	Storage of waste pending composting operation or off-site transfer (R13)	From the receipt of waste to despatch for composting or despatch off site for recovery. Storage of waste on an impermeable surface with sealed drainage. No green waste shall be stored on site prior to shredding for longer than 5 days. The maximum quantity of material held on-site for storage and/or treatment as part of this activity shall not exceed 6,000 tonnes at any one time. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR6	Physical treatment for the purpose of recycling (DAA to AR1)	Pre-treatment of waste pending composting operation or off-site transfer (R3)	From the receipt of waste to despatch for composting or despatch off site for recovery. The maximum quantity of material held on-site for storage and/or treatment as part of this activity shall not exceed 6,000 tonnes at any one time. Pre-treatment of waste prior to composting on an impermeable surface with a sealed drainage system including shredding and screening. Post-treatment of processed compost on an impermeable surface with a sealed drainage system including screening to remove contraries. Waste types suitable for acceptance are limited to those specified in Table S2.2.
AR7	Storage of finished compost and non-composted fraction (DAA to AR1)	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 the receipt of processed uncertified compost and non-composted fraction produced at the facility to treatment on site and despatch for use off-site. Storage of processed uncertified compost on an impermeable surface.

Table S1.1 activities			
AR8	Process water collection and storage (DAA to AR1)	Collection and storage of compost liquor/leachate in 2 storage lagoons.	From the receipt of compost leachate produced at the facility to despatch off site for recovery or disposal.
AR9	Materials recycling facility undertaken as a DAA to Activity AR2.	Recovery of recyclable materials from residual wastes. R3: Recycling/ reclamation of organic substances which are not used as solvents R4: Recycling/ reclamation of metals and metal compounds R5: Recycling/ reclamation of other inorganic compounds R13: Storage of waste pending the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary, pending collection, on the site where it is produced)	Maximum throughput of 180,000 tonnes of waste per annum. From receipt of waste to treatment, storage and despatch of recyclable materials and segregated wastes off-site for recovery. Despatch of non-recyclable materials to the waste incineration plant for incineration. Treatment of waste in an enclosed building and on an impermeable surface with a sealed drainage system including sorting, separation, screening, baling, shredding and compaction. Waste storage shall not exceed 40,000 tonnes at any one time. Waste types suitable for acceptance are limited to those specified in Tables S2.3 and S2.6 of this permit.
AR10	Raw material storage (DAA to AR1, AR2, AR3 and AR4)	Storage of raw materials	From the receipt of raw materials to despatch for use within the facility.
AR11	Electricity Generation (DAA to AR2)	Generation of 4MWe electrical power using a steam turbine to recover energy from the incinerator plant flue gases.	
AR12	Electricity Generation (DAA to AR3)	Generation of 6MWe electrical power from the burning of syngas produced by the waste wood gasification plant, using 3 Jenbacher gas engines (each with a thermal input capacity of 5.2MW).	

Table S1.1 activities			
AR13	Waste preparation and storage prior to gasification (DAA to AR3)	On-site storage and processing of waste wood to meet the specification of the waste gasification plant (R3, R13).	From receipt of waste to transfer to gasification plant.
AR14	Syngas clean-up (DAA to AR3)	Syngas cleaning and filtration, using thermal cracking, cyclones, quench, wet scrubbing system, biochar filters, activated carbon filters, coalescing filters and packed scrubber.	From receipt of syngas produced by the gasifier unit to its clean-up and transfer to gas engines or flare for combustion.
AR15	Emergency flares (DAA to AR3)	Combustion of syngas in emergency flares (3 in number).	From receipt of syngas to emission of combustion gases. For use at start up, shut down or for emergency reasons only.
AR16	Handling and processing of char (DAA to AR3)	Small Waste Incineration Plant Ash smelter plant will process 150 kg /hour	From receipt of char produced by gasification plant to transfer to the ash smelter and disposal off-site. The ash smelter consumes the residual char and oxidises and fuses the ash creating a non-leachable ash product.
AR17	Collection and treatment of process effluent (DAA to AR3)	Collection and treatment of process effluent produced by the gasification plant.	From the production of non-hazardous process effluent by the gasification plant to its treatment in the on-site effluent treatment plant (no more than 75 tonnes per day) and consisting of: Dissolved Air Flotation, Settling / filtration, Membrane Bioreactor, Reverse osmosis (for reuse of treated water). Treated effluent will be either recovered (for reuse in the process) or disposed of off-site.
AR18	Management of site surface water drainage system	Management of site surface waters prior to discharge to water.	From collection of site surface waters to their discharge to water (Thunder Brook) via the site drainage system and attenuation pond.
AR19	Storage of waste pending drying activity (DAA to AR4)	Storage and handling of waste prior to on-site treatment using the waste drying plant (D15)	From receipt of waste to transfer to the waste dryer plant.
Activity reference	Description of activities for waste operations		Limits of activities
AR20	Waste Transfer Station, for the storage and transfer of waste other than that associated with the AR2 waste incineration activity: D15 Storage pending any of the operations numbered D1 to D14 (excluding temporary,		Maximum storage capacity: i. Non-hazardous wastes – 3450 tonnes ii. Inert wastes – 1000 tonnes

Table S1.1 activities		
	pending collection, on the site where it is produced) 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)	iii. Metals – 50 tonnes Waste types suitable for acceptance are limited to those specified in Table S2.6. Activities shall take place on impermeable pavement within the materials recycling facility building.
AR21	Waste Wood: D9 Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12 R3 Recycling/reclamation of organic substances which are not used as solvents R4 Recycling/reclamation of metals and metal compounds R5 Recycling/reclamation of other inorganic materials	Treatment for disposal (no more than 50 tonnes per day, total capacity of activities AR21 and AR22 combined), recycling or recovery consisting only of: - Physical sorting or separation of waste into different compounds - Screening/shredding Waste wood processing to take place on impermeable pavement with sealed drainage system and limited to those waste types specified in Table S2.7. No more than 10 tonnes per day of hazardous waste to be treated at the site.
AR22	Aggregate Processing: D9 Physico-chemical treatment not specified elsewhere in Annex IIA which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D8 and D10 to D12 R3 Recycling/reclamation of organic substances which are not used as solvents R4 Recycling/reclamation of metals and metal compounds R5 Recycling/reclamation of other inorganic materials	Treatment for disposal (no more than 50 tonnes per day, total capacity of activities AR21 and AR22 combined), recycling or recovery consisting only of: - Physical sorting or separation of waste into different compounds - Screening/shredding Operations involving inert wastes (only) shall be carried out on hard standing outside and limited to those specified in Table S2.8.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Part C3 of the application, Table 3 – Technical standards.	29/09/2014
Application	All supporting documentation provided in support of application variation no. EPR/DP3797SE/V005.	29/09/2014
Application	Part C3, Appendix 5 and Appendix 6 of the application. Permit Application Support Document (SOL1701CR01), Section 3, Section 4, Section 5, Section 6 (including Tables 6.2, 6.3, 6.4 and 6.5)	29/06/2017
Response to Schedule 5 dated 03/08/2017	Response to questions 4 a), 4 b); 9. Waste Wood Gasification Plant Operation a), c), d); 9. Waste Dryer Plant a), c); 10, 11, 12, 13, 15 a), 15 d).	25/08/2017
Response Schedule 5 dated 03/08/2017	Site Closure Report	15/09/2017

Table S1.2 Operating techniques		
Description	Parts	Date Received
Response to Schedule 5 dated 04/10/2017	Response to questions 1.1 f) ii); 1.3 a), 1.3 b), 1.3 c); 1.8 a) to h) inclusive; 2 a) to 2 m) inclusive; 7 a), 7 b); 9 b), 9 c), 9 d), 9 e), 9 g), 9 i), 9j).	02/11/2017
Odour management plan, Version 4	All parts.	02/11/2017
Fire prevention plan, November 2017	All parts.	02/11/2017
Additional information	Response detailing syngas clean-up process (dated 01 December 2017)	01/12/2017
Written correspondence (2 emails)	Confirmation that a back-up CEMS will be available on site for the incineration plant. Confirmation of status of Crapper & Sons Landfill Ltd as Operator.	18/12/2017
Written correspondence (2 emails)	Confirmation of design and operation of coalescing filters that will be operated as part of syngas clean-up process.	06/04/2018 and 13/04/2018
Application	All supporting documentation provided in support of application variation no. EPR/DP3797SE/V007	19/10/2020
Additional Information	Revised supporting information received in response to Schedule 5 notice dated 17/11/2021	10/12/2021
Written correspondence (1 email)	Clarification of odour control and ventilation system for the material recycling facility.	21/01/2022
Response to Regulation 61 Notice concerning biowaste treatment	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 21/02/2023
Application EPR/DP3797SE/V009	Application forms C2 and C3, and referenced supporting documents. Email confirming storage details, and referenced supporting documents (received 05/06/2024).	Duly made 05/06/2024

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System (EMS) and the progress made in the certification of the system by an external body or if appropriate submit a schedule by which the EMS will be certified.	Within 12 months of the completion of commissioning of the gasification plant.
IC2	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A1, identifying the fractions within the PM ₁₀ , and PM _{2.5} ranges. On receipt of written approval from the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	Within 6 months of the completion of commissioning of the waste incineration plant.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC3	The Operator shall submit a written report to the Environment Agency on the commissioning of each of the waste gasification (including the ash smelter (AR16)), waste incineration and waste drying plant. Each report shall summarise the environmental performance of the plant as installed against the design parameters set out in the application. Each report shall also include a review of the performance of the plant in question against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions and confirm that the Environmental Management System (EMS) has been updated accordingly.	Within 4 months of the completion of commissioning of each plant.
IC4	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the incinerator plant furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency and include a comparison with the CFD modelling submitted with Pre-Operational Condition PO15.	Within 4 months of the completion of commissioning of the waste incineration plant.
IC5	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of the following incinerator plant emission abatement systems: • The Selective Catalytic Reduction (SCR) system and combustion settings to minimise oxides of nitrogen (NO_x). The report shall include an assessment of the level of NO_x, N₂O and NH₃ emissions that can be achieved under optimum operating conditions. • The lime injection system for minimisation of acid gas emissions • The carbon injection system for minimisation of dioxin and heavy metal emissions.	Within 4 months of the completion of commissioning of the waste incineration plant.
IC6	The Operator shall carry out an assessment of the impact of emissions to air from the incinerator plant of the following component metals subject to emission limit values, Arsenic and Chromium. A report on the assessment shall be made to the Environment Agency for approval. Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the Application. An assessment shall be made of the impact of each metal against the relevant EQS/EAL. In the event that the assessment shows that an EQS/EAL can be exceeded, the report shall include proposals for further investigative work along with timescales for completion.	15 months from the completion of commissioning of the waste incineration plant
IC7	The Operator shall submit a written summary report to the Environment Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) and 3.1(b) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning of the waste incineration plant.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
		Full summary evidence compliance report to be submitted within 18 months of completion of commissioning of the waste incineration plant.
IC8	The Operator shall carry out checks to verify whether the composition of the syngas from each gasification plant is lower than the limits specified in Table 3.3 across a range of operating scenarios and waste feedstock mixes. A written report shall be submitted to the Environment Agency containing the results of syngas testing, and shall include but not be limited to: • A comparison of the monitored syngas composition with the limits set in table S3.3 • A review of the performance of the syngas clean up techniques to demonstrate the removal of pollutants as detailed in the application, including analysis of syngas and scrubber residues • Details of the waste types that were gasified to generate the syngas which was sampled and analysed during this verification • Details of process parameters which could be used as surrogate monitoring to provide assurance that syngas quality as specified in table S3.3 will be achieved • A statement of action (including timescales for implementation) to be taken should syngas levels be shown to have higher pollutant levels than the limits in table S3.3. The operator shall seek written approval from the Environment Agency that the syngas quality can meet the limits set out in table S3.3.	Within 3 months of the completion of commissioning of the waste gasification plant
IC9	The Operator shall submit a written report to the Environment Agency for approval detailing the results of the effluent monitoring programme agreed in accordance with Pre-Operational Condition PO8. The report shall include a comparison of the composition of the monitored effluent with that detailed in the permit application and used in the accompanying H1 assessment. If the composition of the effluent is found to differ from that detailed and assessed in the permit application (in terms of there being additional substances or higher concentrations than those assessed previously, or the effluent is discharged at a higher rate) then a further assessment of the impact of the discharge upon the receiving watercourse shall be undertaken in accordance with our web guidance 'Risk Assessments for your Environmental Permit'. The report shall also propose an ongoing monitoring programme for the discharge of treated effluent.	6 months from the commissioning of the waste gasification plant
IC10	No longer required	---
IC11	The Operator shall undertake a noise assessment during normal operations in accordance with the procedures given in BS4142: 2014, or other methodology as agreed with the Environment Agency, in order to validate the results and conclusions of the noise assessment provided as part of the permit variation application. The assessment shall include, but not be limited to:	Within 6 months of the completion of commissioning of the waste gasification, incineration and drying plant.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	- A review of the noise sources from the facility. Where any noise sources are identified as exhibiting tonal contributions, they shall be quantified by means of frequency analysis. - A review of noise levels from static plant. - Consideration of on-site vehicle movements. A written report shall be submitted to the Agency for approval, detailing the findings of the assessment. If the assessment indicates that noise could have an adverse impact then the report shall propose measures for the further attenuation and/or management of noise along with a timetable for their implementation. The Operator shall implement the improvements to the approved timetable.	
IC12	No longer required	---
IC13	The Operator shall carry out odour monitoring for the waste dryer plant as agreed through Pre-Operational Condition PO17 and submit the results of the monitoring to the Environment Agency for approval along with a comparison of the odour concentrations monitored to those used in the odour modelling and assessment provided as part of the permit variation application. Where the monitored odour concentrations exceed that used in the modelling and assessment of the application then a further odour assessment shall be carried out and submitted to the Environment Agency for approval using this monitoring data. The assessment shall include consideration of any other point source emissions of odour at the facility.	Within 6 months from the completion of commissioning of the waste dryer plant.
IC14	The Operator shall submit the written protocol referenced in condition 3.1.5 for the monitoring of soil and groundwater for approval by the Environment Agency. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1)(b), 14(1)(e) and 16(2) of the IED. The procedure shall be implemented in accordance with the written approval from the Agency.	Within 12 months from the permit issue date.
IC15	The Operator shall submit a written summary report to the Environment Agency to confirm by the results of calibration and verification testing that the performance of the ash smelter Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning of the waste gasification plant Full summary evidence compliance report to be submitted within 18 months of completion of commissioning of the waste gasification plant
IC16	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the ash smelter whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency and include a comparison with the CFD modelling submitted with Pre-Operational Condition PO14	Within 4 months of the completion of commissioning of the gasification plant.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC17	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A5, identifying the fractions within the PM ₁₀ , and PM _{2.5} ranges. On receipt of written approval from the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	Within 6 months of the completion of commissioning of the gasification plant.
IC18	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of the following ash smelter emission abatement systems: • The Selective Non-Catalytic Reduction (SNCR) system and gasification settings to minimise oxides of nitrogen (NO_x). The report shall include an assessment of the level of NO_x, N₂O and NH₃ emissions that can be achieved under optimum operating conditions. • The lime injection system for minimisation of acid gas emissions • The carbon injection system for minimisation of dioxin and heavy metal emissions.	Within 4 months of the completion of commissioning of the gasification plant.
IC19	The Operator shall carry out an assessment of the impact of emissions to air from the Ash Smelter plant of the following component metals subject to emission limit values, Arsenic and Chromium. A report on the assessment shall be made to the Environment Agency for approval. Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the Application. An assessment shall be made of the impact of each metal against the relevant EQS/EAL. In the event that the assessment shows that an EQS/EAL can be exceeded, the report shall include proposals for further investigative work along with timescales for completion.	15 months from the completion of commissioning of the gasification plant
IC20	The operator shall carry out an assessment of the effectiveness of the Airsteril® odour suppression system during periods of operation and plant shut down. A report on the assessment shall be submitted to the Environment Agency for approval. The report shall include any proposals for improvements to the odour suppression system if the assessment shows them to be necessary.	12 months from the commencement of commissioning of the MRF.
IC21	The operator shall carry out a programme of dioxin and dioxin like PCB monitoring of emission points A1 and A5 over a period and frequency agreed with the Environment Agency. The operator shall submit a report to the Environment Agency with an analysis of whether dioxin emissions can be considered to be stable.	Within 3 months of completion of commissioning or as agreed in writing with the Environment Agency
IC22	The operator shall carry out a programme of mercury monitoring of emission points A1 and A5 over a period and frequency agreed with the Environment Agency. The operator shall submit a report to the Environment Agency with an analysis of whether the waste feed to the plant can be proven to have a low and stable mercury content.	Within 3 months of completion of commissioning or as agreed in writing with the Environment Agency
IC23	The Operator shall submit a report to the Environment Agency for approval on start-up and shut-down conditions over the first 12 months of operation. The report shall identify any amendments to the start-up and shut-down definitions that were described in the application.	Within 15 months of completion of commissioning or as agreed in writing with the Environment Agency
Improvement condition for primary containment design (AR1)		

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC24	The operator shall submit a written 'primary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a qualified engineer and shall assess the extent design specification and condition of primary containment systems where polluting liquids and solids are being stored, treated, and/or handled. The plan shall include: - an assessment of the physical condition of all primary containment systems (storage and treatment vessels) using a Written Scheme of Examination and their suitability for providing primary containment when subjected to the dynamic and static loads caused by catastrophic tank failure; - 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 - a preventative maintenance and inspection regime The plan shall be implemented in accordance with the Environment Agency's written approval.	13/07/2024 or other date as agreed in writing with the Environment Agency
Improvement condition for secondary containment design (AR1)		
IC25	The operator shall submit a written 'secondary and tertiary containment plan' and shall obtain the Environment Agency's written approval to it. The plan shall contain the results of an inspection and program of works undertaken by a competent structural engineer, in accordance with the risk assessment methodology detailed within CIRIA C736 (2014) guidance, of the condition and extent of secondary and tertiary containment systems where all polluting liquids and solids are being stored, treated, and/or handled. The inspection shall consider, but not be limited to, the storage vessels, bunds, loading and unloading areas, transfer pipework/pumps, temporary storage areas, and liners underlying the site. The plan shall include: - an assessment of the physical condition of all secondary and/or tertiary containment systems, using a Written Scheme of Examination and their suitability for providing containment when subjected to the dynamic and static loads caused by catastrophic tank failure; - a program of works with timescales for the implementation of individual improvement measures necessary for the secondary and/or tertiary containment systems to comply with CIRIA C736 (2014) guidance, or equivalent. - a preventative maintenance and inspection regime The plan shall be implemented in accordance with the Environment Agency's written approval.	13/07/2024 or other date as agreed in writing with the Environment Agency
Improvement condition for operational contingency storage capacity (AR1)		
IC26	The operator shall provide a written "operational contingency storage 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 compost produced from site operations. The	13/07/2024 or other date as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
	review shall examine site contingency arrangements in the event of closed landspreading periods, extreme weather conditions, site closure, disease outbreak etc. The contingency storage plan shall include: • Additional storage capacity on-site (at least 2 months storage) and storage capacity off-site; • Identification of alternative outlets for compost – identify companies /permitted waste facilities that would be able to manage the compost output, taking into account their permits and capacity constraints. The plan shall be implemented in accordance with the Environment Agency's written approval.	

Table S1.4 Pre-operational measures		
Reference	Operation	Pre-operational measures
PO1	The measures stated shall be complete prior to the operation of each of the following activities: waste incineration plant (AR2), waste gasification plant (AR3), waste dryer plant (AR4) material recycling facility (AR7) and ash smelter(AR16)	Prior to the commencement of commissioning of each of the activities AR2, AR3, AR4, AR7 and AR16, the Operator shall provide a written commissioning plan for the activity (or activities), including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include: • Specific operational parameters required to define “final commissioning”, • the expected emissions to the environment during the different stages of commissioning, • the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO2	The measures stated shall be complete prior to the operation of each of the following activities: waste incineration plant (AR2), waste gasification plant (AR3), waste dryer plant (AR4) material recycling facility (AR7) and the Ash Smelter (AR16)	Prior to the commencement of commissioning, the Operator shall send: • A summary of the site Environment Management System (EMS);and • A copy of the full OTNOC management plan which shall be prepared in accordance with BAT 18 of the BAT conclusions to the Environment Agency and obtain the Environment Agency's written approval to the EMS summary and the full OTNOC management plan. The Operator shall make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements set out in Environment Agency web guide on developing a management system for environmental permits (found on www.gov.uk) and BAT 1 of the incineration BAT conclusions. The EMS shall include the approved OTNOC management plan. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit.
PO3	The measures stated shall be complete prior to the operation of each of the following activities: waste incineration plant (AR2), waste gasification plant (AR3), waste dryer plant (AR4) and material recycling facility (AR7)	Prior to the commencement of commissioning of each of the activities AR2, AR3, AR4 and AR7, the Operator shall submit a written report to the Agency providing the waste pre-acceptance and acceptance procedures (including specific waste acceptance criteria) to be employed at the site for the activity (or activities). The waste acceptance procedure(s) shall include the processes and systems by which wastes unsuitable for treatment at the site will be controlled. The procedure(s) shall be implemented in accordance with the written approval from the Agency.

PO4	The measures stated shall be complete prior to the operation of each of the following operations: waste incineration plant (AR2), waste gasification plant (AR3), waste dryer plant (AR4) and material recycling facility (AR7)	Prior to the commencement of commissioning of each of the activities AR2, AR3, AR4 and AR7, the Operator shall provide the Environment Agency with a written report for approval providing details of the impermeable hardstanding and containment measures (including but not limited to tanks, pipework, bunds, above and below ground drainage systems) in place to prevent and control fugitive emissions to land and water from the activity (or activities). The report shall demonstrate that the areas of hardstanding and other containment measures have been constructed and installed to meet relevant standards, including the relevant requirements of CIRIA C736 Containment systems for the prevention of pollution and Section 2.2.5 of S5.06 Guidance for the Recovery and Disposal of Hazardous and Non Hazardous Waste, and that this has been confirmed by a suitably qualified engineer.
PO5	Operation of waste gasification plant (AR3)	At least 1 month before final commissioning of the gasification plant, the operator shall submit a Syngas Monitoring Methodology for approval in writing by the Environment Agency - detailing how representative sampling and analysis of syngas will occur to demonstrate that it meets the limits specified in table S3.3. The methodology shall include, but not be limited to; • Sample point location and evidence of homogenous sample collection. • Details of sampling methods, including duration, for representative sampling across different operating loads and waste feedstock. • Sample analysis methods, limits of detection and availability of laboratory accreditation for methods. • Procedures for implementing the requirements of conditions 3.6.6 and 3.6.7, including details of sampling, courier, analysis and reporting responsibilities and timescales. The methodology shall be implemented in accordance with the Environment Agency's written approval.
PO6	Operation of waste gasification plant (AR3)	Prior to the commencement of final commissioning of the gasification plant, the operator shall submit procedures for the management of out of specification syngas to the Environment Agency for approval in writing. Procedures shall include details of syngas specification and detail processes for the management of syngas where any limit in Schedule 3 Table 3.3 has been exceeded and/or the requirements of conditions 3.6.6 or 3.6.7 are not being met.
PO7	Operation of waste gasification plant (AR3)	Prior to the commencement of final commissioning of the gasification plant, the Operator shall submit details of the start-up and shut down operating procedures to the Environment Agency for approval. The submission shall include the operational parameters which will be met to define start up and shut down and details of how syngas will be dealt with during these periods.
PO8	Operation of the materials recycling facility (AR7)	The storage or processing of waste in the materials recycling facility building shall not commence until:

		- the Operator has provided evidence to the Environment Agency to show that the design, installation and maintenance of the building's fire detection and suppression systems will be covered by an appropriate UKAS accredited third party certification scheme; and - the fire detection and suppression systems are installed and commissioned; - a commissioning plan is submitted to the Environment Agency that includes, but not limited to, the design layout, performance and operating procedure of the systems; - the Environment Agency has agreed in writing that the storage and treatment of combustible waste in the building may commence.
PO9	Operation of waste incineration plant (AR2)	Prior to the commencement of commissioning of the waste incineration plant (activity AR2), the Operator shall send a report to the Environment Agency which will contain a comprehensive review of the options available for utilising the heat generated, including operating as CHP or supplying district heating, by the waste incineration process in order to ensure that it is recovered as far as practicable. The review shall detail any identified proposals for improving the recovery and utilisation of heat and shall provide a timetable for their implementation.
PO10	Operation of waste incineration plant (AR2)	Prior to the commencement of commissioning of the waste incinerator plant (activity AR2), the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of incinerator bottom ash for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.
PO11	Operation of waste incineration plant (AR2)	After completion of furnace design and at least three calendar months before commencement of commissioning; the operator shall submit a written report to the Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by Chapter IV and Annex VI of the IED.
PO12	Operation of waste incineration plant (AR2)	At least three months before the commencement of commissioning of the waste incineration plant (AR2), the Operator shall submit a written report to the Environment Agency specifying arrangements for continuous and periodic monitoring of emissions to air to comply with Environment Agency guidance notes M1 and M2. The report shall include the following: - Plant and equipment details, including accreditation to MCERTS - Methods and standards for sampling and analysis - Details of monitoring locations, access and working platforms
PO13	Operation of waste dryer plant (AR4)	Prior to the commencement of commissioning of the waste dryer plant, the Operator shall provide the Environment Agency with a written report for approval detailing a

		monitoring programme for point source emissions of odour released from the dryer plant exhausts. The report shall detail the proposed method, duration and frequency of monitoring, which shall ensure that representative samples of air are taken over a range of operating scenarios, having regards to the Environment Agency H4 Odour Management guidance document.
PO14	Operation of ash smelter (AR16)	After completion of the ash smelter design and at least three calendar months before commencement of commissioning; the operator shall submit a written report to the Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by Chapter IV and Annex VI of the IED.
PO15	Operation of ash smelter (AR16)	At least three months before the commencement of commissioning of the ash smelter plant (AR16), the Operator shall submit a written report to the Environment Agency specifying arrangements for continuous and periodic monitoring of emissions to air to comply with Environment Agency guidance notes M1 and M2. The report shall include the following: • Plant and equipment details, including accreditation to MCERTS • Methods and standards for sampling and analysis • Details of monitoring locations, access and working platforms
PO16	Operation of ash smelter (AR16)	Prior to the commencement of commissioning of the ash smelter plant (activity AR16), the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of the ash smelter residues for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.
PO17	Operation of the materials recycling facility (AR7)	Prior to commissioning of the Materials Recycling Facility the Operator shall submit to the Environment Agency for approval a protocol for monitoring and determining the performance of the Airsteril® odour suppression system
PO18	Operation of the drying of waste soils for disposal (AR4)	At least 6 months prior to starting the operation AR4, the operator shall submit a BAT report to the Environment Agency for review and approval. The report shall include but not limited to an assessment of compliance of the operation AR4, against the Waste Treatment BAT Conclusions (current at the time). The operation AR4 shall not start until agreed and approved by the Environment Agency.
PO19	Incineration of non-hazardous waste in a moving grate waste incineration plant (AR2)	At least 6 months prior to starting the operation AR2, the operator shall submit a BAT report to the Environment Agency for review and approval. The report shall include but not limited to an assessment of compliance of the operation AR2, against the Waste Incineration BAT Conclusions (current at the time).

		The operation AR2 shall not start until agreed and approved by the Environment Agency.
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Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Fuel Oil	< 0.1% sulphur content

Table S2.2 Permitted waste types and quantities for composting in open systems (activity AR1)	
Maximum quantity	Annual throughput shall not exceed 180,000 tonnes.
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 1% w/w and shall be as low as reasonably practicable by 31 December 2025. • waste consisting solely or mainly of dusts (except sawdust), powders or loose fibres • hazardous wastes • wastes that are in liquid form • wastes containing wood-preserving agents or other biocides and treated wood and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013 • pest infested waste
Waste code	Description
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 03	plant-tissue waste
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork – virgin timber only
03 01 05	sawdust, shavings, cuttings, wood and particle board other than those mentioned in 03 01 04 – virgin timber only
03 03	wastes from pulp, paper and cardboard production and processing
03 03 10	fibre rejects only – virgin timber only
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable standard

Table S2.2 Permitted waste types and quantities for composting in open systems (activity AR1)	
Maximum quantity	Annual throughput shall not exceed 180,000 tonnes.
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 1% w/w and shall be as low as reasonably practicable by 31 December 2025. • waste consisting solely or mainly of dusts (except sawdust), powders or loose fibres • hazardous wastes • wastes that are in liquid form • wastes containing wood-preserving agents or other biocides and treated wood and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013 • pest infested waste
Waste code	Description
15 01 02	plastic packaging compostable plastics only certified to EN 13432 or equivalent certified compostable standard
15 01 03	wooden packaging – virgin timber only
15 01 05	composite packaging – only biodegradable organic packaging certified to EN 13432 or equivalent certified compostable standard
15 01 09	textile packaging (made entirely from biodegradable fibres only)
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 02	wood, glass and plastic
17 02 01	wood – allowed if biodegradable material only, with no chemical additives or preservative, and no persistent organics present. Untreated wood only. Not allowed if treated, for example contains veneers, other coatings or preserving substances.
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 06	dredging spoil other than those mentioned in 17 05 05 (from inland waters only)
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 05	wastes from aerobic treatment of solid wastes
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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard (excluding veneers, plastic coatings or laminates) certified to EN 13432 or equivalent certified compostable packaging only
19 12 07	wood other than that mentioned in 19 12 06

Table S2.2 Permitted waste types and quantities for composting in open systems (activity AR1)	
Maximum quantity	Annual throughput shall not exceed 180,000 tonnes.
Exclusions	Wastes having any of the following characteristics shall not be accepted: • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 1% w/w and shall be as low as reasonably practicable by 31 December 2025. • waste consisting solely or mainly of dusts (except sawdust), powders or loose fibres • hazardous wastes • wastes that are in liquid form • wastes containing wood-preserving agents or other biocides and treated wood and post-consumer wood • wastes containing persistent organic pollutants • wastes containing Japanese Knotweed or other invasive plant species listed in the Invasive Species (Amendment etc.) (EU Exit) Regulations 2019 • manures, slurries and spoiled bedding and straw from farms where animals have notifiable diseases as stipulated in the Animal By-Products (Enforcement) (England) Regulations 2013 • pest infested waste
Waste code	Description
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 (and only including wastes types listed in this table) and made up of previously sanitised /pasteurised and stabilised batches only
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard (excluding veneers, plastic coatings or laminates) meeting EN 13432 or equivalent certified compostable packaging only
20 01 38	untreated wood where no non-biodegradable coating or preserving substance is present
20 01 39	plastics – incidental compostable plastics only, certified to EN 13432 or equivalent certified compostable standard only.
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste (plant matter only)

Table S2.3 Permitted waste types and quantities for waste incineration (activity AR2) and materials recycling facility (activity AR9)	
Maximum quantity	76,000 tonnes per annum (including that produced on-site from material recovery operations)
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use

Table S2.3 Permitted waste types and quantities for waste incineration (activity AR2) and materials recycling facility (activity AR9)

Maximum quantity	76,000 tonnes per annum (including that produced on-site from material recovery operations)
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 10	combustible waste (refuse derived fuel)

Table S2.4 Permitted waste types and quantities for waste gasification (activity AR3)

Maximum quantity	50,000 tonnes per annum (including that produced from the on-site waste wood processing operations)
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres.
Waste code	Description
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 03	wooden packaging
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 02	wood, glass and plastic
17 02 01	Wood
17 02 04*	Treated wood, glass, plastic (alone or in mixtures) containing hazardous substances (wood only)
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	wood other than that mentioned in 19 12 06
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

Table S2.4 Permitted waste types and quantities for waste gasification (activity AR3)	
Maximum quantity	50,000 tonnes per annum (including that produced from the on-site waste wood processing operations)
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres.
Waste code	Description
20 01	separately collected fractions (except 15 01)
20 01 38	wood other than that mentioned in 20 01 37

Table S2.5 Permitted waste types and quantities for waste drying (activity AR4 Dryer)	
Maximum quantity	20,000 tonnes per annum (including that produced on-site from material recovery operations)
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - odorous
Waste code	Description
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 06	dredging spoil other than those mentioned in 17 05 05

Table S2.6 Permitted waste types and quantities for waste transfer (activity AR20) and materials recycling facility (activity AR9)	
Maximum quantity	180,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying and physical and chemical treatment of minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
02	Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing

Table S2.6 Permitted waste types and quantities for waste transfer (activity AR20) and materials recycling facility (activity AR9)	
Maximum quantity	180,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 04	waste plastics (except packaging)
02 01 07	wastes from forestry
02 01 10	waste metal
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 03	wastes from pulp, paper and cardboard production and processing
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
10	Wastes from thermal processes
10 11	wastes from manufacture of glass and glass products
10 11 03	waste glass-based fibrous materials
10 11 05	particulates and dust
10 11 12	waste glass other than those mentioned in 10 11 11
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 03	particulates and dust
10 12 05	sludges and filter cakes from gas treatment
10 12 06	discarded moulds
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01	waste preparation mixture before thermal processing
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 14	waste concrete and concrete sludge
12	Wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01	wastes from shaping and physical and mechanical surface treatment of metals and plastics
12 01 05	plastics shavings and turnings
12 01 13	welding wastes
12 01 15	machining sludges other than those mentioned in 12 01 14
12 01 21	spent grinding bodies and grinding materials other than those mentioned in 12 01 20

Table S2.6 Permitted waste types and quantities for waste transfer (activity AR20) and materials recycling facility (activity AR9)	
Maximum quantity	180,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
16	Wastes not otherwise specified in the list
16 01	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 03	end-of-life tyres
16 01 19	Plastic
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	Concrete
17 01 02	Bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06
17 02	wood, glass and plastic
17 02 02	Glass
17 02 03	Plastic
17 03	bituminous mixtures, coal tar and tarred products
17 03 02	bituminous mixtures other than those mentioned in 17 03 01
17 05	soil (including excavated soil from contaminated sites), stones and dredging spoil
17 05 04	soil and stones other than those mentioned in 17 05 03
17 05 08	track ballast other than those mentioned in 17 05 07
17 06	insulation materials and asbestos-containing construction materials
17 06 04	insulation materials other than those mentioned in 17 06 01 and 17 06 03

Table S2.6 Permitted waste types and quantities for waste transfer (activity AR20) and materials recycling facility (activity AR9)	
Maximum quantity	180,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
17 08	gypsum-based construction material
17 08 02	gypsum-based construction materials other than those mentioned in 17 08 01
17 09	other construction and demolition wastes
17 09 04	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard
19 12 04	plastic and rubber
19 12 05	Glass
19 12 08	Textiles
19 12 09	minerals (for example sand, stones)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
19 13	wastes from soil and groundwater remediation
19 13 02	solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04	sludges from soil remediation other than those mentioned in 19 13 03
19 13 06	sludges from groundwater remediation other than those mentioned in 19 13 05
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 01	paper and cardboard
20 01 02	Glass
20 01 10	Clothes
20 01 11	Textiles
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 36	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	Plastics

Table S2.6 Permitted waste types and quantities for waste transfer (activity AR20) and materials recycling facility (activity AR9)	
Maximum quantity	180,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
20 01 40	Metals
20 01 41	wastes from chimney sweeping
20 02	garden and park wastes (including cemetery waste)
20 02 02	soil and stones
20 03 03	other non-biodegradable wastes
20 03	other municipal wastes
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street cleaning residues
20 03 07	bulky waste

Table S2.7 Permitted waste types and quantities for waste wood processing (activity AR21)	
Maximum quantity	78,500 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres.
Waste code	Description
03	Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
03 01	wastes from wood processing and the production of panels and furniture
03 01 01	waste bark and cork
03 01 05	sawdust, shavings, cuttings, wood, particle board and veneer containing hazardous substances
03 03	wastes from pulp, paper and cardboard production and processing
03 03 01	waste bark and wood
15	Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified
15 01	packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 03	wooden packaging
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 02	wood, glass and plastic
17 02 01	wood
17 02 04*	Treated wood, glass, plastic (alone or in mixtures) containing hazardous substances (wood only)

Table S2.7 Permitted waste types and quantities for waste wood processing (activity AR21)	
Maximum quantity	78,500 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres.
Waste code	Description
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 07	wood other than that mentioned in 19 12 06
20	Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01	separately collected fractions (except 15 01)
20 01 38	wood other than that mentioned in 20 01 37

Table S2.8 Permitted waste types and quantities for waste aggregate processing (activity AR22)	
Maximum quantity	20,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
01	Wastes resulting from exploration, mining, quarrying and physical and chemical treatment of minerals
01 04	wastes from physical and chemical processing of non-metalliferous minerals
01 04 08	waste gravel and crushed rocks other than those mentioned in 01 04 07
01 04 09	waste sand and clays
01 04 10	dusty and powdery wastes other than those mentioned in 01 04 07
01 04 11	wastes from potash and rock salt processing other than those mentioned in 01 04 07
01 04 12	tailings and other wastes from washing and cleaning of minerals other than those mentioned in 01 04 07
01 04 13	wastes from stone cutting and sawing other than those mentioned in 01 04 07
10	Wastes from thermal processes
10 12	wastes from manufacture of ceramic goods, bricks, tiles and construction products
10 12 08	waste ceramics, bricks, tiles and construction products (after thermal processing)
10 13	wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01	waste preparation mixture before thermal processing
10 13 06	particulates and dust (except 10 13 12 and 10 13 13)
10 13 11	wastes from cement-based composite materials other than those mentioned in 10 13 09 and 10 13 10
10 13 14	waste concrete and concrete sludge

Table S2.8 Permitted waste types and quantities for waste aggregate processing (activity AR22)	
Maximum quantity	20,000 tonnes per year
Exclusions	Wastes having any of the following characteristics shall not be accepted: - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres; - hazardous wastes
Waste code	Description
17	Construction and demolition wastes (including excavated soil from contaminated sites)
17 01	concrete, bricks, tiles and ceramics
17 01 01	concrete
17 01 02	bricks
17 01 03	tiles and ceramics
17 01 07	mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standards or methods
A1	Particulate matter	Incinerator plant ^{Note 1}	30 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Particulate matter		10 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Hydrogen chloride		60 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Hydrogen chloride		10 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Hydrogen fluoride		2 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
	Carbon monoxide		100 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Carbon monoxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		200 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		100 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 14791

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standards or methods
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		400 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		200 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Cadmium & thallium and their compounds (total)		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
	Mercury and its compounds		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.5 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
	Ammonia (NH ₃)		No limit	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Nitrous Oxide (N ₂ O)		No limit	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Dioxins / furans (I-TEQ)		0.1 ng/m ³	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Humans / Mammals)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Fish)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Birds)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standards or methods
	Dioxin-like PCBs (WHO-TEQ Fish)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
	Dioxin-like PCBs (WHO-TEQ Birds)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
	Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.
A2, A3, A4	Oxides of Nitrogen	Gas engines associated with gasification plant ^{Note 2}	250 mg/m ³	Periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 14792
	Carbon Monoxide		400 mg/m ³	Periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 15058
	Sulphur Dioxide		40 mg/m ³	Periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 14791
A5	Particulate matter	Ash smelter associated with the gasification plant	30 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Particulate matter		10 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Hydrogen fluoride		2 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
	Carbon monoxide		100 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standards or methods
	Carbon monoxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		200 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Sulphur dioxide		100 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 14791
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		400 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		200 mg/m ³	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Cadmium & thallium and their compounds (total)		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
	Mercury and its compounds		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.5 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
	Ammonia (NH ₃)		No limit	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Nitrous Oxide (N ₂ O)		No limit	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
	Dioxins / furans (I-TEQ)		0.1 ng/m ³	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standards or methods
	Dioxins / furans (WHO-TEQ Humans / Mammals)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Fish)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Birds)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
	Dioxin-like PCBs (WHO-TEQ Fish)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
	Dioxin-like PCBs (WHO-TEQ Birds)		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
	Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.		No limit	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.
A6, A7, A8	-	Emergency flares associated with gasification plant	-	-	-	-
A9, A10	-	Waste drying plant	-	-	-	-

Note 1 – Reference conditions 11% Oxygen, dry at 0°C, 101.3 kPa

Note 2 – Reference conditions 5% Oxygen, dry at 0°C, 101.3 kPa

Table S3.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Particulate matter		150 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3 during abatement plant failure during failure of the continuous emission monitor
A1	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3 during abatement plant failure during failure of the continuous emission monitor
A1	Carbon monoxide		100 mg/m ³	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3 during abatement plant failure during failure of the continuous emission monitor

Table S3.1(b) Point source emissions to air during OTNOC – emission limits (IED annex VI limits) and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	As specified in the OTNOC management plan as approved after completion of pre-operational condition PO2			As specified in the OTNOC management plan as approved after completion of pre-operational condition PO2		
A1	Particulate matter		30 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Particulate matter		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride		60 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride		20 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 1911 Parts 1, 2 and 3
A1	Hydrogen fluoride		4 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Hydrogen fluoride		1 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen fluoride		2 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
A1	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in any 24-hour period	Continuous measurement	BS EN 14181
A1	Carbon monoxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181

Table S3.1(b) Point source emissions to air during OTNOC – emission limits (IED annex VI limits) and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Sulphur dioxide		200 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide		100 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS EN 14791
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		400 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		200 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Cadmium & thallium and their compounds (total)		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8-hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Mercury and its compounds		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8-hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
A1	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.5 mg/m ³	periodic over minimum 30 minute, maximum 8-hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Ammonia (NH ₃)		No limit	½-hr average and / or daily average	Continuous measurement	BS EN 14181
A1	Nitrous oxide (N ₂ O)		No limit	½-hr average	Continuous	BS EN 14181
A1	Dioxins / furans (I-TEQ)		0.1 ng/m ³	periodic over minimum 6 hours, maximum 8-hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.2 Point source emissions to water – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 7	Discharge to watercourse from site surface water attenuation pond	Suspended solids	-	Spot sample	Monthly samples for the first 6 months of operation. After the first 6 months of operation monitoring frequency may be reduced to biannual, with prior written agreement from the Environment Agency.	BS EN 872
		COD	-			BS EN 1899-1 or BS EN 1899-2
		Metals (including arsenic, cadmium, lead, iron, chromium (III), copper, nickel, zinc)	-			Using appropriate methods referred to in Technical Guidance Note M18 Monitoring of discharge to water and sewer
		Oil and grease	None visible	Instantaneous	Daily	Visual inspection

Table S3.3 Syngas monitoring requirements				
Location or description of point of measurement	Parameter	Limit (incl. unit) Note 1	Monitoring frequency	Monitoring standard or method
P1 Syngas, post gas cleaning line and pre combustion. Sampling points to be agreed through PO5.	Total sulphur	0.57 mg/m ³	As specified in condition 3.5.6	As agreed through the completion of Pre-operational measure PO5
	Hydrogen sulphide	0.40 mg/m ³		
	Hydrogen fluoride	5 mg/m ³		
	Hydrogen chloride	15 mg/m ³		
	Total halogenated hydrocarbons	0.07 mg/m ³		
	Heavy metals Hg, Cd, Tl, Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.16 mg/m ³		
	Total aromatic hydrocarbons expressed as Xylene	2.6 mg/m ³		
	Calorific value	-	Continuous	

Note 1 - The emission limits refer to a calorific value (CV) equivalent to that for natural gas of 37 MJ/m³. The following calculation shall be used to show compliance with the limits in this table: (syngas monitoring result / syngas calorific value) x 37.

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
As identified in the Application	Wind Speed and Direction	Continuous	Anemometer	
Location close to the Combustion Chamber inner wall of the incinerator plant or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	
A1	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.
Location close to the Combustor Chamber inner wall of the ash smelter or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A5	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A5	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A5	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
A5	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.
Emergency gas flares	Hours operated	-	-	Based upon written records of the dates and times that the flares are operated, which shall be available for Agency inspection.
Process monitoring for open windrows composting (AR1)				
Stockpiles prior to composting including screened and shredded material	Temperature	Daily prior to processing	Temperature probe	Monitoring equipment shall be available on site and used as required to maintain aerobic conditions and ensure compliance with this permit. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency. Uncontrolled self-heating and decomposition must be prevented in accordance with the Accident Management Plan and/or Fire Prevention Plan. Process shall be controlled in accordance with permit condition 3.4 and the Odour Management Plan. Sampling of waste shall be in
	Moisture	Daily prior to processing	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	
	C:N Total Organic Carbon and Total Kjeldahl Nitrogen	On acceptance or as agreed in an approved odour management plan	Total Organic Carbon using recognised industry method Total Kjeldahl Nitrogen in accordance with BS EN 13654-1	

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				accordance with EN14899. Anaerobic conditions shall be prevented.
	Fly infestation or pupa formation	Daily – for stockpiles in storage prior to preparation and stockpiles in sanitisation stage Weekly – for stockpiles in stabilisation stage	Visual inspection	Records of fly count must be maintained as necessary and infested waste should be rejected in accordance with waste acceptance procedures and in accordance with permit condition 3.7.
Representative internal core for each composting batch during sanitisation and stabilisation stage	Temperature	Daily during sanitisation stage. Weekly during stabilisation stage	Temperature probe Temperature probe shall record core waste temperature and probe placement must be sufficient to record temperature uniformly.	Monitoring equipment shall be available on site and used as required to maintain aerobic conditions and ensure compliance with this permit. Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency. Process shall be controlled in accordance with permit condition 3.4 and the Odour Management Plan. Sampling of waste shall be in accordance with EN14899. Anaerobic conditions shall be prevented.
	Moisture	At least daily during sanitisation stage Weekly during stabilisation stage	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	
	C:N Total Organic Carbon and Total Kjeldahl Nitrogen	Weekly or as agreed in an approved odour management plan	Total Organic Carbon using recognised industry method Total Kjeldahl Nitrogen in accordance with BS EN 13654-1	

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Representative internal core for each composting batch during further maturation stage	Temperature	Weekly	Temperature probe Temperature probe shall record core waste temperature and probe placement must be sufficient to record temperature uniformly	Process shall be controlled in accordance with permit condition 3.4 and the Odour Management Plan.
	Moisture	Weekly	Industry grab test as a minimum, or oven drying in accordance with BS EN 13040	
Internal core for oversize storage piles	Temperature	Once per week	Temperature probe As specified in the Environmental Management System	Uncontrolled self-heating and decomposition must be prevented in accordance permit condition 3.8, the Fire Prevention Plan and/or Accident Management Plan.
Storage tank(s)/leachate lagoon	Integrity checks	Weekly	Visual assessment	750 mm freeboard must be maintained for storage lagoons. Records of volume must be maintained.
Emissions of odour from on-site waste operations and activities	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Incinerator Bottom Ash	LOI	<5%	Monthly in the first year of operation. Then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Incinerator Bottom Ash	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Incinerator Bottom Ash	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Incinerator APC Residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	-	Monthly in the first year of operation. Then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Incinerator APC Residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	-	Before use of a new disposal or recycling route	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Ash Smelter Residue	Note 1 -		Monthly in the first year of operation. Then Quarterly	Note 1	

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
			Before use of a new disposal or recycling route		
Ash Smelter Filter Residue	Note 1	-	Monthly in the first year of operation. Then Quarterly	Note 1	
			Before use of a new disposal or recycling route		

Note 1 - To be agreed in writing with the Environment Agency following completion of Pre-operational condition PO16

* Or other equivalent standard as agreed in writing with the Environment Agency.

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1, A2, A3, A4, A5	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
Emissions to water Parameters as required by condition 3.5.1	W1	Monthly for the first 6 months, reduced to biannually with agreement from the Environment Agency	1 Jan and 1 Jul
LOI Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	Bottom Ash	Before use of a new disposal or recycling route	-
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC Residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	APC Residues	Before use of a new disposal or recycling route	-

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Parameters as required by condition 3.5.1	Ash smelter, Filter Residue	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
		Before use of a new disposal or recycling route	
Parameters as required by condition 3.5.1	Gasification Syngas	Monthly, or Quarterly if monitoring frequency has reduced to quarterly	1 st day of the month, or quarter
Functioning and monitoring of the incineration plant as required by condition 4.2.2	-	Annually	1 Jan
Process monitoring Parameters as required by condition 3.5.1	As specified in schedule 3 table S3.4	Every 12 months	1 January
Non-compostable contamination removal efficiency Parameters as required by conditions 2.3.4, 2.3.7 and 4.2.7		Every 12 months Yearly report of detailing contamination removal efficiency and progress with plastic reduction contamination	

Table S4.2: Annual production/treatment	
Parameter	Units
Total Waste Incinerated	tonnes
Total Waste Gasified	tonnes
Total Waste Dried	tonnes
Total char processed in the ash smelter, the SWIP	tonnes
Total liquid effluent from gasification plant treated in the WWTP	m ³
Electrical energy produced from incinerator plant	KWh
Electrical energy produced from gasification plant	KWh
Electrical energy exported from incinerator plant	KWh
Electrical energy exported from gasification plant	KWh
Waste heat (steam/hot water) utilised on-site	KWh
Processed compost	tonnes
Recovered outputs	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Electrical energy exported, imported and used at the installation	Annually	KWh / tonne of waste incinerated or gasified
Fuel oil consumption	Annually	Kg / tonne of waste incinerated
LPG consumption	Annually	KWh / tonne of waste gasified
Mass of Bottom Ash produced	Annually	Kg / tonne of waste incinerated
Mass of APC residues produced	Annually	Kg / tonne of waste incinerated
Mass of Other solid residues produced	Annually	Kg / tonne of waste incinerated
Urea consumption	Annually	Kg / tonne of waste incinerated
Activated Carbon consumption	Annually	Kg / tonne of waste incinerated
Lime consumption	Annually	Kg / tonne of waste incinerated
Water consumption	Annually	Kg / tonne of waste incinerated or gasified
Periods of abnormal operation (incineration plant)	Annually	Number of occasions and cumulative hours for current calendar year for each line.
Mass of gasification char produced	Annually	Kg / tonne of waste gasified
Mass of gasification tar produced	Annually	Kg/tonne of waste gasified
Mass of gasification filter residue produced	Annually	Kg/tonne of waste gasified
Flare operation (for each flare associated with gasification plant)	Annually	Individual and total hours

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Air	Forms Air 1 - 7 or other form(s) as agreed in writing by the Environment Agency	05/06/2018
Water and Land	Form Water 1 or other form as agreed in writing by the Environment Agency	05/06/2018
Water and raw material usage	Form WU/RM1 1 or other form as agreed in writing by the Environment Agency	05/06/2018
Energy usage	Form Energy 1 or other form as agreed in writing by the Environment Agency	05/06/2018
Waste disposal/recovery	Form R1 or other form as agreed in writing by the Environment Agency	05/06/2018
Residue quality	Forms Residue 1 & Residue 2 or other form as agreed in writing by the Environment Agency	05/06/2018

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Syngas	Form SG1 or other form as agreed in writing by the Environment Agency	05/06/2018
Other performance indicators	Form Performance 1 or other form as agreed in writing by the Environment Agency	05/06/2018
Process monitoring	Form process 1 or other form as agreed in writing by the Environment Agency	13/07/2023
Waste Returns	E-waste Returns Form or other form as agreed in writing by the Environment Agency	--

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

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

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

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

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

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

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	

Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“abatement equipment” means that equipment dedicated to the removal of polluting substances from releases from the installation to air or water media.

“abnormal operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the emissions into the air and the discharges of waste water may exceed the prescribed emission limit values

“accident” means an accident that may result in pollution

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

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

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

“APC residues” means air pollution control residues

“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.

“BAT conclusions” means Best Available Techniques (BAT) Conclusions published by the European Commission.

“bi-annual” means twice per year with at least five months between tests

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

“bottom ash” means ash falling through the grate.

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

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

“commissioning” means testing of the new incineration plant that involves any operation of the furnace or as agreed with the Environment Agency.

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

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

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

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

“daily average” for releases of substances to air means the average of valid half-hourly averages over a calendar day during normal operation.

“dioxin and furans” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

“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 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.

‘*Hazardous property*’ has the meaning in Annex III of the Waste Framework Directive

‘*Hazardous waste*’ has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005

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

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

“incineration line” means all of the incineration equipment related to a common discharge to air location.

“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.

“ISO” means International Standards Organisation.

‘*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

“LOI” means loss on ignition; a technique used to determine the combustible material by heating the ash residue to a high temperature

“maturation” means a stage when by agitating and turning the compost, it no longer results in reheating and the monitored temperature falls to ambient without the compost being too dry or anaerobic. Phytotoxins that are formed during the active composting phase are metabolised by microorganisms, which will result in the

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

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

“OTNOC” means operation other than normal operating conditions, excluding start-up and shut-down and periods of abnormal operation, as defined in the OTNOC management plan approved through pre-operational condition PO1 or otherwise as agreed in writing with the Environment Agency.

“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

“PAH” means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenzo[ah]anthracene, Dibenzo[a,i]pyrene Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene

“PCB” means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in the table below.

“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.

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

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

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

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

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

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

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

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

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

“shut down” is any period where the plant is being returned to a non-operational state [and there is no waste being burned] [as described in the application or agreed in writing with the Environment Agency].

“start up” is any period, where the plant has been non-operational, [after igniting the auxiliary burner] until [waste][waste fuel] has been fed to the plant [in sufficient quantity to cover the grate and] to initiate steady-state conditions [as described in the application or agreed in writing with the Environment Agency].

“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 veneer).

“TOC” means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC. In respect of Bottom Ash, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

‘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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“year” means calendar year ending 31 December.

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

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

- (a) 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
- (b) 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
- (c) in relation to gases from incineration plants other than those burning waste oil, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 11% dry

For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should be reported as a range based on: all congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum. However the minimum value should be used when assessing compliance with the emission limit value in table S3.1.

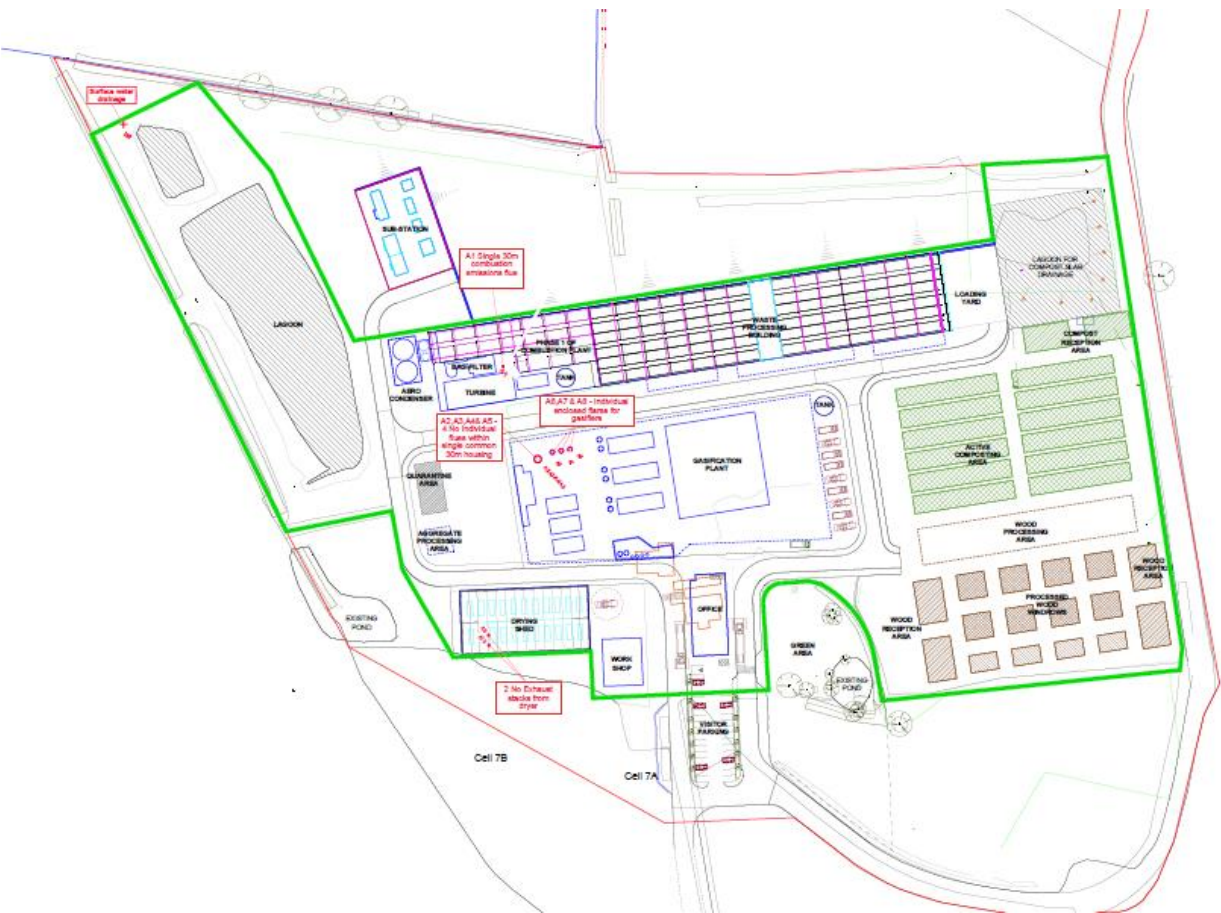
TEF schemes for dioxins and furans				
Congener	I-TEF	WHO-TEF		
	1990	2005	1997/8	
		Humans / Mammals	Fish	Birds

TEF schemes for dioxins and furans				
Congener	I-TEF	WHO-TEF		
	1990	2005	1997/8	
Dioxins				
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	0.5	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.001	<0.001
OCDD	0.001	0.0003	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.001	0.0003	0.0001	0.0001

TEF schemes for dioxin-like PCBs			
Congener	WHO-TEF		
	2005	1997/8	
	Humans / mammals	Fish	Birds
Non-ortho PCBs			
3,4,4',5-TCB (81)	0.0001	0.0005	0.1
3,3',4,4'-TCB (77)	0.0003	0.0001	0.05
3,3',4,4',5 - PeCB (126)	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(169)	0.03	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	0.00003	<0.000005	0.0001
2,3,4,4',5-PeCB (114)	0.00003	<0.000005	0.0001
2,3',4,4',5-PeCB (118)	0.00003	<0.000005	0.00001
2',3,4,4',5-PeCB (123)	0.00003	<0.000005	0.00001

TEF schemes for dioxin-like PCBs			
Congener	WHO-TEF		
	2005	1997/8	
	Humans / mammals	Fish	Birds
2,3,3',4,4',5-HxCB (156)	0.00003	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (157)	0.00003	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (167)	0.00003	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (189)	0.00003	<0.000005	0.00001

Schedule 7 – Site plan



END OF PERMIT