

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Kent Enviropower Limited

Allington Incinerator Allington Quarry Laverstoke Road Allington Maidstone Kent ME16 0LE

Variation application number

EPR/BR4551IC/V012

Permit number

EPR/BR4551IC

Allington Incinerator Permit number EPR/BR4551IC

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. 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 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

This permit controls the operation of a waste incineration plant. The relevant listed activity is S5.1 Part A(1) (b). The permit implements the requirements of the EU Directives on Industrial Emissions and Waste.

Furnace technology	Fluidised Bed
Number of lines	3
Principal waste type	Municipal /commercial & industrial waste.
Stack height	80 m
Permitted plant capacity	560,000 tonnes per year
Electrical generation capacity	53.8 MWe

The main features of the permit are as follows:

Summary of Process

The purpose of the Installation is to receive municipal and industrial waste, to recover recyclable elements for reuse and to recover the energy available from the combustible element of the residue by incineration in a fluidised bed furnace. Energy is recovered from the incineration process and converted to electricity for export to the National Grid. The combustion gases are cleaned to meet the standards required by the Industrial Emissions Directive before discharge from a tall chimney. Ashes and other solid residues are removed from the installation.

The Installation covers the site and the entire incineration plant including all incineration lines, waste reception, storage, on-site pre-treatment facilities, water, fuel and air supply systems, boiler, facilities for the treatment of exhaust gases, on-site facilities for treatment or storage of residues and waste water, stack, devices and systems for controlling incineration operations, recording and monitoring conditions.

The plant has a design throughput of around 580,000 tonnes per annum with an incineration capacity around 560,000 tonnes per annum. There is a single waste reception, materials recycling and preparation section followed by three independent incinerator lines each complete with a heat recovery boiler, acid gas abatement, bag filter and a separate flue in the chimney. The heat produced from the incineration of the waste is used to generate steam in the boilers and the steam is then combined and passed to a steam turbine which generates some 34.5 MW of electrical energy for export to the National Grid.

Raw Materials

Waste is delivered to the plant in road vehicles which are weighed before proceeding to the tipping hall. This is a fully enclosed building, maintained under slight negative pressure to ensure that no odours, dust or litter can escape the building. The vehicles carry either unsorted mixed municipal waste, sorted waste for recycling or mixed recyclable waste and non-recyclable waste or each tip into the appropriate section of the tipping hall.

The unsorted mixed waste (black bag) is transferred by crane grab to a waste shredding line, it then moves forward through a metals extraction section where ferrous metals are removed for recycling before moving to the prepared fuel bunker.

The facility also operates as a waste transfer site, which is permitted separately (EAWML100300). It receives clean mixed recyclates and food wastes collected in the community and loads them in bulk onto their designated transport vehicles for transport off site for recovery.

A crane grab in the prepared fuel bunker both mixes the waste and charges the hoppers of the three incineration lines.

Hydrated lime for the flue gas cleaning process is delivered by bulk tanker and offloaded pneumatically into three 125m³ silos vented through a reverse pulse jet filter.

Activated carbon for the flue gas cleaning process is stored in dedicated silos that are pneumatically filled from delivery trucks. There are three silos, one for each line, each equipped with filters to prevent dust emissions during filling.

Urea, dissolved in water is stored in a fully bunded tank and is injected into the furnaces as necessary to control NOx emissions.

Caustic soda for water treatment resin regeneration is delivered by bulk tanker and offloaded into a 5.5 m³ tank with scrubber, inside the demineralisation area.

Hydrochloric acid for water treatment resin regeneration is delivered by bulk tanker and offloaded into a 5.5 m³ tank vented through the caustic soda scrubber in a bund outside the demineralisation area.

Various other water treatment chemicals are delivered in appropriate containers and stored in bunded areas.

Gas oil for the combustion chamber auxiliary burners and on-site vehicles is stored in a fully bunded 150 m³ tank.

Sand for the fluidised bed furnaces is stored in 3 silos each of 55 cubic meters capacity.

Various maintenance materials (oils, greases, insulants, antifreezes, welding and fire fighting gases etc.) are stored in the appropriate manner.

Combustion Process

The technology employed for incineration is the ROWITEC unit which uses a fluidised bed process. The design has an inclined air distributor plate with a number of separate air supply chambers providing differential air flows across the bed, causing a revolving action. This technique promotes rapid and uniform mixing of the sand and bottom ash and ensures that heavy inert and non-combustible material migrates to the sides of the bed where they can easily be removed.

An angled furnace wall above the fluidised bed zone restrains bed expansion under high fluidising air flows and so minimises particulate carry over. The elliptical patterns of air flow converge in the centre of the combustion area ensuring effective vertical and lateral turbulent mixing and high combustion efficiency and uniformity. The waste is burned on a bed consisting of sand and ash that is held in suspension by an upward flow of combustion air that circulates the combustion mixture up to the throat of the furnace.

The furnace operating design is based on a thermal capacity of 53.8MW at full load and this can be achieved over the typical range of waste calorific values expected with municipal waste.

The combustion air system provides the furnace with the total air requirements for fluidisation and combustion. Primary air is supplied to the bottom of the combustion chamber and fluidises the bed. This air is extracted from the waste reception and storage buildings and destroys all odours in the combustion chamber.

Each furnace is equipped with two fuel oil burners for use at start-up to heat the furnace and also during extreme reductions in waste fuel calorific value when the temperature of the furnace would otherwise fall below 850 degrees Centigrade.

Combustion control of the furnace will be achieved through a combination of furnace bed and freeboard temperature control, primary air flow control, oxygen control within the flue gas and furnace load.

Recirculated flue gas is fed to the furnace bed as a cooling medium to control the furnace bed temperature and also to assist the control of NO_x by influencing the combustion temperature conditions within the furnace.

The furnace bed is managed to remove non-combustible material (bottom ash) from the bed and maintain the sand level within the optimum operating range. Bottom ashes produced in the furnace together with sand migrate down the slope of the furnace to the discharge section located at each side of the bed. The bottom ash and sand are both withdrawn from the discharge sections of the bed by two water-cooled discharge screw conveyors. Material passing out of the screw conveyors is discharged to a vibrating screeen. Undersize material is returned to the sand hopper for re-use within the furnace while the oversized material is sent off site for recovery or re-use or landfill.

Energy Recovery

Hot gases from the furnace pass through to a boiler designed to generate steam. The boiler comprises two fully water cooled radiation chambers, a single pass horizontal plain tube convective heating surface, incorporating a three stage convective superheater unit and a plain tube economiser section. The economiser is designed for high velocity gas flow to minimise the reformation of dioxins in the critical de Novo synthesis range.

Steam is generated at 65 bar and a final temperature of 420 degrees Centigrade.

The high pressure steam from all three boilers feeds into a common header which in turn will feed a condensing steam turbine that will generate electricity. Steam exiting the turbine will be condensed in an air cooled condenser and the condensate returned to the boilers.

Gas Cleaning

The plant is designed to meet the requirements of the Industrial Emissions Directive as a minimum for releases to air by a combination of main process design and operation and abatement equipment.

Flue gases pass from the boiler to the gas cleaning equipment. The gas passes to an electrostatic precipitator (ESP) for the separation of ash carried over from the furnace with the flue gas. Material collected in the ESP will be discharged by means of rotary valves and chain conveyors and then pneumatically fed to the ash silos or re-injected into the flue gas cleaning system.

Gases leaving the ESP enter the gas cleaning system. This comprises a circo clean reactor and bag filter system. Gases entering the circo clean reactor will be at a temperature of 190 to 230 degrees C and will come into contact with a mixture of water, hydrated lime and activated carbon that have been injected into the reactor. The reactor is designed to reduce or remove acidic pollutants such as HCI, SO₂ and HF by the use of the hydrated lime and dioxins and furans, PCBs, PAHs, mercury vapour and heavy metal salts such as mercury chloride by the use of the activated carbon. The injected water enhances the reactions and cools the gas. The control system of the circo clean reactor optimises the use of reactants by balancing the feed rate with the concentration of the pollutants entering the circo clean reactor.

The final stage of the gas cleaning system is the bag filter unit which separates the particulate material from the flue gas. The baghouse filter consists of compartments each of which contains a number of tubular filter

bags. A thick porous layer of particulate builds on the bag surfaces to form a filter cake which efficiently removes ultra-fine particles from the gas stream and the excess lime continues to react with the acid gases.

Bag house residue is discharged from the compartments via the integrated buffer storage by a closed pneumatic conveying system into the reaction product silos. Silos are equipped with a filter, hopper heating and fluidisation system to assist discharge. The residue is then discharged directly into road vehicles under dust free conditions for transport off site to a licensed facility.

Nitrogen oxides (NO_x) abatement is achieved by the use of both flue gas recirculation (FGR) and selective non-catalytic reduction (SNCR). The SNCR is based on the injection of urea into the furnace chambers before the boilers and before the lime and carbon injection and before the gas passes to bag filters.

The cleaned gas then discharges to atmosphere via three 80-metre flues in a common stack at an efflux velocity in excess of 15 ms⁻¹ at maximum throughput.

Ancillary Operations

Demineralised water is required to compensate for boiler blowdown losses. A package demineralisation plant provides this water. The ion exchange resins are regenerated using sodium hydroxide and hydrochloric acid and the regeneration effluent is routed through a neutralisation tank to the collection pit for reuse where possible.

Ash Handling

Bottom ash, the combined boiler and ESP ash and the flue gas treatment residue (FGTR) from the bag filter system, are each sent for separate disposal off site by licensed contractors subject to waste licensing legislation. FGTR is not mixed with any other ash at any time. The bottom ash is likely to be subject to ferrous and non-ferrous metals extraction by the contractors before disposal or reuse. All operations will be subject to waste licensing legislation and be tracked by the Environment Agency. At least quarterly sampling of the bottom ash will be carried out to ensure effective burn out is being achieved by testing for the "loss on ignition" of the residual ash. All other solid waste residues arising from the operation of the process will be removed from site, in enclosed containers, for disposal by suitable contractors.

Liquid Effluent and Site Drainage

Uncontaminated surface water from the roads and parking area that is not reused within the process will be discharged to sewer.

Emissions Monitoring

Emissions from the stack are continuously monitored for: particulate, carbon monoxide (CO), ammonia (NH₃), sulphur dioxide (SO₂), hydrogen chloride (HCl), oxygen (O₂), nitrogen oxides (NOx) and volatile organic compounds (VOC). In addition periodic sampling and measurement will be carried out for metals cadmium (Cd), thallium (TI), mercury (Hg), antimony (Sb), arsenic (As), lead (Pb), chromium (Cr), cobalt (Co), copper (Cu), manganese (Mn), nickel (Ni), vanadium (V), dioxins and furans, dioxin like PCBs, hydrogen fluoride (HF) and nitrous oxide (N₂O). Periodic measurements will be carried out four times in the first year and thereafter either at the same frequency or twice per year dependant on the substances.

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

Status log of the permit			
Description	Date	Comments	
Application BR4551 (A001)	Duly made 04/02/02	Received 31/01/02.	
Response to request for information (Sch 4)	Requested 18/04/02	Response dated May 02.	
Response to request for information (Sch 4)	Requested 30/04/02	Response dated 13/06/02.	

Status log of the permit		
Description	Date	Comments
Supplementary information 1	Received 20/08/02	Groundwater & construction issues; Incoming waste handling and treatment; Boiler & Furnace issues; Clarification of relationship between KEL and WRG; Noise; Environmental Monitoring Programme; Revised General Layout Diagram.
Supplementary information 2	Received 27/08/02	Revise`d details of incoming waste handling and preparation.
Supplementary information 3	Received 22/11/02	Revised BAT Assessment; Response to Comments; Phase 2 Site Report; Management Structure of KEL; Off-site monitoring programme.
Copies of approvals from landowners for conducting off site monitoring programme	Received 11/03/03	Off-site monitoring now in compliance with Regulations.
Supplementary information 4	Received 23/04/03	BAT Assessment for the Contribution from the Waste Management Facility to Acid Deposition at Wouldham to Detling Escarpment – report was at the request of English Nature.
Permit BR4551	Issued 27/08/03	-
Variation BX4518 (V002)	Issued 03/03/04	Correction of Table 1.1.1 and revised site plan.
Variation GP3235LE (V003)	Issued 31/01/06	-
Variation BP3837ML (V004)	Issued 20/03/07	-
Variation AP3431UN (V005)	Issued 07/09/07	-
Variation application EPR/BR4551IC/V006	Duly made 04/02/13	-
Response to request for information dated 05/12/12	Received 18/04/13	-
Response to schedule 5 notice dated 11/03/13	Received 20/03/13 and 18/04/13	Information regarding impact of increased CO emissions on environment.
Variation determined EPR/BR4551IC	14/05/13	Variation issued.
Environment Agency variation determined EPR/BR4551IC/V007	05/09/13	Environment Agency variation to implement the changes introduced by IED.
Application EPR/BR4551IC/V008 (variation)	Duly made 26/03/14	Application to vary the permit.
Further information	Email dated 16/05/14	Request by operator to amend total organic carbon and loss of ignition limits for bottom ash in line with the IED.
Variation determined EPR/BR4551IC	04/06/14	Varied and consolidated permit issued. Effective from 01/07/14.
Environment Agency variation determined EPR/BR4551IC/V009	19/11/14	Environment Agency variation to add requirement for quarterly reporting of abnormal operations.
Application EPR/BR4551IC/V010 (variation)	Duly made 23/08/16	Application to vary the permit to increase the annual operating hours to 8,760 hours per annum with a corresponding increase of the maximum throughput of the plant to 560,000 tonnes per annum.

Status log of the permit		
Description	Date	Comments
Variation determined EPR/BR4551IC	27/10/16	Variation issued.
Application EPR/BR4551IC/V011	Duly made 09/11/18	Application to remove the half-hourly air emission limit for ammonia.
Variation determined EPR/BR4551IC/V011	16/01/19	Variation notice issued.
Permit review EPR/BR4551IC/V012 Environment Agency initiated variation	19/04/22	Statutory review of permit. BAT Conclusions published 03 December 2019.

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/BR4551IC

Issued to

Kent Enviropower Limited ("the operator")

whose registered office is

3 Sidings Court White Rose Way Doncaster DN4 5NU

company registration number 02894377

to operate a regulated facility at

Allington Incinerator Allington Quarry Laverstoke Road Allington Maidstone Kent ME16 0LE

to the extent set out in the schedules.

The notice shall take effect from 19/04/22

Name	Date
Philip Lamb	19/04/22

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/BR4551IC

This is the consolidated permit referred to in the variation and consolidation notice for application **EPR/BR4551IC/V012** authorising,

Kent Enviropower Limited ("the operator"),

whose registered office is

3 Sidings Court White Rose Way Doncaster DN4 5NU

company registration number 02894377

to operate an installation at

Allington Incinerator Allington Quarry Laverstoke Road Allington Maidstone Kent ME16 0LE

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

Name	Date
Philip Lamb	19/04/22

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.

1.2 Energy efficiency

- 1.2.1 The operator shall:
 - (a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities.
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.
- 1.2.2 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 The operator shall:
 - 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 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 table S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer or holder.
- 2.3.5 Waste paper, metal, plastic or glass that has been separately collected for the purpose of preparing for re-use or recycling shall not be accepted. Waste from the treatment of these separately collected

wastes shall only be accepted if incineration delivers the best environmental outcome in accordance with regulation 12 of the Waste (England and Wales) Regulations 2011.

- 2.3.6 Separately collected fractions other than those listed in condition 2.3.5 shall not be accepted unless they are unsuitable for recovery by recycling.
- 2.3.7 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
 - (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.8 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.
- 2.3.9 Waste shall not be charged if:
 - (a) the combustion chamber temperature is below 850 °C,
 - (b) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded; or
 - (c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than 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) unless otherwise agreed in writing with the Environment Agency, 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 The operator shall record the beginning and end of each period of "abnormal operation".
- 2.3.11 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 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) unless otherwise agreed in writing with the Environment Agency, 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 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 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 Bottom 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.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 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 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S3.4. 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.
- 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

•	Sulphur dioxide	20%
•	Oxides of nitrogen (NO & NO2 expressed as NO2)	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.

3.4 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.

3.5 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) and S3.2;
 - (b) process monitoring specified in table S3.3; and
 - (c) residue quality in table S3.4.
- 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) and S3.2 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.

3.8 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.

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.

4.3 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, 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.
- 4.3.7 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
 - (a) a decision by the Secretary of State not to re-certify the agreement;
 - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
 - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

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	S5.1 A1 (b)	The incineration of non-hazardous waste in a waste incineration plant with a capacity of 3	From receipt of waste to emission of exhaust gas and removal from site of waste arising. Includes pre- treatment of waste prior to incineration.
		tonnes per hour or more.	Waste types and quantities as specified in Table S2.2 of this permit.
	Directly Associated A	Activities	
AR2	Electricity Generation	Generation of electrical power using a steam turbine from energy recovered from the flue gases.	Supply of electricity to the national grid and for use within the installation.
AR3	Emergency electrical generator	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.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/BR4551IC/A001	The response to question B2.3 given in the Application (chapter 2 pages 25-50)	31/01/2002 & 05/2002.
	Management and control: The response to question B2.1 given in the Application. (Chapter 2 pages 14-16)	
	Raw materials (including water): The response to question B2.2 given in the Application. (Chapter 2 pages 16-23)	
	Groundwater protection: The response to question B2.4 given in the Application (Chapter 2 page 50)	
	Waste handling and storage: The response to question B2.5 given in the Application (Chapter 2 pages 50-51)	
	Waste recovery and disposal: The response to question B2.6 given in the Application (Chapter 2 page 52)	

Table S1.2 Operating tec	Table S1.2 Operating techniques		
Description	Parts	Date Received	
	Energy efficiency: The response to question B2.7 given in the Application & Response to question 8 in Schedule 4 Notice dated 18/04/2002		
	Accident prevention and control: The response to question B2.8 given in the Application & response to question 9 in Schedule 4 Notice dated 18/04/2002.		
	Noise and vibration: The response to question B2.9 given in the Application.		
	Monitoring: The response to question B2.10 given in the Application.		
	Decommissioning: The response to question B2.11 given in the Application.		
Response to Schedule 4 Notice dated 18/04/2002	Response to questions 6, 7, 8, 9, 10, 11, 12, 13 and 16.	05/2002	
Application EPR/BR4551IC/V008	Response to section 3 of part C3 of application form. Section 3 "Start up and shut down" and section 4 "Combustion Air" of the "EP Variation Supporting information" document	26/03/2014	
Response to improvement condition IC1	Operating techniques as set out in improvement condition response as approved by the Environment Agency	Date IC1 response was received	

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The operator shall submit a report to the Environment Agency for approval (using the form provided by the Environment Agency) that addresses compliance with each BAT conclusion. The report shall include:	21/06/22
	i. If any BAT conclusion is not relevant explain why	
	ii. Whether and how the installation complies with the standards in set out in each BAT conclusion	
	iii. If the installation does not currently comply with a standard set in a BAT conclusion describe how and when the installation will comply with that standard.	
	iv. If the installation will continue operating in a manner which would not comply with a BAT Conclusion, after 03/12/2023 the operator shall submit to the Environment Agency:	
	 a justification for being allowed to do so 	
	 a description of alternative measures to be adopted that will provide equivalent environmental protection 	

ReferenceRequirementDateIC2The operator shall submit a report to the Environment Agency 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 bAT 4 of the EAT conclusions, be based on historic 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.30/09.IC3The operator shall submit a report to the Environment Agency on whether of the BAT conclusions, be based on historic dioxin emissions monitoring data and have regard to the Environment Agency Dioxins Monitoring Protocol.30/09.IC4The operator shall perform a study to determine the extent to which the operation of the current systems in place at the plant to minimise NOx emissions can be further optimised such that emissions are reduced as far as possible below 180 mg/Nm³ as a daily average, without significantly increasing emissions of other pollutants or having a significant negative effect on plant operation, reliability or bottom ash quality. The study shall be based on the resoults of trials carried out at the installation and shall have regard to the recommendations for test conditions set out in Section 5.4.3 of report titled "Establishing factors that influence NOx reduction at waste incineration plant to levels below the upper end of the BAT-AELs' (dated 14/01/2022), or other methodology agreed in writing with the Environment Agency which shall include but not necessarily be limited to the following:•A brief description of the currently installed measures at the installat	Table S1.3 Improvement programme requirements			
 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 BAT 4 of the BAT conclusions to air are stable. The report shall have regard to BAT 4 of the BAT conclusions, be based on historic merissions monitoring data and 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. IC4 The operator shall perform a study to determine the extent to which the operation of the current systems in place at the plant to minimise NOx emissions can be further optimised such that emissions are reduced as far as possible below 180 mg/Nm³ as a daily average, without significantly increasing emissions of other pollutants or having a significant negative effect on plant operation, reliability or bottom ash quality. The study shall be based on the results of trials carried out at the installation and shall have regard to the recommendations for test conditions set out in Section 5.4.3 of report titled 'Establishing factors that influence NOx reduction at waste incineration plant to levels below the upper end of the BAT-AELs' (dated 14/01/2022), or other methodology agreed in writing with the Environment Agency which shall include but not necessarily be limited to the following: A brief description of the currently installed measures at the installation to minimise NOx emissions, including data and historic data which illustrates the current achievable level of daily NOx emissions. The results of trials conducted to further reduce daily average NOx emissions using currently installed measures, including:				
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. 30/09. IC4 The operator shall perform a study to determine the extent to which the operation of the current systems in place at the plant to minimise NOx emissions can be further optimised such that emissions are reduced as far as possible below 180 mg/Nm³ as a daily average, without significantly increasing emissions of other pollutants or having a significant negative effect on plant operation, reliability or bottom ash quality. The study shall be based on the results of trials carried out at the installation and shall have regard to the recommendations for test conditions set out in Section 5.4.3 of report titled 'Establishing factors that influence NOx reduction at waste incineration plant to levels below the upper end of the BAT-AELs' (dated 14/01/2022), or other methodology agreed in writing with the Environment Agency. A written report of the study shall be submitted to the Environment Agency which shall include but not necessarily be limited to the following: • A brief description of the currently installed measures at the installation to minimise NOx emissions monitoring data and historic data which illustrates the current achievable level of daily NOx emissions. • The results of trials conducted to further reduce daily average NOx emissions using currently installed measures, including: • a description of the parameters that were varied during the trial e.g. ammonia or urea feed rates, physical form of urea	/23			
 The operation shall perform a study to determine the extent to which the operation of the current systems in place at the plant to minimise NOx emissions can be further optimised such that emissions are reduced as far as possible below 180 mg/Nm³ as a daily average, without significantly increasing emissions of other pollutants or having a significant negative effect on plant operation, reliability or bottom ash quality. The study shall be based on the results of trials carried out at the installation and shall have regard to the recommendations for test conditions set out in Section 5.4.3 of report titled 'Establishing factors that influence NOx reduction at waste incineration plant to levels below the upper end of the BAT-AELs' (dated 14/01/2022), or other methodology agreed in writing with the Environment Agency. A written report of the study shall be submitted to the following: A brief description of the currently installed measures at the installation to minimise NOx emissions, including details of how the reagent dosing system responds to emissions monitoring data and historic data which illustrates the current achievable level of daily NOx emissions. The results of trials conducted to further reduce daily average NOx emissions using currently installed measures, including: a description of the parameters that were varied during the trial e.g. ammonia or urea feed rates, physical form of urea 	/23			
 injected, air flows, and the range over which they were varied the levels of NOx achieved and associated levels of ammonia and nitrous oxide emissions and reagent consumption observed effects and predicted long-term impacts on plant operation, reliability and maintenance regime any changes to the composition of the bottom ash and boiler ash and the implications of those changes for the ability to process and use the ash, as well as for the pollution potential of the ash both during processing and its subsequent use as a secondary aggregate any other relevant cross-media effects 	/23			

Table S1.3 Improvement programme requirements							
Reference	Requirement	Date					
	on a permanent basis, including justification and an implementation plan where relevant.						
	 Where the response to IC1 shows that the energy efficiency will be below the bottom of the BAT AEEL range specified in BAT 20 after 02/12/2023 the operator shall carry out an assessment of the opportunities to increase the energy efficiency of the installation. The assessment shall include but not necessarily be limited to: 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. 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 parasitic 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. 	21/04/2023					

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 incineration plant							
Maximum quantity	560,000 tonnes per year						
Waste code	Description						
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use						
19 10	Wastes from shredding of metal-containing wastes						
19 10 01	iron and steel waste						
19 10 02	non-ferrous waste						
19 10 04	fluff-light fraction and dust other than those mentioned in 19 10 03						
19 10 06	other fractions other than those mentioned in 19 01 05						
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 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						
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 38	wood other than that mentioned in 20 01 37						
20 01 39	plastics						

Table S2.2 Permitted waste types and quantities for incineration plant					
Maximum quantity	560,000 tonnes per year				
Waste code	Description				
20 01 40	metals				
20 03	other municipal wastes				
20 03 01	mixed municipal waste				
20 03 02	waste from markets				
20 03 03	street-cleaning residues				

Schedule 3 – Emissions and monitoring

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1, A2 & A3 as shown on Site Plan in	Particulate matter	Incineration exhaust gases	30 mg/m ³	1/2-hr average	Continuous	EN 14181
Schedule 7.	Particulate matter		10 mg/m ³ Until 02/12/2023	daily average	Continuous	EN 14181
			5 mg/m ³ from 03/12/2023			
	Total Organic Carbon (TOC)		10 mg/m ³	97% of all ½ hr averages in a rolling year	Continuous	EN 14181
	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous	EN 14181
	Hydrogen chloride		60 mg/m ³	1/2-hr average	Continuous	EN 14181
	Hydrogen chloride		10 mg/m ³ Until 02/12/2023	daily average	Continuous	EN 14181
			8 mg/m ³ from 03/12/2023	-		
	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in any 24- hour period	Continuous	EN 14181
	Carbon monoxide		50 mg/m ³	daily average	Continuous	EN 14181

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Sulphur dioxide		200 mg/m ³	1/2-hr average	Continuous	EN 14181
	Sulphur dioxide		50 mg/m ³ Until 02/12/2023	daily average	Continuous	EN 14181
			40 mg/m ³ from 03/12/2023			
	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)		200 mg/m ³ Until 02/12/2023	daily average	Continuous	EN 14181
			180 mg/m ³ from 03/12/2023			
	Hydrogen fluoride		2 mg/m ³ until 02/12/2023 1 mg/m ³ from 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	CEN TS 17340 [BS ISO 15713 can be used until 01/03/22]
	Cadmium & thallium and their compounds (total)	-	0.05 mg/m3 until 02/12/2023 0.02 mg/m ³ From 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	BS EN 14385
	Mercury and its compounds		0.05 mg/m ³ until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annual until 02/12/2023	BS EN 13211

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Mercury and its compounds		0.02 mg/m ³ from 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Bi-annually from 03/12/2023	BS EN 13211
			Limit does not apply if continuous monitoring has been specified in writing by the Environment Agency		Not required if continuous monitoring has been specified in writing by the Environment Agency	
	Mercury and its compounds	-	0.02 mg/m ³ from 03/12/2023	Daily average	Continuous from 03/12/2023 Not required unless continuous monitoring has been specified by in writing by the Environment Agency in line with sampling protocol	EN 14181
	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their	_	0.5 mg/m ³ Until 02/12/2023	Average of three consecutive measurements of at	Bi-annually	BS EN 14385
	compounds (total)	0.3 mg/m ³ from 03/12/2023	each			
	Exhaust gas temperature	-	No limit set	-	Continuous	Traceable to national standards

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
	Exhaust gas pressure		No limit set	-	Continuous	Traceable to national standards
	Exhaust gas flow		No limit set	-	Continuous from 01/01/2023	BS EN 16911-2
	Exhaust gas oxygen content		No limit set	-	Continuous	EN 14181
	Ammonia (NH ₃)		10 mg/m ³	Daily average	Continuous	EN 14181
	Nitrous oxide (N ₂ O)		No limit set	- Until 01/01/2023	Bi-annual Until 01/01/2023	EN ISO 21258
	Nitrous oxide (N ₂ O)		No limit set	¹ / ₂ -hr average and daily average from 01/01/2023	Continuous from 01/01/2023	EN 14181
	Carbon dioxide		No limit set	Continuous	Continuous from 01/01/2023	EN 14181
	Dioxins / furans (I-TEQ)	_	0.1 ng/m ³ Until 02/12/2023	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually until 02/12/2023	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (I-TEQ)		0.06 ng/m ³	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually from 03/12/2023	EN 1948 Parts 1, 2 and 3
			or	or	or	or

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
			specified by the peri Environment wee Agency in line sam	value over sampling period of 2 to 4 weeks for long term sampling from 03/12/2023.	long term sampling if specified by the Environment Agency in line with sampling protocol from 03/12/2023	CEN TS 1948-5 if specified by the Environment Agency in line with sampling protocol
	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
				or	or	or
				value over sampling period of 2 to 4 weeks for long term sampling from 03/12/2023.	long term sampling if specified by the Environment Agency in line with sampling protocol from 03/12/2023. No monitoring is required if emissions have been shown to be below 0.01 ng/m ³ as agreed with the Environment Agency.	CEN TS 1948-5 if specified by the Environment Agency in line with sampling protocol
	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

		Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
Polybrominated dibenzo- dioxins and furans		No limit set	periodic over minimum 6 hours, maximum 8 hour period	Bi-annually from 01/01/2023	Method based on procedural requirements of EN 1948
Specific individual poly- cyclic 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.
Carbon monoxide	Emergency electrical generator	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021	Every 1500 hours of operation or once every five years whichever comes first from 01/01/2030	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators Published 16 February 2021 (formerly known as TGN M5)
	dioxins and furans Specific individual poly- cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	dioxins and furans Specific individual poly- cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6. Carbon monoxide Emergency electrical	dioxins and furansNo limit setSpecific individual poly- cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.No limit setCarbon monoxideEmergency electricalNo limit set	dioxins and furansminimum 6 hours, maximum 8 hour periodSpecific individual poly- cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.No limit setperiodic over minimum 6 hours, maximum 8 hour periodCarbon monoxideEmergency electrical generatorNo limit setIn line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16	dioxins and furansminimum 6 hours, maximum 8 hour periodSpecific individual poly- cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.No limit setperiodic over minimum 6 hours, maximum 8 hour periodAnnuallyCarbon monoxideEmergency electrical generatorNo limit setIn line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators'Every 1500 hours of operation or once every five years whichever comes first from 01/01/2030

Table S3.1(a)	Point source emissi	ons to air during	abnormal operation o	f incineration plant – en	nission limits and n	nonitoring requirements
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1, A2 & A3 as shown on Site Plan in Schedule 7.	Particulate matter	Incineration exhaust 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
	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in any 24- hour period	Continuous	EN 14181 or alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor

 Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site

 emission limits and monitoring requirements

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method		
S1 as shown on Site Plan in Schedule 7.	Uncontaminated surface water run-off	No parameters set	No limit set	-	-	-		

Table S3.3 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
As identified in the Application	Wind Speed and Direction	Continuous	Anemometer	
Location close to the Combustion Chamber inner wall or as identified and justified in Application.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
Incineration 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 Residue quality	1				
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Bottom Ash	тос	3%	Quarterly	EN 14899 and either EN 13137 or EN 15936	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'	
Combined boiler ash/Electrostatic Precipitator (ESP) 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'	
Combined boiler ash/Electrostatic Precipitator (ESP) ash	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic,		Before use of a new disposal or recycling route	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	

Table S3.4 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
	Cobalt, Vanadium, Zinc) soluble fractions				
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.		Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
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'	

* 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.

Parameter Emission or monitoring Reporting period Period begins				
	point/reference	riepering period	i ened begine	
Emissions to air Parameters as required by condition 3.6.1	A1, A2 & A3	Quarterly	1 Jan, 1 Apr, 1 Ju and 1 Oct	
TOC Parameters as required by condition 3.6.1	Bottom Ash	Quarterly	1 Jan, 1 Apr, 1 Ju 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 Ju and 1 Oct	
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	Bottom Ash	Before use of a new disposal or recycling route		
Parameters as required by condition 3.6.1				
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	Combined Boiler ash/ Electrostatic Precipitator (ESP) ash	Quarterly	1 Jan, 1 Apr, 1 Ju 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	Combined Boiler ash/ Electrostatic Precipitator (ESP) 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 Ju and 1 Oct	

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	APC Residues	Before use of a new disposal or recycling route	
Parameters as required by condition 3.6.1			

Table S4.2: Annual production/treatment		
Parameter	Units	
Total Municipal Waste Incinerated	tonnes	
Total Commercial Waste Incinerated	tonnes	
Electrical energy produced	kWh	
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 S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Annual Report as required by condition 4.2.2	Annually	-
Electrical energy exported, imported and used at the installation	Annually	kWh / tonne of waste incinerated
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
Combined Boiler ash/ Electrostatic Precipitator (ESP) 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	Annually	kg / tonne of waste incinerated

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Periods of abnormal operation	Annually	No of occasions and cumulative hours for current calendar year for each line.

Table S4.4 Reporting forms			
Media/parameter	Reporting format	Date of form	
Annual report required by condition 4.2.2	Annual performance report template	19/04/22	
Emissions to air until	PMA1-3, HCLA1-3, NHA1-3, SOA1-3, NOXA1-3.	12/01/06	
02/12/2023	TOCA1-3	14/05/15	
	EXTA1-3, COA1-3	18/04/13	
Emissions to air from 03/12/2023	Forms air 1-9 or other forms as agreed in writing by the Environment Agency	19/04/22	
Residue quality	Form residue 1 and 2 or other form as agreed in writing by the Environment Agency	19/04/22	
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	19/04/22	

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.

"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

"bottom ash" means ash that has migrated down the slope of the furnace and is discharged at each side of the bed.

"CEM" Continuous emission monitor

"CEN" means Commité Européen de Normalisation

"bi-annual" means twice per year with at least five months between tests;

"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.

"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.

"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

"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.

"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.

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

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

"Pests" means Birds, Vermin and Insects.

"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.

"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 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 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

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

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

TEF schemes for dioxin-like PCBs				
Congener	WHO-TEF			
	2005	1997/8		
	Humans /	Fish	Birds	
	mammals			
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	

"year" means calendar year ending 31 December.

When the following terms appear in the waste code list in Schedule 2, table 2.2 for that table, they have the meaning given below:

'hazardous substance' means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

'heavy metal' means any compound of antimony, arsenic, cadmium, chromium (VI), copper, lead, mercury, nickel, selenium, tellurium, thallium and tin, as well as these materials in metallic form, as far as these are classified as hazardous substances

'PCBs' means

- polychlorinated biphenyls
- polychlorinated terphenyls
- monomethyl-tetrachlorodiphenyl methane, Monomethyl-dichloro-diphenyl methane, Monomethyldibromo-diphenyl methane
- any mixture containing any of the above mentioned substances in a total of more than 0,005 %by weight

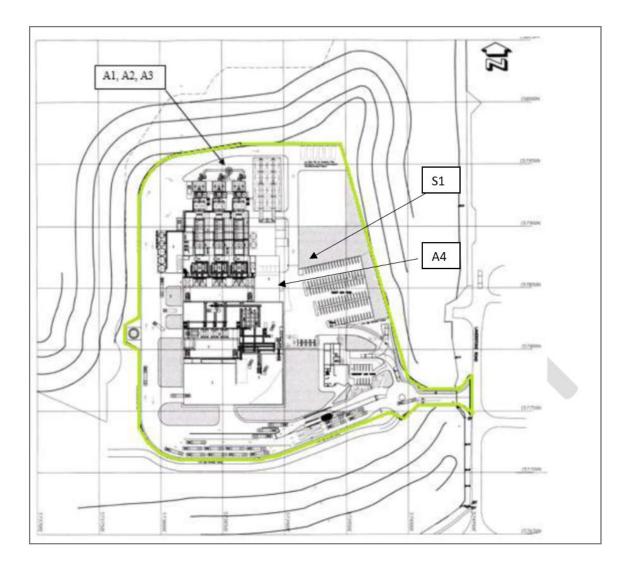
'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified as hazardous substances

'stabilisation' means processes which change the hazardousness of the constituents in the waste and transform hazardous waste into non-hazardous waste

'solidification' means processes which only change the physical state of the waste by using additives without changing the chemical properties of the waste

'partly stabilised wastes' means wastes containing, after the stabilisation process, hazardous constituents which have not been changed completely into non-hazardous constituents and could be released into the environment in the short, middle or long term.

Schedule 7 – Site plan



END OF PERMIT