

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

SUEZ Recycling and Recovery Surrey Ltd

Charlton Lane Eco Park

Charlton Lane

Shepperton

Surrey

TW17 8QA

Variation application number

EPR/VP3997NK/V008

Permit number

EPR/VP3997NK

Charlton Lane Eco Park

Permit number EPR/VP3997NK

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.

This variation has been issued to update the permit following a statutory review of the permits in the industry sector for incineration and waste treatment. The opportunity has also been taken to consolidate the original permit and subsequent variations. The Industrial Emissions Directive (IED) came into force on 7th January 2014 with the requirement to implement all relevant Best Available Techniques (BAT) conclusions as described in the Commission Implementing Decision. The BAT conclusions for incineration were published on 03 December 2019 in the Official Journal of the European Union (L323) following a European Union wide review of BAT, implementing decision 2017/2117/EU of 21 November 2017.

The BAT Conclusions for Waste Treatment (the BREF) was published on 17 August 2018 following a European Union wide review of BAT, implementing decision (EU) 2018/1147 of 10 August 2018.

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

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

The schedules specify the changes made to the permit. Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Brief description of the process

The Charlton Lane Eco Park carries out the following listed activities:

- section 5.1 Part A (1)(b) - waste gasification
- section 5.4 Part A (1)(b)(i) - anaerobic digestion (AD) feeding into a combined heat and power (CHP) plant

And the following waste operations:

- community recycling centre
- recyclables bulking facility
- road sweepings bulking facility

The Installation generates approximately 5.4 MW of electricity. Electricity will be generated from the gasification installation (3.65 MW) and CHP plant (1.78 MW). Additionally, photovoltaic cells will generate approximately 0.16 MW though these are not regulated by the Environmental Permit. Approximately 1.85 MWe of electricity will be used by the gasification plant and AD/CHP plant, with the remainder being used by other parts of the installation or exported to the National Grid.

The main features of the incineration plant and anaerobic digestion plant are as follows:

Incineration Plant	
Furnace technology	Gasification

Number of lines	1
Principal waste type	Municipal and commercial & industrial waste
Stack height	49 m
Permitted plant capacity	55,460 tonnes per year
Electrical generation capacity	3.65 MWe
Anaerobic Digestion Plant	
Permitted plant capacity	40,000 tonnes per year
Combustion Plant	2 x CHP gas engines
Stack height	49 m
Electrical generation capacity	1.78 MWe

The Waste Gasification Installation

The Applicant has described the incineration installation as a gasification installation. Our view is that for the purposes of IED (in particular Chapter IV) and EPR, the installation is a waste incineration plant because, notwithstanding the fact that energy will be recovered from the process, the process is never the less 'incineration' because it is considered that its main purpose is the thermal treatment of waste. IED defines an incineration plant as any stationary or mobile technical unit and equipment dedicated to the thermal treatment of wastes with or without recovery of the combustion heat generated including: the incineration by oxidation of waste; and other thermal treatment processes such as pyrolysis, gasification or plasma processes in so far as the substances resulting from the treatment are subsequently incinerated.

The waste gasification plant will accept 55,460 tonnes per year of waste. Pre-treatment will remove approximately 10,750 tonnes per annum, therefore the plant will gasify up to 44,710 tonnes per annum of this waste and recover energy in the form of steam, which will be used to produce electricity for export to the National Grid and potentially supply heat to users nearby.

In outline, the gasification process will be as follows:

- There will be 1 gasification line.
- Up to 55,460 tonnes per year of waste will be delivered to site and stored in the reception hall.
- The installation will include a pre-treatment line consisting of a shredder, trommel, magnet, eddy current, ballistic separator, air belt separator and secondary shredder. The pre-treatment recovers recyclables from the waste and processes it to form refuse derived fuel (RDF) for gasification.
- The fluidised bed gasifier is a single vessel.
- In the gasification zone a "bed" of solid sand-like particles is contained in the bottom region of the vessel and as air passes upwards it suspends sand in the air stream.
- When the fuel is introduced onto the bed it is heated as it comes into contact with the hot sand and undergoes the gasification reaction, producing syngas.
- Above the fluidised bed, the syngas is sampled in the gasification zone.
- The secondary air injection is then introduced at multiple levels and is followed by an additional combustion zone where the syngas will be fully combusted.
- Emissions of nitrogen dioxide will be controlled by the injection of urea into the combustion zone.

- The hot combustion gases will pass through a boiler to recover energy in the form of steam. The steam will then be used to generate electricity in a steam turbine, before being condensed in an air-cooled condenser.
- The combustion gases which exit the boiler will be cleaned in a multicyclone to reduce particulate levels.
- Further nitrogen dioxide reduction will be achieved using selective non-catalytic reduction (SNCR).
- Acid gases will be neutralised by the injection of hydrated lime into the flue gas stream.
- Heavy metals will be removed from flue gases by the injection of powdered activated carbon into the flue gas.
- Particle removal will be by bag filters.
- The combustion gases will be released to atmosphere via a 49 m high stack.
- The ash residues will be collected in separate containers. The Incinerator Bottom Ash (IBA) will be collected from the fluidised bed and transferred offsite as non-hazardous waste for treatment or be disposed of to landfill. Boiler ash will be collected and transferred off-site as non-hazardous waste for recovery. Air Pollution Control Residues (APCr), including fly ash, will be collected in a dedicated silo and transferred off-site as hazardous waste.

Anaerobic Digestion (AD) Installation

The plant will operate two AD vessels. The vessels will be fed with food waste after the removal of undesirable 'contamination' such as plastic, stones, glass etc, and the addition of dilution water. Each digester will have a design capacity of 128 wet tonnes per day of organic material. The plant will output up to 880 m³ per hour biogas with a net calorific value of 22.2 MJ/Nm³. The biogas will be captured from the anaerobic digestion tanks and will be piped to a gas holder.

The slurry digestate from the anaerobic digestion process will be de-watered in a centrifuge. About 16,000 tonnes per annum of digestate cake will be transferred offsite to be spread to agricultural land as a soil enhancer. The liquor from the de-watering process will be collected for reuse in the waste dissolvers, cleaned, and part will be discharged to sewer.

CHP Plant and Flare

The CHP units will consist of two gas engines. Electricity will be generated from the combustion of biogas. Heat will be recovered from the cooling jacket, oil lubrication system and flue gases. Electricity from the CHP engines will be exported to the national grid whilst the heat from the process will be used within the anaerobic digestion plant to run the pasteurisation process.

The flare stack is designed to operate in the event that more biogas is generated than can be combusted in the engine. The flare stack will normally only be required to operate when the CHP engines are not in use for routine maintenance and are offline and are therefore not available to use the biogas produced by the digester.

Road sweepings bulking facility

The road sweeping bulking facility is separate from the gasification installation, although it takes place in the same building. It will be used for the treatment of road sweepings which will have been collected off-site and delivered to the installation for bulking up as waste code 20 03 03. The annual throughput for the facility will be 2,660 tonnes per annum with the maximum storage at any one time being 100 tonnes.

Vehicles will discharge their contents onto a concrete floor. The area will be a bulking bay with push-walls and a concrete floor sloping slightly to a drainage system and below-ground tank. Grit and small particles will be prevented from falling into the catch pit and below-ground tank by a grating cover. The maximum storage capacity for grit will be 90 tonnes.

Effluent from the sweepings will be collected in a 10 m³ tank and will be transferred off-site using a vacuum tanker ready to be transferred off-site to a suitably licensed facility.

Site Location

The Eco Park development is located on approximately 4.5 hectares of land to the Southeast of Charlton Village and west of Upper Halliford.

The following Habitats sites are located within 10 km of the installation: Southwest London Water Bodies (Ramsar & SPA); Thursley, Ash, Pirbright and Chobham Common (SAC); and Thames Basin Heath (SPA).

There are no Sites of Specific Scientific Interest within 2 km of the site, but there are 13 non-statutory local wildlife and conservation sites within this distance.

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

Status log of permit A: EPR/VP3997NK		
Description	Date	Comments
Waste Management Licence EAWML 80619	15/11/2004	Issued to Surrey Waste Management Limited
Modified EAWML 80619	27/02/2008	Incorporated activities from EAWML 83092
Modified EAWML 80619	07/11/2008	
Received notification of change of company name	21/10/2010	
Issue of updated permit pages to show change of company name	12/11/2010	Change of company name to SITA Surrey Limited (EPR reference: EPR/VP3997NK)
Application for Variation EPR/VP3997NK/V003	Duly Made 20/01/2011	Application to add an anaerobic digestion installation, gas engines and a gasification installation to Permit.
Additional information received	15/04/2011	Applicant provided corrected plant layout for Anaerobic Digestion plant.
Additional information received	09/05/2011	Response to 06/04/2011 schedule 5 notice.
Additional information received	21/06/2011, 04/07/2011 & 28/07/2011	Response to 18/05/2011 schedule 5 notice.
Additional information received	08/07/2011	Response to 08/07/2011 email querying errors in 18/05/2011 schedule 5 notice.
Additional information received	09/08/2011	Response to 08/07/2011 schedule 5 notice.
Additional information received	22/08/2011	Replacement of abnormal emissions report received on 08/07/2011. Revised version of response to 08/07/2011 schedule 5 notice.
Additional information received	29/09/2011	Replacement of revised response to our schedule 5 notice dated 08/07/2011 which was received on 22/08/2011. To correct errors in flare stack emission table 8.1.
Additional information received	28/10/2011	Response to 14/10/2011 schedule 5 notice.
Additional information received	22/11/2011	Email confirming errors in response to 14/10/2011 schedule 5 notice, which will be corrected in response to 23/11/2011 schedule 5 notice.
Additional information received	22/12/2011	Response to 23/11/2011 schedule 5 notice, which amended dispersion model data to correct for error in building width and boiler protect vent height.
Additional information received	21/02/2012	Revised response to 23/11/2011 schedule 5 notice, which corrected errors and omissions in 22/12/2011 submission. Also covering email included details of lightening protection, and digester capacity.
Additional information received	07/03/2012	Email regarding shut down of primary gasification chambers.
Additional information received	16/03/2012	Revised response to 23/11/2011 schedule 5 notice.
Additional information received	16/05/2012	Email confirming AD plant capacity.
Additional information received	21/05/2012	Email confirming energy generation and CHP energy recovery.

Status log of permit A: EPR/VP3997NK		
Description	Date	Comments
Additional information received	16/08/2012	Emails regarding the possibility of re-routing the boiler protection vents.
Additional information received	28/09/2012	Email confirming the operational temperature of the primary gasification chambers.
Variation determined EPR/VP3997NK/V003 (varied and consolidated permit issued)	08/10/2012	
Agency variation determined EPR/VP3997NK/V004	30/05/2013	Agency variation to implement the changes introduced by IED.
Application EPR/VP3997NK/V005 received (variation and consolidation)	Duly made 27/11/2013	Application to: change the gasification technology to fluidised bed gasifier; modify the AD installation; and add a road sweeping bulking facility.
Additional information received	21/02/2014	Response to Schedule 5 notice sent on 30/01/2014.
Additional information received	05/03/2014	Response to Schedule 5 notice sent on 30/01/2014 which clarified information from the 21/02/2014 submission.
Additional information received	05/03/2014	Response to Schedule 5 notice sent on 11/02/2014.
Additional information received	13/03/2014	Email clarifying noise modelling in response to Schedule 5 notice sent on 11/02/2014.
Additional information received	14/03/2014	Email clarifying noise modelling in response to Schedule 5 notice sent on 11/02/2014.
Additional information received	04/04/2014	Email regarding the Human Health Risk Assessment.
Additional information received	07/04/2014	Email regarding site layout plans.
Additional information received	08/05/2014	Email correcting response (dated 21/02/2014) to question 21 of the Schedule 5 sent on 30/01/2014.
Additional information received	16/05/2014	Memo responding to further information requested on 10/4/2014 which clarifies details about the Greenhouse Gas Assessment, Road Sweeping Bulking Facility, Boiler Protection Vents, Bottom Ash and APC Residue processing and AD installation.
Additional information received	16/05/2014	Email summarising status of the planning permission.
Additional information received	20/05/2014	Email clarifying the location of the syngas sampling points and location of predicted concentrations in the abnormal emissions assessment.
Additional information received	29/05/2014	Memo – justification for gasification (document dated 27/05/2014).
Additional information received	06/06/2014	Email including: clarifications about the AD plant; revised site plan; revised AD process diagram; and correction of Specific Energy Consumption calculation.
Additional information received	19/06/2014	Email clarifying how SCADA system works.
Additional information received	03/07/2014	Email clarifying waste operations.
Additional information received	03/07/2014	Two emails describing the AD bund and penstock valve.
Additional information received	04/07/2014	Revised site plan.
Additional information received	10/07/2014	Email summarising waste acceptance during gasifier downtime.
Additional information received	17/09/2014	Request to withdraw from the application the request to add waste codes 02 01 02, 02 01 06, 02 02 02 and 02 02 03 to the gasifier.
Additional information received	24/09/2014	Clarifications.
Additional information received	06/10/2014	Clarifications.
Additional information received	09/10/2014	Planning permission update.

Status log of permit A: EPR/VP3997NK		
Description	Date	Comments
Additional information received	16/10/2014	Clarifications.
Variation determined EPR/VP3997NK/V005	29/10/2014	Varied and consolidated permit issued in modern condition format.
Notified change of company name and address	07/04/2016	Request from operator to update the company name from SITA (Surrey) Limited to SUEZ Recycling and Recovery Surrey Ltd and the first line of their registered office address from SITA House to SUEZ House.
Variation issued EPR/VP3997NK/V006	30/06/2016	Varied permit issued to SUEZ Recycling and Recovery Surrey Ltd.
Application received EPR/VP3997NK/V007 (variation and consolidation)	Duly made 20/01/2022	Variation to extend the site boundary of the installation and add a surface water emissions point to manage surface water runoff to the existing infiltration lagoon.
Regulation 61 notice issued	02/12/2022	Regulation 61 Notice requiring information for Statutory review of permit. BAT Conclusions published 03 December 2019.
Variation issued EPR/VP3997NK/V007	07/12/2022	Varied and consolidated permit issued in modern condition format issued to SUEZ Recycling and Recovery Surrey Ltd.
Regulation 61 notice response	06/04/2023, 12/10/2023, 19/10/2023, 07/11/2023 and 11/12/2023	
Variation issued EPR/VP3997NK/V008	17/01/2024	

Status log of permit B: EAWML 83092		
Description	Date	Comments
Waste Disposal Licence SCC/2/1 issued to Surrey County Council	01/10/1985	
Modification	13/10/1994	
Waste Management Licence 83092 issued to Surrey County Council	01/04/1996	(Supersedes WDL SCC/2/1)
Modification	31/10/1997	
Modification	27/04/1999	
Application to transfer from Surrey County Council to Surrey Waste Management Ltd	25/08/1999	
Permit transfer determined	17/04/2000	
Modification	17/04/2000	
Modification	09/05/2001	
Modification	05/12/2003	
Modification	18/07/2006	
Received notification of change of company name	21/10/2010	(EPR/NP3493EY)
Issue of updated permit pages to show change of company name	12/11/2010	
Application EPR/VP3997NK/V005 (variation and consolidation)	Duly made 27/11/2013	Application to consolidate EAWML 83092 (EPR/NP3493EY) with permit EPR/VP3997NK and vary and update the permit to modern conditions.

Variation determined EPR/VP3997NK/V005	29/10/2014	Varied and consolidated permit issued in modern condition format. EAWML 83092 ceases to exist.
---	------------	--

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

Permit number

EPR/VP3997NK

Issued to

SUEZ Recycling and Recovery Surrey Ltd (“the operator”)

whose registered office is

**Suez House
Grenfell Road
Maidenhead
Berkshire
SL6 1ES**

company registration number 03184332

to operate a regulated facility at

**Charlton Lane Eco Park
Charlton Lane
Shepperton
Surrey
TW17 8QA**

to the extent set out in the schedules.

The notice shall take effect from 17/01/2024

Name	Date
Principal Permitting Team Leader	17/01/2024

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/VP3997NK

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/VP3997NK/V008 authorising,

SUEZ Recycling and Recovery Surrey Ltd (“the operator”),

whose registered office is

**Suez House
Grenfell Road
Maidenhead
Berkshire
SL6 1ES**

company registration number 03184332

to operate an installation at

**Charlton Lane Eco Park
Charlton Lane
Shepperton
Surrey
TW17 8QA**

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

Name	Date
Principal permitting Team Leader	17/01/2024

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.
 - (c) referenced in schedule 1, table S1.1 (AR1), from 03/12/2023, in accordance with a written other than normal operating conditions (OTNOC) management plan.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 The operator shall review the written management system at least every 3 years or otherwise as requested by the Environment Agency.
- 1.1.4 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.
- 1.1.5 For the following activities referenced in schedule 1, table S1.1 (AR2, AR7, AR8, AR14, AR15 and AR16) 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 For the following activities referenced in schedule 1, table S1.1 (AR1 and AR2), 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 (AR1), 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 (AR1), 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 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 For the following activities referenced in schedule 1, table S1.1 (AR1 and AR2), 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 (AR2), all process plant and equipment shall be commissioned, operated and maintained and shall be fully documented and recorded in accordance with the manufacturer’s recommendations.
- 2.1.3 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 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, S2.3, S2.4 and S2.5; and
 - (b) it conforms to the description in the documentation supplied by the producer or holder.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1 (AR1), 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 For the following activities referenced in schedule 1, table S1.1 (AR1), 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 (AR1), Waste shall not be charged if:
- (a) the gasification combustion zone temperature is below 850 °C,
 - (b) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded during abnormal operation; or
 - (c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than during abnormal operation; or
 - (d) continuous emission monitors to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than during abnormal operation; or
 - (e) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than during abnormal operation.
 - (f) continuous emission monitors to demonstrate compliance with the emission limit values for particulates, TOC or CO in schedule 3 are unavailable unless alternative techniques, as agreed in writing with the Environment Agency, are used to demonstrate compliance with those emission limit values.
- 2.3.10 For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall record the beginning and end of each period of “abnormal operation”.
- 2.3.11 For the following activities referenced in schedule 1, table S1.1 (AR1), during a period of “abnormal operation”, the operator shall restore normal operation of the failed equipment or replace the failed equipment as soon as possible.

- 2.3.12 For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall interpret the start of the period of “abnormal operation” as the earliest of the following:
- (a) a technically unavoidable stoppage, disturbance, or failure of continuous emission monitors.
 - (b) a technically unavoidable stoppage, disturbance, or failure of the activated carbon abatement system
 - (c) Any other technically unavoidable stoppage, disturbance, or failure of the plant which is causing or could lead to an exceedance of an emission limit value in table S3.1.
- 2.3.13 For the following activities referenced in schedule 1, table S1.1 (AR1), 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) The failed equipment has not been repaired and brought back into normal operation and a single period of abnormal operation reaches a duration of 4 hours after the start of abnormal operation on an incineration line
 - (d) Abnormal operation occurs on an incineration line and the cumulative duration of abnormal operation periods over 1 calendar year has reached 60 hours on that incineration line;
- 2.3.14 For the following activities referenced in schedule 1, table S1.1 (AR1), 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.
- 2.3.15 For the following activities referenced in schedule 1, table S1.1 (AR1), bottom ash, boiler ash and APC residues shall not be mixed.

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 Technical requirements

WEEE treatment

- 2.5.1 The storage (including temporary storage) and treatment of WEEE shall be carried out in accordance with the technical requirements of Annex VIII of the WEEE Directive.
- 2.5.2 WEEE shall be treated using best available treatment, recovery and recycling techniques (BATRRT).
- 2.5.3 As a minimum, the substances, preparations and components specified in table A shall be removed from any separately collected WEEE.

Table A Substances, preparations and components to be removed from separately collected WEEE

<ul style="list-style-type: none"> • Capacitors containing Polychlorinated biphenyls (PCB) • Mercury-containing components, such as switches or backlighting lamps • Batteries • Printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimetres • Toner cartridges, liquid and pasty, as well as colour toner • Plastic containing brominated flame retardants • Asbestos waste and components which contain asbestos • Cathode ray tubes • Chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC), hydrofluorocarbons (HFC), or hydrocarbons (HC) • Gas discharge lamps • Liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimetres and all those back-lighted with gas discharge lamps • External electric cables • Components containing refractory ceramic fibres • Components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and the Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation • Electrolytic capacitors containing “substances of concern” (height > 25mm, diameter > 25 mm or proportionately similar volume)
--

2.5.4 All fluids contained within any WEEE shall be removed prior to further treatment.

2.5.5 Separately collected components of WEEE specified in table B shall be treated in accordance with the methods specified in that table.

Table B Specified Treatment Methods for separately collected components of WEEE

Component	Specified Treatment
Cathode ray tubes	The fluorescent coating shall be removed.
Gas discharge lamps	The mercury shall be removed.

2.5.6 Equipment shall be provided to record the weight of untreated WEEE accepted at, and components and materials leaving the site.

Hazardous waste storage and treatment

2.5.7 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, S3.1(a), S3.1(b), S3.2 and S3.3.

3.1.2 The limits given in schedule 3, subject to condition 3.2.1, shall not be exceeded.

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

3.2 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.
(b) The limits in table S3.1 (a) shall not be exceeded during abnormal operation.

3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1 and S3.1(a); 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 or 10-minute averages 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 or 10 minute period, the half-hourly average or 10-minute average shall in any case be considered valid if measurements are available for a minimum of 20 minutes or 7 minutes during the half-hour or 10-minute period respectively. The number of half-hourly or 10-minute averages so validated shall not exceed 5 or 15 respectively per day;
- (d) daily average values shall be calculated as follows:
- (i) the average of valid half hourly averages or 10 minute averages over a calendar day excluding half hourly averages or 10 minute averages during periods of abnormal operation. The daily average value shall be considered valid if no more than five half-hourly average or fifteen 10-minute 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.
- 3.3.4 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.
- 3.3.5 For the following activities referenced in schedule 1, table S1.1 (AR2), the operator shall implement a leak detection and repair (LDAR) programme to detect and mitigate the release of volatile organic compounds, including methane from diffuse sources.

3.4 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) S3.2 and S3.3
 - (b) process monitoring specified in table S3.4, S3.4(a) and S3.4(b); and

(c) 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 unless otherwise agreed in writing by the Environment Agency 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. Newly installed Data handling and acquisition systems (DAHS), or DAHS replacing existing DAHS, shall have MCERTS certification.
- 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), S3.1(b), S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

3.7 Pests

- 3.7.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.7.2 The operator shall:
- (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
 - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.8 Fire prevention

- 3.8.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.
- 3.8.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
 - (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.8.3 For the following activities referenced in schedule 1, table S1.1 (AR2) the operator shall undertake a DSEAR assessment and maintain an accident management plan.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year using the annual report form specified in schedule 4, table S4.4 or otherwise in a format agreed with the Environment Agency. 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;
 - (c) the performance parameters set out in schedule 4 table S4.3
 - (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 (AR2), 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 (AR2), the operator shall submit an annual report detailing the efficiency of removal of non-compostable and non-digestible materials from feedstock prior to processing and the level of contamination in the final recovered digestate and/or 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), (b) or (c), 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	Limits of specified activity
AR1	S5.1A(1)(b)	<p>Gasification</p> <p>The incineration of non-hazardous waste in a waste incineration plant with a capacity exceeding 3 tonnes per hour.</p>	<p>From receipt of waste, including pre-treatment by shredding, screening and separation, to emission of exhaust gas and disposal of waste arising.</p> <p>Waste types and quantities as specified in Table S2.2 of this permit.</p>
AR2	S5.4A(1)(b)(i)	<p>Anaerobic Digestion</p> <p>Recovery or a mix of recovery and disposal of non-hazardous waste in a facility with a capacity exceeding 100 tonnes per day.</p> <p>R13: Storage of wastes pending the operations numbered R1 and R3.</p> <p>R3: Recycling or reclamation of organic substances that are not used as solvents.</p>	<p>Receipt and storage of waste.</p> <p>Treatment of waste including shredding, sorting, screening, compaction, baling, mixing, water addition and maceration.</p> <p>Digestion of wastes including pasteurisation and chemical addition.</p> <p>Biogas storage and drying.</p> <p>Treatment of digestate including screening to remove plastic residues, centrifuge and pressing, ready for transfer offsite.</p> <p>Waste types and quantities as specified in Table S2.3 of this permit.</p>
Directly Associated Activities			
AR3	Electricity Generation associated with the gasification plant	Generation of 3.65 MWe electrical power using a steam turbine from energy recovered from the gasification plant flue gases.	
AR4	Electricity Generation associated with the anaerobic digestion plant	<p>Generation of 1.78 MWe electrical power from biogas using gas engines.</p> <p>R1: Use principally as a fuel or other means to generate energy.</p>	<p>From receipt of biogas produced by anaerobic digestion plant to the supply of power and the emission of exhaust gases.</p> <p>Each CHP engine must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this. The Operator must keep periods of start-up and shut-down of each engine as short as possible. Monitoring shall not take place during periods of start-up and shut-down. There must be no persistent emission of 'dark smoke' as</p>

			defined in section 3(1) of the Clean Air Act 1993.
AR5	Emergency flare operation associated with the anaerobic digestion plant	Use of an auxiliary flare to burn biogas, required only for short periods of break down or maintenance of facility D10: Incineration on land	From receipt of biogas produced by anaerobic digestion plant to the combustion of the biogas and the emission of exhaust gases.
AR6	Surface water discharge	Collection, storage and discharge to groundwater via infiltration lagoon, and surface water discharge of uncontaminated surface water from roof and site surface drainage.	From collection of excess uncontaminated surface water from roof and site surface drainage into the infiltration lagoon, to discharge into the Charlton Lane Swale. Discharge of excess uncontaminated surface water to mitigate the risk of flooding only. Pumped at maximum of 5 l/s.
AR7	Storage of waste pending recovery or disposal associated with the anaerobic digestion plant	R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced)	From the receipt of permitted waste to pre-treatment and despatch for anaerobic digestion on site. Storage of residual wastes from pre-treatment to despatch off-site for recovery. Storage of waste in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system. Waste types suitable for acceptance are limited to those specified in Table S2.3.
AR8	Physical treatment for the purpose of recycling associated with the anaerobic digestion plant	R3: Recycling/reclamation of organic substances which are not used as solvents	From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery. Pre-treatment of waste in enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system including shredding, sorting, screening, compaction, baling, mixing and maceration. Post-treatment of digestate in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with a sealed drainage system, including screening to remove contraries, centrifuge and pressing and addition of thickening agents

			<p>(polymers), or drying for use as a fertiliser or soil conditioner (drying for the purpose of use as a fuel is not permitted).</p> <p>Heat treatment (pasteurisation) of waste in 3 tanks for the purpose of recovery.</p> <p>Biogas cleaning by chemical scrubbing.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.3.</p>
AR9	Raw material storage associated with the anaerobic digestion plant	Storage of raw materials including lubrication oil, antifreeze, propane, ferric chloride, caustic soda, sulphuric acid activated carbon, diesel.	From the receipt of raw materials to despatch for use within the facility.
AR10	Gas storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	<p>Storage of biogas produced from on-site anaerobic digestion of permitted waste in 1 stand-alone gas bag and roof space of digesters.</p> <p>From the receipt of biogas produced at the on-site anaerobic digestion process to despatch for use within the facility.</p>
AR11	Digestate storage	R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	<p>From the receipt of processed uncertified digestate produced from the on-site anaerobic digestion process to despatch for use off-site.</p> <p>Storage of processed uncertified liquid digestate in 1 storage tank.</p> <p>No on-site storage of solid digestate.</p>
AR12	Air treatment	Collection and treatment of air from the buildings or plant using abatement system – wet scrubber and carbon filters- prior to release to atmosphere.	From the collection of air from site processes to treatment and release of treated air to atmosphere.
AR13	Back up electrical generator associated with the incineration plant	For providing emergency electrical power to the plant in the event of supply interruption.	Emergency use to a maximum of 500 hours operation per year.

		Maximum of 50 hours testing per year.
Activity reference	Description of activities for waste operations	Limits of activities
AR14	<p>Community Recycling Centre</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R4: Recycling/reclamation of metals and metal compounds</p> <p>R5: Recycling/reclamation of other inorganic materials</p> <p>R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)</p> <p>D14: Repackaging prior to submission to any of the operations numbered D1 to 13</p> <p>D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)</p>	<p>Treatment consisting of manual sorting and compaction of waste into different components for recovery.</p> <p>For WEEE only: Treatment consisting only of sorting, dismantling, separation, shredding, screening, grading, baling, shearing, compacting, crushing, granulation, repair or refurbishment, or cutting of waste into different components for recovery.</p> <p>The maximum quantity of hazardous waste received at the site shall not exceed 10 tonnes per day.</p> <p>Except for WEEE awaiting manual dismantling, repair or refurbishment only the maximum quantity of hazardous waste that can be stored at the site shall not exceed 50 tonnes at any one time.</p> <p>There shall be no mixing of hazardous and non-hazardous waste.</p> <p>Wastes shall be stored for no longer than 1 year prior to disposal and 3 years prior to recovery.</p> <p>Waste types as specified in Table S2.4. The total combined quantity of waste for activities A14 and A15 shall not exceed 250,000 tonnes per year.</p> <p>Wastes that have the potential to be odorous shall be processed and removed from the site within 72 hours of acceptance on site or within a timescale as agreed in writing with the Environment Agency.</p>
AR15	<p>Recyclables Bulking Facility</p> <p>R3: Recycling/reclamation of organic substances which are not used as solvents</p> <p>R4: Recycling/reclamation of metals and metal compounds</p> <p>R5: Recycling/reclamation of other inorganic materials</p> <p>R13: Storage of waste pending any of the operations numbered R1 to R12 (excluding</p>	<p>Treatment consisting of manual sorting, compaction and baling of waste into different components for recovery.</p> <p>For WEEE only: Treatment consisting only of sorting, dismantling, separation, shredding, screening, grading, baling, shearing, compacting, crushing, granulation, repair or refurbishment, or cutting of waste</p>

	<p>temporary storage, pending collection, on the site where it is produced)</p> <p>D14: Repackaging prior to submission to any of the operations numbered D1 to 13</p> <p>D15: Storage pending any of the operations numbered D1 to D14 (excluding temporary storage, pending collection, on the site where it is produced)</p>	<p>into different components for recovery.</p> <p>The maximum quantity of hazardous waste received at the site shall not exceed 10 tonnes per day.</p> <p>Except for WEEE awaiting manual dismantling, repair or refurbishment only the maximum quantity of hazardous waste that can be stored at the site shall not exceed 50 tonnes at any one time.</p> <p>There shall be no mixing of hazardous and non-hazardous waste.</p> <p>Wastes shall be stored for no longer than 1 year prior to disposal and 3 years prior to recovery.</p> <p>Waste types as specified in Table S2.4. The total combined quantity of waste for activities A14 and A15 shall not exceed 250,000 tonnes per year.</p> <p>Wastes that have the potential to be odorous shall be processed and removed from the site within 72 hours of acceptance on site or within a timescale as agreed in writing with the Environment Agency.</p>
AR16	<p>Road Sweepings Bulking Facility</p> <p>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.</p>	<p>Treatment consisting only of separation of non-hazardous waste into different components for disposal (no more than 50 tonnes per day) or recovery.</p> <p>Waste types and quantities as specified in Table S2.5.</p>

Table S1.2 Operating techniques		
Description	Parts	Date Received
Working Plan for CRC and RBF	Working Plan - Charlton Lane Waste Transfer Station Community Recycling Centre & MRF - Issue 4.2 (September 2009)	01/09/2009 (approved 25/11/2009)
Response to Schedule 5 Notice (sent on 6/4/11)	Answers to questions 2, 3, 4, 5, 6, & 12 (relating to AD sludge only).	09/05/2011
Application EPR/VP3997NK/V005	Operating Techniques detailed in part C3, section 3a of the application form.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	"EP Variation Supporting Information" document, Section 1.5.3 relating to incineration capacity.	Received 25/09/2013 Duly Made 27/11/2013

Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, Section 2.4.1.2 and 2.4.1.3 relating to description of waste types permitted for incineration and AD respectively.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, section 2.5.1.4 relating to waste charging.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, sections 1.5.3, 2.1.3.2 and 2.3.1.1 relating to start-up and shut-down.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, sections 2.3.2.1 and 2.5.1.1 relating to temperature monitoring in the combustion chamber.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, sections 1.5.4, 2.4.6.1 and 2.6.1 relating to energy recovery from the installation.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, section 1.5.8 and 2.3.1.1 relating to monitoring of emissions to air.	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, section 1.5.8 and 2.3.1.1 relating to monitoring during abnormal operation (CEM failure).	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, section 1.5.2.1 relating to incoming waste acceptance	Received 25/09/2013 Duly Made 27/11/2013
Application EPR/VP3997NK/V005	“EP Variation Supporting Information” document, section 1.7.1 ,1.7.2 and 1.7.3 relating to the Community Recycling Centre, Recyclables Bulking Facility and Road Sweepings Bulking Facility.	Received 25/09/2013 Duly Made 27/11/2013
Response to Schedule 5 notice (sent on 30/01/14)	Response to question 3 including the referenced diagram in Appendix B: Gasification plant design (general process flow). Response to question 16 relating to the gasification stack and odour stack.	21/02/2014
Response to Schedule 5 notice (sent on 30/01/14)	Response to questions 8 and 9 correcting errors in the list of wastes.	21/02/2014
Memo ‘Justification of Gasification Technology’ clarifying response to the Schedule 5 notices	Sections 2 and 3 describing the proposed staged gasification system, including figure 1 (staged gasification design).	29/05/2014
Memo ‘EP Variation Clarifications’	Section 3 relating to ash and APC residues. Section 4 relating to road sweepings bulking facility.	16/05/2014
Further information: Operating technique clarifications	Response to question 2a relating to prevention of uncontrolled ingress of air. Response to question 2c relating to urea solution storage.	20/05/2014

Further information: AD process diagram	Revised AD process diagram and additional information about the waste dissolvers.	06/06/2014
Further information: revised site plan	Revised site plan showing the installation boundary and the revised emission points.	06/06/2014
Email of further information: waste acceptance	Confirmation of waste acceptance for gasification during gasifier downtime.	10/07/2014
Email of additional information	Section 2, A1, only paragraph 3 relating to the removal of waste from the bunker on a first in, first out principle.	16/10/2014
Additional information	Clarification dated 10/10/14 relating to the removal of the wheel wash and replacement with a manual wash down.	16/10/2014
Application EPR/VP3997NK/V007	Answer to question 2 of form Part C3 and the referenced supporting documentation.	20/01/2022
Additional information	Email containing details of the pumping infrastructure stated within supporting documentation provided in answer to question 2 of form Part C3.	05/10/2022
Response to regulation 61 notice	Operating techniques as set out in the response to the regulation 61 notice, and additional information received in response to information requested dated 02/11/23.	06/04/23 and 07/11/23

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall submit a report to the Environment Agency for approval on whether waste feed to the plant can be proven to have a low and stable mercury content. The report shall have regard to BAT 4 of the BAT conclusions, be based on historic mercury emissions monitoring data and have regard to the Environment Agency Mercury Monitoring Protocol.	31/12/23
IC2	For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall submit a report to the Environment Agency for approval on whether dioxin emissions to air are stable. The report shall have regard to BAT 4 of the BAT conclusions, be based on historic dioxin emissions monitoring data and have regard to the Environment Agency Dioxins Monitoring Protocol.	31/01/24
IC3	For the following activities referenced in schedule 1, table S1.1 (AR1), the operator shall calculate the gross electrical efficiency using the method set out in the general considerations section of the BAT conclusions and submit details of the calculation to the Environment Agency. The calculation shall use the R1 efficiency status, boiler efficiency determination guidance (or other methodology as agreed in writing with the Environment Agency) to calculate boiler efficiency which can then be used to calculate Qth Where the calculated gross electrical efficiency is below the range specified in BAT 20 of the BAT conclusions, the operator shall carry out an	17/01/25

	<p>assessment of the opportunities to increase the energy efficiency of the installation.</p> <p>The assessment shall include but not necessarily be limited to:</p> <ul style="list-style-type: none"> • Improvements that could be made to the furnace (including control systems) in order to increase the amount of thermal energy produced per unit of thermal energy in the waste. • Where relevant, improvements that could be made to the steam system and related components to allow a greater quantity of electricity to be generated per unit of thermal energy in the steam. • Improvements in the heat and electrical efficiency of the plant's ancillary systems that could be made in order to reduce the heat and electrical loads of the plant. • Where relevant, an implementation plan for the improvements identified, including the anticipated increase in the gross and/or net electrical efficiency of the plant which would be achieved. <p>A written copy of the assessment shall be submitted to the Environment Agency for approval.</p>	
IC4	<p>For the following activities referenced in schedule 1, table S1.1 (AR2). 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.</p> <p>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.</p> <p>The plan shall include:</p> <ul style="list-style-type: none"> • 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 <p>The plan shall be implemented in accordance with the Environment Agency's written approval.</p>	<p>17/01/25 or other date as agreed in writing with the Environment Agency</p>
IC5	<p>The operator shall carry out a review of the abatement plant on site, in order to determine whether the measures have been effective and adequate to prevent and where not possible minimise emissions released to air including but not limited to odour and ammonia.</p> <p>The operator shall submit a written report to the Environment Agency following this review for assessment and approval.</p> <p>The report shall include but not limited to the following aspects:</p>	<p>17/01/25 or other date as agreed in writing with the Environment Agency</p>

	<ul style="list-style-type: none"> • Full investigation and characterisation of the waste gas streams. • Abatement stack monitoring results (not limited to odour and ammonia) • Abatement process monitoring results (not limited to odour and ammonia) • Details of air quality quantitative impact assessment including modelling and a proposal for site-specific “action levels” (not limited to odour concentration, hydrogen sulphide and ammonia). • Odour monitoring results at the site boundary • Records of odour complaints and odour related incidents • Recommendations for improvement including the replacement or upgrading the abatement plant • Timescales for implementation of improvements to the abatement plant <p>The operator shall implement the improvements in line with the timescales as approved by the Environment Agency.</p>	
IC6	<p>For the following activities referenced in schedule 1, table S1.1 (AR2). The operator shall establish the methane emissions in the exhaust gas from engines burning biogas and compare these to the manufacturer’s specification and benchmark levels agreed in writing with the Environment Agency. The operator shall, as part of the methane leak detection and repair (LDAR) programme, develop proposals to assess the potential for methane slip and take corrective actions where emissions above the manufacturer’s specification or appropriate benchmark levels are identified.</p>	<p>17/01/25 or other date as agreed in writing with the Environment Agency</p>

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 gasification plant	
Maximum quantity	The quantity of wastes accepted for gasification shall not exceed 55,460 tonnes a year.
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
02 01 04	waste plastics (except packaging)
02 01 07	wastes from forestry
02 01 09	agrochemical waste other than those mentioned in 02 01 08
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 04	materials unsuitable for consumption or processing
02 05	Wastes from the dairy products industry
02 05 01	materials unsuitable for consumption or processing
02 06	wastes from the baking and confectionery industry
02 06 01	materials unsuitable for consumption or processing
02 06 02	wastes from preserving agents
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
03 03 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08	wastes from sorting of paper and cardboard destined for recycling
03 03 10	fibre rejects, fibre-, filler- and coating-sludges from mechanical separation
07	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 02	wastes from the MFSU of plastics, synthetic rubber and man-made fibres
07 02 13	waste plastic
15	WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED

Table S2.2 Permitted waste types and quantities for gasification plant	
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 05	composite packaging
15 01 06	mixed packaging
15 01 09	textile packaging
15 02	absorbents, filter materials, wiping cloths and protective clothing
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01	End-of-life vehicles and their components
16 01 19	plastic
17	CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)
17 02	wood, glass and plastic
17 02 01	wood
17 02 03	plastic
19	WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 02	wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09 wastes from aerobic treatment of solid wastes
19 05	Wastes from aerobic treatment of waste
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost wastes from anaerobic treatment of waste
19 06	Wastes from anaerobic treatment of waste
19 06 04	digestate from anaerobic treatment of municipal waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletizing) not otherwise specified
19 12	Waste from the mechanical treatment of waste(e.g. sorting crushing, compacting, palletising) not otherwise specified)
19 12 01	paper and cardboard
19 12 04	plastic and rubber
19 12 07	wood other than that mentioned in 19 12 06
19 12 08	textiles
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

Table S2.2 Permitted waste types and quantities for gasification plant	
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 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 25	edible oil and fat
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30	detergents other than those mentioned in 20 01 29
20 01 32	Medicines other than those mentioned in 20 01 31
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 41	wastes from chimney sweeping
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 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 04	septic tank sludge
20 03 06	waste from sewage cleaning
20 03 07	bulky waste

Table S2.3 Permitted waste types and quantities for Anaerobic Digestion plant	
Maximum quantity	The quantity of wastes accepted for treatment by Anaerobic Digestion shall not exceed 40,000 tonnes a year.
Exclusions	<p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> • biodegradable wastes that is significantly contaminated with non-compostable or digestible contaminants, in particular plastic and litter shall be no more than 5% w/w and shall be as low as reasonably practicable by 31 December 2025. • wastes containing wood-preserving agents or other biocides 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

Table S2.3 Permitted waste types and quantities for Anaerobic Digestion plant	
Waste code	Description
02	WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01	wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01	sludges from washing and cleaning – food processing waste, food washing waste
02 01 02	animal tissue waste – Category 3 animal by-products (ABP) including blood, animal flesh, fish processing waste, fish carcasses, poultry waste – Category 2 ABP – paunch contents
02 01 03	plant tissue waste - husks, cereal dust, waste animal feeds
02 01 06	animal faeces, urine, manure including spoiled straw
02 01 07	wastes from forestry
02 01 99	residues from commercial mushroom cultivation
02 02	wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01	sludges from washing and cleaning – process water, – food washing waste
02 02 02	animal tissue waste – Category 3 ABP including blood, animal flesh, fish processing waste, fish carcasses, poultry waste
02 02 03	materials unsuitable for consumption or processing – coffee, food processing waste, jam, kitchen waste, fruit, vegetable oil, tobacco, tea, vegetable waste – waste fat from processing of meat or fish
02 02 04	sludges from on-site effluent treatment
02 02 99	non specified* – sludges from gelatine production – animal gut contents
02 03	wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation
02 03 02	sludges from washing, cleaning peeling, centrifuging and separation – coffee, mushroom compost, food processing waste, food washing waste, tobacco
02 03 04	biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances)
02 03 05	effluent from the processes referred to in sources of waste
02 03 99	non specified* – sludge from production of edible fats and oils – seasoning residues, molasses residues – residues from production of potato, corn or rice starch
02 04	wastes from sugar processing
02 04 03	sludges from on-site effluent treatment – biological sludge
02 04 99	other biodegradable wastes
02 05	wastes from the dairy products industry
02 05 01	biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances) – solid and liquid dairy products, milk, food processing wastes, yoghurt, whey
02 05 02	sludges from on-site effluent treatment
02 06	wastes from the baking and confectionery industry
02 06 01	biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances) - food condemned, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes
02 06 03	sludges from on-site effluent treatment

Table S2.3 Permitted waste types and quantities for Anaerobic Digestion plant	
02 07	wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01	wastes from washing, cleaning and mechanical reduction of raw materials– brewing waste, food processing waste, fermentation waste
02 07 02	wastes from spirits distillation – spent grains, fruit and potato pulp – sludge from distilleries
02 07 04	biodegradable materials unsuitable for consumption or processing (other than those containing dangerous substances) - brewing waste, food processing waste, fermentation waste, beer, alcoholic drinks, fruit juice
02 07 99	spent grains, hops and whisky filter sheets/ cloths.
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 02	green liquor sludge – paper sludge, green liquor
03 03 08	wastes from sorting of paper and cardboard destined for recycling – cardboard, newspaper, tissues, paper
03 03 10	fibre rejects and sludges – paper pulp (de-inked only), paper fibre
04	WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01	Wastes from the leather and fur industry
04 01 01	fleshings and lime split wastes
04 01 05	tanning liquor free of chromium
04 01 07	sludges not containing chromium
04 02	waste from the textile industry
04 02 10	organic matter from natural products, e.g. grease, wax
07	WASTES FROM ORGANIC CHEMICAL PROCESSES
07 02	wastes from the manufacture, formulation, supply and use of plastics, synthetic rubber and man-made fibres
07 02 13	waste plastic - must conform to BS EN 13432
19	WASTE 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 the 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 wastes
19 05 03	off-specification compost from source segregated biodegradable waste
19 06	waste from anaerobic treatment of waste
19 06 03	liquor from anaerobic treatment of municipal waste
19 06 04	digestate from anaerobic treatment of source segregated biodegradable waste
19 06 05	liquor from anaerobic treatment of animal and vegetable waste
19 06 06	digestate from anaerobic treatment of animal and vegetable waste
20	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01	municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
20 01 08	biodegradable kitchen and canteen waste

Table S2.3 Permitted waste types and quantities for Anaerobic Digestion plant	
20 01 25	edible oil and fat
20 01 38	wood (where no non-biodegradable coating or preserving substance present)
20 02	garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste – animal faeces, manure, garden waste, green waste, horticultural waste, plant tissue, parks and garden waste, hedge and tree trimmings, grass cuttings and leafy materials
20 03	other municipal wastes
20 03 01	mixed municipal waste – separately collected biowastes
20 03 02	wastes from markets - markets – allowed only if source segregated biodegradable fractions e.g. plant material, fruit and vegetables.

Table S2.4 Permitted waste types and quantities for Recyclables Bulking Facility and Community Recycling Centre	
Maximum quantity	The quantity of wastes accepted at the Recyclables Bulking Facility and Community Recycling Centre shall not exceed 250,000 tonnes a year.
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
09	WASTES FROM THE PHOTOGRAPHIC INDUSTRY
09 01	Wastes from the photographic industry
09 01 11*	single-use cameras containing batteries included in 16 06 01, 16 06 02 or 16 06 03
09 01 12	single-use cameras containing batteries other than those mentioned in 09 01 11
13	OIL WASTES AND WASTES OF LIQUID FUELS
13 02	Waste engine, gear and lubricating oils
13 02 04*	mineral-based non chlorinated engine, gear and lubricating oils
13 02 05*	mineral-based non chlorinated engine, gear and lubricating oils
13 02 06*	synthetic engine, gear and lubricating oils
13 02 07*	readily biodegradable engine, gear and lubricating oils
13 02 08*	other engine, gear and lubricating oil
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 02	plastic packaging
15 01 06	mixed packaging (packaging waste associated with incoming weee only)
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 07*	oil filters

Table S2.4 Permitted waste types and quantities for Recyclables Bulking Facility and Community Recycling Centre	
Maximum quantity	The quantity of wastes accepted at the Recyclables Bulking Facility and Community Recycling Centre shall not exceed 250,000 tonnes a year.
Waste code	Description
16 02	Wastes from electrical and electronic equipment
16 02 09*	transformers and capacitors containing pcbs
16 02 10*	discarded equipment capacitors containing or contaminated by pcbs other than those mentioned in 16 02 09
16 02 11*	discarded equipment capacitors containing chlorofluorocarbons, hcfc, hfc
16 02 12*	discarded equipment capacitors containing free asbestos
16 02 13*	discarded equipment containing hazardous components other than those mentioned in 16 02 09 to 16 02 12
16 02 14	discarded equipment other than those mentioned in 16 02 09 to 16 02 13
16 02 15*	hazardous components removed from discarded equipment
16 02 16	components removed from discarded equipment other than those mentioned in 16 02 15
16 05	gases in pressure containers and discarded chemicals
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
16 06	Batteries and accumulators
16 06 01*	lead acid
16 06 02*	Ni-Cd batteries
16 06 03*	mercury-containing batteries
16 06 04	alkaline batteries (except 16 06 03)
16 06 05	other batteries and accumulators
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 01	wood
17 02 02	glass
17 02 03	plastic
17 04	Metals (including their alloys)
17 04 01	copper, bronze, brass
17 04 02	aluminium
17 04 03	lead
17 04 04	zinc
17 04 05	iron and steel
17 04 06	tin
17 04 07	mixed metals

Table S2.4 Permitted waste types and quantities for Recyclables Bulking Facility and Community Recycling Centre	
Maximum quantity	The quantity of wastes accepted at the Recyclables Bulking Facility and Community Recycling Centre shall not exceed 250,000 tonnes a year.
Waste code	Description
17 04 11	cables other than those mentioned in 17 04 10
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
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
17 06 05*	construction materials containing asbestos
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 PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION/INDUSTRIAL USE
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 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 05	glass
19 12 07	wood other than that mentioned in 19 12 06
19 12 09	minerals (for example sand, stones)
19 12 12	other wastes (including mixture of materials) from mechanical treatment of waste other than those mentioned in 19 12 11
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 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 13*	solvent
20 01 14*	acids
20 01 15*	alkalines
20 01 17*	photochemicals
20 01 19*	pesticides

Table S2.4 Permitted waste types and quantities for Recyclables Bulking Facility and Community Recycling Centre	
Maximum quantity	The quantity of wastes accepted at the Recyclables Bulking Facility and Community Recycling Centre shall not exceed 250,000 tonnes a year.
Waste code	Description
20 01 21*	fluorescent tubes and other mercury containing waste
20 01 23*	discarded equipment containing chlorofluorocarbons
20 01 25	edible oil and fat
20 01 26*	oil and fat other than those mentioned in 20 01 25
20 01 27*	paint, inks, adhesives and resins containing dangerous substances
20 01 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 29*	detergents containing dangerous substances
20 01 30	detergents other than those mentioned in 20 01 29
20 01 33*	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries
20 01 34	batteries and accumulators other than those mentioned in 20 01 33
20 01 35*	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components
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 37*	wood containing dangerous substances
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 40	metals
20 01 41	wastes from chimney sweeping
20 02	Garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
20 02 02	soil and stones
20 02 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 S2.5 Permitted waste types and quantities for Road Sweeping Bulking Facility	
Maximum quantity	The quantity of wastes accepted at the Road Sweeping Bulking Facility shall not exceed 2,660 tonnes a year.
Waste code	Description
20 03	Other municipal wastes
20 03 03	street-cleaning residues

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements (AR1 – Gasification Plant)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 Location marked on site plan in schedule 7	Particulate matter	Incineration exhausts gases	30 mg/m ³	½-hr average	Continuous	EN 14181
	Particulate matter		5 mg/m ³	daily average	Continuous	EN 14181
	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous	EN 14181
	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous	EN 14181
	Hydrogen chloride		60 mg/m ³	½-hr average	Continuous	EN 14181
	Hydrogen chloride		8 mg/m ³	daily average	Continuous	EN 14181
	Hydrogen fluoride		1 mg/m ³	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	CEN TS 17340
	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in any calendar day	Continuous	EN 14181
	Carbon monoxide		50 mg/m ³	daily average	Continuous	EN 14181
	Sulphur dioxide		200 mg/m ³	½-hr average	Continuous	EN 14181
Sulphur dioxide	40 mg/m ³	daily average	Continuous	EN 14181		

Table S3.1 Point source emissions to air – emission limits and monitoring requirements (AR1 – Gasification Plant)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		400 mg/m ³	½-hr average	Continuous	EN 14181
	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		100 mg/m ³	daily average	Continuous	EN 14181
	Cadmium & thallium and their compounds (total)		0.02 mg/m ³	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	BS EN 14385
	Mercury and its compounds		0.02 mg/m ³	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	BS EN 13211
			Limit does not apply if continuous monitoring has been specified by the Environment Agency	Not required if continuous monitoring has been specified by the Environment Agency		
	Mercury and its compounds		0.02 mg/m ³	Daily average	Continuous	EN 14181
			Not required unless continuous monitoring has been specified by the Environment Agency in line with sampling protocol			
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.3 mg/m ³	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	BS EN 14385	

Table S3.1 Point source emissions to air – emission limits and monitoring requirements (AR1 – Gasification Plant)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Exhaust gas temperature		No limit set	-	Continuous	Traceable to national standards
	Exhaust gas pressure		No limit set	-	Continuous	Traceable to national standards
	Exhaust gas flow		No limit set	-	Continuous	BS EN 16911-2
	Exhaust gas oxygen content		No limit set	-	Continuous	EN 14181
	Exhaust gas water vapour content		No limit set	-	Continuous	EN 14181
	Ammonia (NH ₃)		15 mg/m ³	daily average	Continuous	EN 14181
	Nitrous oxide (N ₂ O)		No limit set	½-hr average and daily average	Continuous	EN 14181
	Carbon dioxide		No limit set	Continuous	Continuous	EN 14181
	Dioxins / furans (I-TEQ)		0.06 ng/m ³ and 0.08 ng/m ³ if long term limit is specified by the Environment Agency in line with sampling protocol	periodic over minimum 6 hours, maximum 8 hour period and value over sampling period of 2 to 4 weeks for long term sampling	Bi-annually and long term sampling if specified by the Environment Agency in line with sampling protocol	EN 1948 Parts 1, 2 and 3 and CEN TS 1948-5 if specified by the Environment Agency in line with sampling protocol

Table S3.1 Point source emissions to air – emission limits and monitoring requirements (AR1 – Gasification Plant)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Dioxin-like PCBs (WHO-TEQ Humans / Mammals, Fish, Birds)		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	EN 1948 Parts 1, 2 and 4
	Dioxins / furans (WHO-TEQ Humans / Mammals, Fish, Birds)		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	BS EN 1948 Parts 1, 2 and 3
	Polybrominated dibenzodioxins and furans		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Method based on procedural requirements of EN 1948
	Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Annually	BS ISO 11338 Parts 1 and 2.
Emergency generator stack as shown on stack indication plan provided on 11/12/2023	No parameters set	Back-up electrical generator	No limit set	-	-	-

Table S3.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements (AR1 Gasification Plant)

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 Location marked on site plan in schedule 7	Particulate matter	Incineration exhausts gases	150 mg/m ³	½-hr average	Continuous	EN 14181 or alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor
	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous	EN 14181 or alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor
	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in calendar day	Continuous	EN 14181 or alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor

Table S3.1(b) Point source emissions to air – emission limits and monitoring requirements (other)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A7 (as shown on site plan in Schedule 7)	Hydrogen sulphide	Stack from wet scrubber followed by a carbon filter	No limit set	Average over sample period	Once every 6 months from 03/12/23	CEN TS 13649 for sampling NIOSH 6013 for analysis
	Ammonia		20 mg/m ³	Average over sample period		EN ISO 21877
	Odour concentration		No limit set	--		BS EN 13725
A4 & A5 as marked on the Site Plan in Schedule 7	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	CHP Gas Engines' stacks (Note 3)	500 mg/m ³	Average over sample period	Annual	BS EN 14792
	Carbon monoxide		1400 mg/m ³			BS EN 15058
	Sulphur dioxide		350 mg/m ³ until 31/12/29			BS EN 14791 or CEN TS 17021 or by calculation based on fuel sulphur content
			162 mg/m ³ from 01/01/30			
	Total VOCs		No limit set			BS EN 12619
A6 (as shown on site plan in Schedule 7)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Flare stack (Note 2)	150 mg/m ³	Average over sample period	Note 1	BS EN 14792
	Carbon monoxide		50 mg/m ³			BS EN 15058
	Total VOCs		10 mg/m ³			BS EN 12619
	Sulphur dioxide		395 mg/m ³			BS EN 14791
Pressure relief valves	Biogas release and operational events	Digesters/Digestate storage tank(s)	No limit set	Recorded duration and frequency	Daily inspection	--

Table S3.1(b) Point source emissions to air – emission limits and monitoring requirements (other)						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
Vents from tank(s)	No parameter set	Oil/Fuel Storage tank(s)	No limit set	--	--	--
<p>Note 1: Following commissioning, monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.</p> <p>Note 2: These emission limits are based on normal operating conditions and load - temperature 0°C (273K); pressure 101.3 kPa and oxygen 3%.</p> <p>Note 3: These emission limits are based on normal operating conditions and load - temperature 0°C (273 K); pressure 101.3 kPa and oxygen 5% (for gas engines burning biogas) and oxygen 3% (for medium combustion plants other than engines and gas turbines burning biogas).</p>						

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 Soakaway, marked on site plan in schedule 7	Surface water	No parameters set	No limit set			
W2 Surface water discharge, marked on site plan in schedule 7	Uncontaminated site surface water from roofs and operational areas	Oil and grease	None visible	--	Weekly	Visual inspection

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
S1 marked on site plan in schedule 7	Liquor from anaerobic digestion plant and other waste waters	No parameters set	No limit set	-	-	-

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 gasification combustion zone inner wall or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
Gasification plant	Gross electrical efficiency	within 6 months of any modification that significantly affects energy efficiency	Performance test at full load or other method as agreed in writing with the Environment Agency	

Table S3.4(a) Process monitoring requirements for AR2 Anaerobic digestion plant				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Digester feed (digestion process)	pH	As described in site operating techniques	As described in site operating techniques	Process monitoring to be recorded using a SCADA system where relevant.
	Alkalinity			
	Temperature			
	Organic loading rate			
	Volatile fatty acids concentration			
	Ammonia			
	Liquid /foam level			
Biogas in digesters	Flow	Continuous	In accordance with EU weights and measures Regulations	Process monitoring to be recorded using a SCADA system where relevant. Gas monitors to be calibrated every 6 months or in accordance with the manufacturer's recommendations
	Methane	Continuous	None specified	
	CO ₂	Continuous	None specified	
	O ₂	Continuous	None specified	
	Hydrogen sulphide	Daily	None specified	
	Pressure	Continuous	None specified	
Digestate batch	Volatile fatty acids concentration	One sample at the end of each batch (hydraulic retention time) cycle.	As described in site operating techniques	--
	Ammonia			
Digesters and storage tanks	Integrity checks	Weekly	Visual assessment	In accordance with design specification and tank integrity checks.
Digesters	Agitation /mixing	Continuous	Systems controls	Records maintained in daily operational records.
	Tank capacity and sediment assessment	Once every 5 years from date of commission	Non-destructive pressure testing integrity assessment every 5 years or as specified by	In accordance with design specification and tank integrity checks.

Table S3.4(a) Process monitoring requirements for AR2 Anaerobic digestion plant				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
			manufacturers technical specification.	
Waste reception building or area; Digesters and storage tanks	Odour	Daily	Olfactory monitoring	Odour detection at the site boundary.
Diffuse emissions from all sources identified in the Leak Detection and Repair (LDAR) programme	VOCs including methane	Every 6 months or otherwise agreed in accordance with the LDAR programme	BS EN 15446 In accordance with the LDAR programme	Monitoring points as specified in a DSEAR risk assessment and LDAR programme. Limit as agreed with the Environment Agency as a percentage of the overall gas production.
CHP engine stacks	VOCs including methane	Annually	BS EN 12619	Total annual VOCs emissions from the CHP engine(s) to be calculated and submitted to the Environment Agency.
	Exhaust gas temperature		Traceable to National Standards	
	Exhaust gas pressure		Traceable to National Standards	
	Exhaust gas water vapour content		BS EN 14790-1	Unless gas is dried before analysis of emissions.
	Exhaust gas oxygen		BS EN 14789	
	Exhaust gas flow		BS EN 16911-1	
Meteorological conditions	Wind speed, air temperature, wind direction	Continuous	Method as specified in management system	Conditions to be recorded in operational diary and records. Equipment shall be calibrated on a 4 monthly basis, in accordance with manufacturer's recommendations or as agreed in writing by the Environment Agency.

Table S3.4(a) Process monitoring requirements for AR2 Anaerobic digestion plant				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Emergency flare	Operating hours	Continuous	Recorded duration and frequency. Recording using a SCADA system or similar system	Date, time and duration of use of auxiliary flare shall be recorded.
	Quantity of gas sent to emergency flare			Quantity can be estimated from gas flow composition, heat content, ratio of assistance, velocity, purge gas flow rate, pollutant emissions.
Pressure relief valves and vacuum systems	Gas pressure	Continuous	Recording using a SCADA system	Continuous gas pressure shall be monitored.
	Re-seating	Weekly inspection	Visual	Operator must ensure that valves are re-seated after release in accordance with the manufacturer's design.
	Inspection, maintenance, calibration, repair and validation	Following foaming or overtopping or at 3 yearly intervals whichever is sooner	Written scheme of examination in accordance with condition 1.1.1	After a foaming event or sticking, build-up of debris, obstructions or damage, operator must ensure that pressure relief valve function remains within designed gas pressure in accordance with the manufacturer's design by suitably trained and qualified personnel.
	Inspection, calibration and validation report	In accordance with design and construction specifications or after over topping or foaming event	Written scheme of examination in accordance with condition 1.1.1	Operator must ensure that valves are re-seated after release, after a foaming event or sticking, build-up of debris, obstructions or damage. Operator must ensure that PRV function remains within designed operation gas pressure in accordance with the manufacturer's design by suitably

Table S3.4(a) Process monitoring requirements for AR2 Anaerobic digestion plant				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
				trained/qualified personnel. Inspection, calibration and validation report. In accordance with industry Approved Code of Practice
Storage tanks	Volume	Daily	Visual or flow metre measurement	750 mm freeboard must be maintained for storage lagoons. Records of volume must be maintained.

Table S3.4 (b) Process monitoring requirements – odour abatement				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Odour abatement plant				
Scrubbers (water/chemical/dry)				
Scrubber	Gas temperature – inlet and outlet	Continuous	Temperature probe / Traceable to national standards	Odour abatement plant shall be regularly checked and maintained to ensure appropriate temperature and moisture content. Odour abatement plant shall be managed in accordance with permit condition 3.4, the odour management plan and
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter / EN 16911-1 and MID for EN 16911-1	
	Moisture content or humidity – inlet and outlet (for dry scrubbers only)	Daily	Moisture meter	
	Moisture content or humidity – outlet (for wet scrubbers if used)	Daily	Moisture meter	

Table S3.4 (b) Process monitoring requirements – odour abatement

	before other abatement systems)			manufacturer's recommendations.
	Back pressure	Weekly	Pressure differential using sensors	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	
	pH scrubber solution (pre-abatement)	Continuous	pH meter	
	pH scrubber solution (post-abatement)	Continuous	pH meter	
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	
	Ammonia – inlet	Every 6 months or as agreed in writing by the Environment Agency.	EN ISO 21877	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.3 and the odour

Table S3.4 (b) Process monitoring requirements – odour abatement				
				management plan.
Carbon filters				
Carbon filter	Carbon bed temperature – inlet and outlet	Continuous	Temperature probe	Odour abatement plant shall be managed in accordance with permit condition 3.4, the odour management plan and manufacturer's recommendations. Carbon filter(s) to be replaced in accordance with manufacturer's recommendations.
	Gas flow rate – inlet and outlet	Continuous	Gas flow meter	
	Moisture or humidity	Daily	Moisture meter	
	Back pressure	Weekly	Recognised industry method	
	Efficiency assessment	Annual	Emission removal efficiency (BS EN 13725 for odour removal)	Equipment shall be calibrated on a 4 monthly basis, or as agreed in writing by the Environment Agency.
	Hydrogen sulphide – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	CEN TS 13649 for sampling NIOSH 6013 for analysis	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.3 and the odour management plan.
	Ammonia – inlet	Every 6 months or as agreed in writing by the	EN ISO 21877	Action levels to be agreed on completion of IC7 as approved in

Table S3.4 (b) Process monitoring requirements – odour abatement

		Environment Agency.		writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.3 and the odour management plan.
	Odour concentration – inlet and outlet gas stream	Every 6 months or as agreed in writing by the Environment Agency.	BS EN 13725	Action levels to be agreed on completion of IC7 as approved in writing by the Environment Agency. Action levels to be achieved in accordance with permit condition 3.3 and the odour management plan.

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
Bottom Ash	TOC or otherwise as agreed in writing with the Environment Agency	3% or otherwise as agreed in writing with the Environment Agency	Quarterly	EN 14899 and either EN 13137 or EN 15936 or otherwise as agreed in writing with the Environment Agency	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'
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.		Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
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'	
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'	

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
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'	
Boiler 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	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	-
Boiler 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	Sampling and analysis as per TGN M4 Guidelines for Ash Sampling and Analysis	-

* 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 3.6.1.	A1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
	A4, A5, A6, A7	Annually	1 Jan
Emissions to water Parameters as required by condition 3.6.1	W2	Annually	1 Jan
TOC or otherwise as agreed in writing with the Environment Agency Parameters as required by condition 3.6.1	Bottom Ash	Quarterly	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 3.6.1	Bottom Ash	Quarterly	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 3.6.1	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 3.6.1	APC Residues	Quarterly	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 3.6.1	APC Residues	Before use of a new disposal or recycling route	
Process monitoring – digester tank integrity	As specified in schedule 3 table S3.4(b)	Every 5 years from the date of commissioning or as per the	1 January

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Parameters as required by condition 3.6.1		manufacturer's recommendation, whichever is sooner	
Process monitoring – under and over pressure relief systems Parameters as required by condition 3.6.1	As specified in schedule 3 table S3.4(b)	Every 12 months Yearly summary report of over-pressure and under-pressure events detailing mass balance release	1 January
Process monitoring – leak detection and repair (inspection, calibration and maintenance) Parameters as required by condition 3.6.1	As specified in schedule 3 table S3.4(b)	Every 3 years	1 January
Process monitoring – use of emergency flare Parameters as required by condition 3.6.1	As specified in schedule 3 table S3.4(b)	Every 12 months	1 January
Total annual VOCs emissions from gas engines (calculated)	As specified in schedule 3 table S3.4(b)	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	1 January

Table S4.2: Annual production/treatment	
Parameter	Units
Incineration Plant	
Total Municipal Waste Incinerated	tonnes
Total Commercial and industrial Waste Incinerated	tonnes
Total Commercial and Industrial waste input to mechanical treatment plant	tonnes
Total Recyclates recovered	tonnes
Thermal energy produced e.g. steam for export	kWh
Electrical energy exported	kWh
Electrical energy used on installation	kWh
Waste heat utilised by the installation	kWh

Table S4.2: Annual production/treatment	
Parameter	Units
Anaerobic Digestion Plant	
Total waste treated in the anaerobic digestion plant	tonnes
Electricity generated	MWh
Biomethane generated	tonnes or m ³
CLO outputs	tonnes
Recovered outputs	tonnes

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Incineration Plant		
Annual Report as required by condition 4.2.2	Annually	-
Electrical energy exported, imported and used at the installation, including separate accounting for the gasification installation and AD/CHP installation	Annually	kWh / tonne of waste
Fuel oil consumption	Annually	kg / tonne of waste incinerated
Bottom Ash residue	Annually	Route, tonnes and tonnes / tonne of waste incinerated
APC residue	Annually	Route, tonnes and tonnes / tonne of waste incinerated
Boiler ash	Annually	Route, tonnes and tonnes / 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, including separate accounting for the gasification installation and AD/CHP installation	Annually	kg / tonne of waste incinerated
Periods of abnormal operation	Annually	No of occasions and cumulative hours for current calendar year for each line.
Anaerobic Digestion Plant		
Water usage	Annually	tonnes or m ³

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh
Raw material usage	Annually	tonnes or m ³
Emergency flare operation	Annually	hours
Electricity exported	Annually	MWh
CHP engine usage	Annually	hours
CHP engine efficiency	Annually	%

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Incineration Plant		
Annual report required by condition 4.2.2	Annual performance report template	-
Emissions to air from 03/12/2023	Forms air 1-9 (AR1) or other forms as agreed in writing by the Environment Agency	17/01/2024
Residue quality	Form residue 1 and 2 (AR1) or other form as agreed in writing by the Environment Agency	17/01/2024
Other performance indicators	Form performance 1 (AR1) or other form as agreed in writing by the Environment Agency	17/01/2024
Anaerobic Digestion Plant		
Air	Form air 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Emissions to water	Form water 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Water usage	Form water usage 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Energy usage	Form energy 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Other performance indicators	Form performance 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Process monitoring	Form process 1 (AR2) or other form as agreed in writing by the Environment Agency	17/01/2024
Waste returns	E-waste Return Form or other form as agreed in writing by the Environment Agency	-

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

(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 plant or the measurement devices. Abnormal operation starts as defined in condition 2.3.12 and ends as defined in condition 2.3.13. Abnormal operation is limited to 4 hours for a single occurrence and a total of 60 hours per year per line.

“accident” means an accident that may result in pollution.

“ADQP” means Anaerobic Digestion Quality Protocol

“anaerobic digestion” means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobes and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

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

“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 Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for Waste Incineration

“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 or transported by the grate;

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

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

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

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

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

“combined heat and power” (CHP) or Cogeneration means the simultaneous generation in one process of thermal energy and electrical or mechanical energy.

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

‘Daily average emissions value’ means ‘the average of at least 43 valid half hourly averages or for CO the average of at least 43 valid half hourly averages or 129 valid 10 min averages’

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

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

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

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions 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 limit.

“existing medium combustion plant” means an MCP which was put into operation before 20 December 2018.

“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

“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

“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

“ISO” means International Standards Organisation.

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

‘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

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

“medium combustion plant” or “MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion

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

“new medium combustion plant” means an MCP which was put into operation after 20 December 2018. This includes replacement MCP and Generators.

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

“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, Dibenz[ah]anthracene, Dibenz[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.

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

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

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

- 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.

“specified generator” means a group of generators other than excluded between 1 and 50 megawatts or less than 50 megawatts as defined in Schedule 25B(2) of SI 2018 No.110 of the EPR.

“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. “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.

“start up” is any period, where the plant has been non-operational, until waste has been fed to the plant in a sufficient quantity to initiate steady-state conditions as described in the application or as agreed in writing with the Environment Agency.

“shut down” is any period where the plant is being returned to a non-operational state as described in the application or as agreed in writing with the Environment Agency.

“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

“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,
- (d) In relation to gases from gas engines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 5% 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
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
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



“©Crown Copyright. All rights reserved. Environment Agency, 100026380, 2023.”

END OF PERMIT

Permit number
EPR/VP3997NK