

Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Waste Recycling Limited

Greatmoor Energy from Waste Facility
Edgcott
Aylesbury
Bucks
HP18 0QN

Permit number

EPR/UP3734HT

Greatmoor Energy from Waste Facility

Permit Number EPR/UP3734HT

Introductory note

This introductory note does not form a part of the permit

This permit controls the operation of an Installation, whose purpose is the disposal of waste with energy recovery in an incineration plant. The relevant listed activity is Section 5.1 Part A(1)(c) – incineration of non-hazardous waste in an incineration plant with a capacity of 1 tonne or more per hour. The permit implements the requirement of the EU Directives, in particular, the Integrated Pollution Prevention and Control and Waste Incineration.

The main features of the permit are as follows:

The installation is designed to dispose of residual municipal waste. The waste will be weighed when entering the site and incoming waste vehicles will discharge into the waste bunker.

Overhead grab crane(s) will be used to mix and break up the incoming materials, to ensure homogeneity of feed. Non-permitted wastes will be removed prior to the waste entering the combustion chambers and removed off-site. Waste will be loaded from the bunker into each combustion chamber via dedicated feed chutes and airlocks, using the grab cranes. The waste bunker is designed to provide up to seven days of waste storage capacity at the normal rate of throughput.

Air for combustion will be drawn from the tipping hall reducing the escape of dust and odours. The reception area will be enclosed, with rapid action access doors to manage traffic and louvered panels to control air movements.

Combustion will take place in two stages, with primary combustion undertaken on a moving mechanical grate to promote the mixing of burning/unburnt wastes. The combustion gas from the primary stage will be incinerated in the secondary combustion chamber to reach the specified minimum temperature of 850 degrees centigrade for a minimum of two seconds. The unburnt material remaining on the grate will be removed as an ash (IBA).

The heat from combustion will be recovered within a waste heat boiler to form high pressure steam, which is used to drive turbines to generate electricity. A proportion of this site generated energy will be used within the facility itself, but the majority will be exported to the National Grid.

The heat recovery boiler incorporates facilities to minimise dust carry-over and for online cleaning through rapping systems and soot blowers to minimise maintenance impacts. Dust collected from the boilers will be discharged as fly ash and collected with the flue gas treatment residues.

The air pollution control system will involve a process called “*Selective Non-Catalytic Reduction*” (SNCR) to control the release of nitrogen oxides (NOx) gases. Acid gases will be treated by a “semi - dry” system using lime injection. Activated carbon which adsorbs dioxins, furans and gaseous mercury is also injected into the gas stream. The exhaust gases will then be filtered through a bag filter, which traps fine particulate matter (dust) including the boiler ash (fly ash), reaction products and excess reagents. The bag filters also thereby remove heavy metals that are adsorbed onto particulate matter. These residues are known collectively as air pollution control (APC) residues. A metering system will deliver the reagents in the right quantity to insure low emissions, low reagent consumption and low residue levels.

The cleaned gases will pass to the atmosphere via the stack. The gases will be subject to extractive continuous sampling and monitoring, using certified Continuous Monitoring Equipment (CEMs). Feedback of monitoring data will allow action to be taken to adjust the process if necessary before emission limits are exceeded.

The principal waste streams the Installation will produce are incinerator bottom ash (IBA), air pollution control residues and recovered ferrous and non-ferrous metals. Air Pollution Control (APC) residues are treated as hazardous waste.

The site is located approximately 2km east of the village of Edgcott, 1.7 km from HM Prisons Grendon Springhill, 14km to the northwest of Aylesbury town centre and 11km south of Buckingham at National Grid Reference SP 703 224. The Listed Lower Greatmoor Farm farmhouse and outbuildings are located to the south of the proposed EfW facility site, and is the nearest residential receptor.

There are no Special Protection Areas (SPAs), Special Area of Conservation (SAC) or RAMSAR sites within a 2km radius of the proposed site. There are three Sites of Special Scientific Interest (SSSI) within 1km of the site; Sheephouse Wood from approximately 300m to the north, Grendon Wood from 750m to the south west and Finemere Wood from 550m to the south east.

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

Detail	Date	Comments
Application EPR/UP3734HT/A001	Duly made 05/06/11	
Issue of Notice seeking further information	16/11/11	
Additional Information Received	12/12/11 and 19/12/11	Response to question 9 sent under separate cover
Issue of Notice seeking further information	24/01/12	
Additional Information Received	01/02/12	
Permit determined	09/05/2012	

End of Introductory Note

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/UP3734HT

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

Waste Recycling Limited ("the operator"),
whose registered office is

Waste Recycling Limited
Ground Floor West
900 Pavilion Drive
Northampton Business Park
Northampton
NN4 7RG

company registration number 02674166
to operate an installation at

Greatmoor Energy from Waste Facility
Edgcott
Aylesbury
Bucks
HP18 0QN

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

Name	Date
Mrs F M Devine	09 May 2012

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 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 recovery and efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.2.2 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 The operator shall review the practicability of Combined Heat and Power (CHP) implementation at least every 2 years. The results shall be reported to the Agency within 2 months of each review.

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where waste disposal is necessary, this is undertaken in a manner which minimised its impact on the environment.
- 1.4.2 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 in condition 2.3.3 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 (a) 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.
- (b) 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, 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.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.3 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; and
 - (c) having been separately collected for recycling, it is contaminated and otherwise destined for landfill.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and

- (e) the waste code of the waste.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.
- 2.3.6 Waste shall not be charged, or shall cease to be charged, if:
 - (a) the combustion chamber temperature is below, or falls 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 under WID abnormal operating conditions ; or
 - (d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under WID abnormal operating conditions.
- 2.3.7 The operator shall have at least one auxiliary burner in each line at start up or shut down or whenever the operating temperature falls below that specified in condition 2.3.6, as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.6 is maintained in the combustion chamber, such burner(s) may 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.
- 2.3.8 The operator shall record the beginning and end of each period of "WID abnormal operation".
- 2.3.9 During a period of "WID abnormal operation", the operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.
- 2.3.10 Where, during "WID abnormal operation", any of the following situations arise, the operator shall, as soon as is practicable, cease the burning of waste until normal operation can be restored:
 - (a) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 due to disturbances or failures of the abatement systems, or continuous emission monitor(s) are out of service, as the case may be, for a total of 4 hours uninterrupted duration;
 - (b) the cumulative duration of "WID abnormal operation" periods over 1 calendar year exceeds 60 hours on an incineration line;
 - (c) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 (a) due to disturbances or failures of the abatement systems.
- 2.3.11 The operator shall interpret the end of the period of "WID abnormal operation" as the earliest of the following:
 - (a) when the failed equipment is repaired and brought back into normal operation;
 - (b) when the operator initiates a shut down of the waste combustion activity, as described in the application or as agreed in writing with the Environment Agency;
 - (c) when a period of four hours has elapsed from the start of the "WID abnormal operation";
 - (d) when, in any calendar year, an aggregated period of 60 hours "WID abnormal operation" has been reached for a given incineration line.
- 2.3.16 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.

2.5 Pre-operational conditions

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

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, except in "WID abnormal operation", when there shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.1(a).
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S 3.3. 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 of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, and S3.1(a);
 - (b) process monitoring specified in table S3.2;
 - (c) residue quality in table S3.3.
- 3.3.2 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.

- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.
- 3.3.4 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), S3.2, and S3.3 unless otherwise agreed in writing by the Environment Agency.
- 3.3.5 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; 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:

• 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%
 - (b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.3.5 (a);
 - (c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period, the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. The number of half-hourly averages so validated shall not exceed 5 per day;
 - (d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average 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.

3.4 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.
- 3.4.3 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;
 - (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;
 - (b) implement the approved noise and vibration management 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 report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
 - (b) the annual production /treatment data set out in schedule 4 table S4.2; and
 - (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
 - (d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Article 12(2) of the Waste Incineration Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the WID.

- 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 The Environment Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit; or
 - (c) any significant adverse environmental effects.
- 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.
- 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 “without delay”, in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
S5.1 A1 (c)	The incineration of non-hazardous waste in an incineration plant with a capacity of 1 tonne per hour or more.	From receipt of waste to emission of exhaust gas and disposal of waste arising.
Directly Associated Activities		
Electricity Generation	Generation of 22MWe electrical power using a steam turbine from energy recovered from the flue gases.	
Back up electrical generator	For providing emergency electrical power to the plant in the event of supply interruption.	

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	Best Available Techniques and operating techniques (all sections) BAT03 Questions in support of EPR 5.01 (all sections) Residue Management Plan (all sections)	Duly Made Date 05/06/11
Response to Schedule 5 Notice dated 12/12/11	Response to questions 3, 4, 5, 6 and 7	12/12/11

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System and the progress made in the accreditation of the system by an external body or if appropriate submit a schedule by which the EMS will be subject to accreditation.	Within 12 months of the date on which waste is first burnt.
IC2	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A1, identifying the fractions within the PM ₁₀ , PM _{2.5} and PM _{1.0} ranges. The proposal shall include a timetable for approval by the Environment Agency to carry out such tests and produce a report on the results. On receipt of written agreement by the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	Within 6 months of the completion of commissioning.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC3	The Operator shall submit a written report to the Environment Agency on the commissioning of the installation. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions.	Within 4 months of the completion of commissioning.
IC4	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency.	Within 4 months of the completion of commissioning.
IC5	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of the Selective Non Catalytic Reduction (SNCR) system and combustion settings to minimise oxides of nitrogen (NO _x) emissions within the emission limit values described in this permit with the minimisation of nitrous oxide emissions. The report shall include an assessment of the level of NO _x and N ₂ O emissions that can be achieved under optimum operating conditions. The report shall also provide details of the optimisation (including dosing rates) for the control of acid gases and dioxins.	Within 4 months of the completion of commissioning.
IC6	The Operator shall carry out an assessment of the impact of emissions to air of the [following] component metals subject to emission limit values, Cd, and Cr. A report on the assessment shall be made to the Environment Agency. Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the Application. An assessment shall be made of the impact of each metal, that exceeds the original assumption, against the relevant EQS/EAL. In the event that the assessment shows that an EQS/EAL can be exceeded, the report shall include proposals for further investigative work.	15 months from commencement of operations
IC7	The Operator shall submit a written summary report to the Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning. Full summary evidence compliance report to be submitted within 18 months of commissioning.
IC8	The operator shall carry out a noise monitoring survey at Lower Great Moor Farm to quantify the noise impact during normal operation against the information supplied in the application and P07. The methodology and monitoring locations will be agreed in writing with the Environment Agency. The result of the survey together with the conclusions and recommendations for any abatement shall be provided to the Environment Agency.	Within 9 months of the completion of commissioning.

Table S1.4 Pre-operational measures	
Reference	Pre-operational measures
PO1	Prior to the commencement of commissioning, the Operator shall send a summary of the site Environment Management System (EMS) to the Environment Agency and make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements set out in Section 1 of How to comply with your environmental permit – Getting the basics right. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit.
PO2	Prior to the commencement of commissioning, the Operator shall send a report to the Environment Agency which will contain a comprehensive review of the options available for utilising the heat generated by the waste incineration process in order to ensure that it is recovered as far as practicable. The review shall detail any identified proposals for improving the recovery and utilisation of waste heat and shall provide a timetable for their implementation.
PO3	Prior to the commencement of commissioning, the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of incinerator bottom ash for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.
PO4	Prior to the commencement of commissioning; the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO5	Prior to the commencement of commissioning, the Operator shall submit a written report to the Agency detailing the waste acceptance procedure to be used at the site. The waste acceptance procedure shall include the process and systems by which wastes unsuitable for incineration at the site will be controlled. The procedure shall be implemented in accordance with the written approval from the Agency.
PO6	After completion of furnace design and at least three calendar months before any furnace operation; the operator shall submit a written report to the Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by the Waste Incineration Directive.
PO7	As part of the final design process the Operator shall assess opportunities to reduce noise emissions. On completion of the final design and prior to commencement of installation of plant and associated buildings , the operator shall submit a revised noise assessment report to the Environment Agency detailing the design options considered (including building dimensions, what the walls and roofs will be made of) and those proposed relating to noise reduction of the new plant and buildings to achieve the levels of protection identified in BS:4142.

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	Maximum total throughput 300,000 tonnes per 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 04	waste plastics (except packaging)
02 01 07	wastes from forestry
02 01 09	agrochemical wastes other than those mentioned in 02 01 08
02 02	Wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 02	animal-tissue waste
02 02 03	materials unsuitable for consumption or processing
02 02 04	sludges from on-site effluent treatment
02 06	Wastes from the baking and confectionary industry
02 06 01	materials unsuitable for consumption or processing
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
04	Wastes from the Leather, Fur and Textile Industries
04 02	Wastes from the textile industry
04 02 09	wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10	organic matter from natural products (e.g. grease, wax)
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
09	Wastes from the Photographic Industry
09 01	Wastes from the photographic industry
09 01 07	photographic film and paper containing silver or silver compounds
09 01 08	photographic film and paper free of silver or silver compounds
15	Waste Packaging, Absorbents, Wiping Cloths, Filter Materials and Protective Clothing Not Otherwise Specified
15 01	Packaging (including separately collected municipal packaging waste)

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	Maximum total throughput 300,000 tonnes per year
Waste code	Description
15	Waste Packaging, Absorbents, Wiping Cloths, Filter Materials and Protective Clothing Not Otherwise Specified
15 01	Packaging (including separately collected municipal packaging waste)
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 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
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
17 06	Insulation materials and asbestos-containing construction materials
17 06 04	insulating materials other than those mentioned in 17 06 01 and 17 06 03
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
18	Wastes From Human or Animal Health Care and/or Related Research (except kitchen wastes not arising from immediate health care)
18 01	Wastes from natal care, diagnosis, treatment or prevention of disease in humans
18 01 04	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 09	medicines other than those mentioned in 18 01 08
18 02	wastes from research, diagnosis, treatment or prevention of disease involving animals
18 02 03	wastes whose collection and disposal is not subject to special requirements in order to prevent infection
18 02 06	chemicals other than those mentioned in 18 02 05
18 02 08	medicines other than those mentioned in 18 02 07
19	Wastes from Waste Management Facilities, Off-Site Waste Water Treatment Plants and the Preparation of Water for Human Consumption and Water for Industrial Use
19 05	Wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable wastes
19 05 03	off-specification compost
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
19 08	Wastes from waste water treatment plants not otherwise specified
19 08 01	screenings
19 08 05	sludges from treatment of urban waste water
19 12	Wastes from the mechanical treatment of waste (e.g. sorting, crushing,

Table S2.2 Permitted waste types and quantities for incineration plant	
Maximum quantity	Maximum total throughput 300,000 tonnes per year
Waste code	Description
	compacting, pelletising) 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 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 fraction (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 38	wood other than that mentioned on 20 01 37
20 01 39	plastics
20 02	Garden and park wastes (including cemetery waste)
20 02 01	biodegradable waste
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 06	waste from sewage cleaning
20 03 07	bulky waste

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Particulate matter		30 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Particulate matter		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Total Organic Carbon (TOC)		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride		60 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Hydrogen chloride		10 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Hydrogen fluoride		2 mg/m ³	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
A1	Carbon monoxide		150 mg/m ³	95% of all 10-minute averages in any 24-hour period	Continuous measurement	BS EN 14181
A1	Carbon monoxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide		200 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Sulphur dioxide		50 mg/m ³	daily average	Continuous measurement	BS EN 14181
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		400 mg/m ³	½-hr average	Continuous measurement	BS EN 14181
A1	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)		200 mg/m ³	daily average	Continuous measurement	BS EN 14181

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Cadmium & thallium and their compounds (total)		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	Mercury and its compounds		0.05 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 13211
A1	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.5 mg/m ³	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
A1	water vapour content Unless gas is dried before analysis of emissions			continuous		BS EN 14181
A1	Ammonia (NH ₃)			½-hr average and / or daily average	Continuous where CEM installed.	BS EN 14181
A1	Nitrous oxide (N ₂ O)			½-hr average and / or daily average	Continuous where CEM installed.	BS EN 14181
A1	Dioxins / furans (I-TEQ)		0.1 ng/m ³	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Humans / Mammals)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Fish)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
A1	Dioxins / furans (WHO-TEQ Birds)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3

Table S3.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Fish)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Dioxin-like PCBs (WHO-TEQ Birds)			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948-4
A1	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.			periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS ISO 11338 Parts 1 and 2.

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

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1	Particulate matter		150 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure
A1	Total Organic Carbon (TOC)		20 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure
A1	Carbon monoxide		100 mg/m ³	½-hr average	Continuous measurement	BS EN 15267-3 during abatement plant failure]

Table S3.2 Process monitoring requirements				
Location 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.	Temperature (° C)	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with the Agency.
A1	Exhaust gas oxygen content	Continuous	BS EN 15267-3 BS EN 14181	
A1	Exhaust gas water vapour content	Continuous	BS EN 15267-3 BS EN 14181	Unless gas is dried before analysis of emissions.

Table S3.3 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	3%	Monthly in the first year of operation. Then Quarterly	Environment Agency ash sampling protocol.	
Bottom Ash	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.		Monthly in the first year of operation. Then Quarterly	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	
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	Sampling and analysis as per Environment Agency ash sampling protocol.	

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

Schedule 4 - Reporting

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

Table S4.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to air Parameters as required by condition 3.5.1	A1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
TOC Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	Bottom Ash	Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC Residues	Quarterly (but monthly for the first year of operation)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1	APC Residues	Before use of a new disposal or recycling route	
Functioning and monitoring of the incineration plant as required by condition 4.2.2		Annually	1 Jan

Table S4.2: Annual production/treatment

Parameter	Units
Total Municipal Waste Incinerated	tonnes
Total Commercial Waste Incinerated	tonnes
Electrical energy produced	KWhrs
Thermal energy produced e.g. steam	KWhrs

Table S4.2: Annual production/treatment

Parameter	Units
Electrical energy exported	KWhrs
Electrical energy used on installation	KWhrs
Waste heat utilised by the installation	KWhrs

Table S4.3 Performance parameters

Parameter	Frequency of assessment	Units
Electrical energy exported, imported and used at the installation	Quarterly	KWhrs / tonne of waste incinerated
Fuel oil consumption	Quarterly	Kgs / tonne of waste incinerated
Mass of Bottom Ash produced	Quarterly	Kgs / tonne of waste incinerated
Mass of APC residues produced	Quarterly	Kgs / tonne of waste incinerated
Mass of Other solid residues produced	Quarterly	Kgs / tonne of waste incinerated
Ammonia consumption	Quarterly	Kgs / tonne of waste incinerated
Activated Carbon consumption	Quarterly	Kgs / tonne of waste incinerated
Lime consumption	Quarterly	Kgs / tonne of waste incinerated
Water consumption	Quarterly	Kgs / tonne of waste incinerated
Periods of WID abnormal operation	Quarterly	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
Air	Form air 1-7 or other form as agreed in writing by the Environment Agency	09/05/12
Residues	Form R1/residues1-2 or other form as agreed in writing by the Environment Agency	09/05/12
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	09/05/12
Other performance indicators	Form WU/RM1 or other form as agreed in writing by the Environment Agency	09/05/12

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	
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 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.

“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.

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

“bottom ash” means ash falling through the grate or transported by the grate

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

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

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

“disposal” means any of the operations provided for in Annex IIA to Directive 2008/98/EC of the Waste Framework Directive.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit..

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

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

“ISO” means International Standards Organisation.

“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.

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

"quarterly" for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

"recovery" means any of the operations provided for in Annex IIB to Directive 2008/98/EC of the Waste Framework Directive.

"shut down" is any period where the plant is being returned to a non-operational state.

"start up" is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the plant[in sufficient quantity to cover the grate and to initiate steady-state conditions as described in the application.

"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 (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

"Waste Incineration Directive" means Directive 2000/76/EC on the incineration of waste (O.J. L 332, 28.12.2000)

"WFD" means Waste Framework Directive (Directive 2008/98/EC of the European Parliament and Council).

"WID abnormal operation" means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the concentrations in the discharges into air and the purified waste water of the regulated substances may exceed the normal emission limit values.

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

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

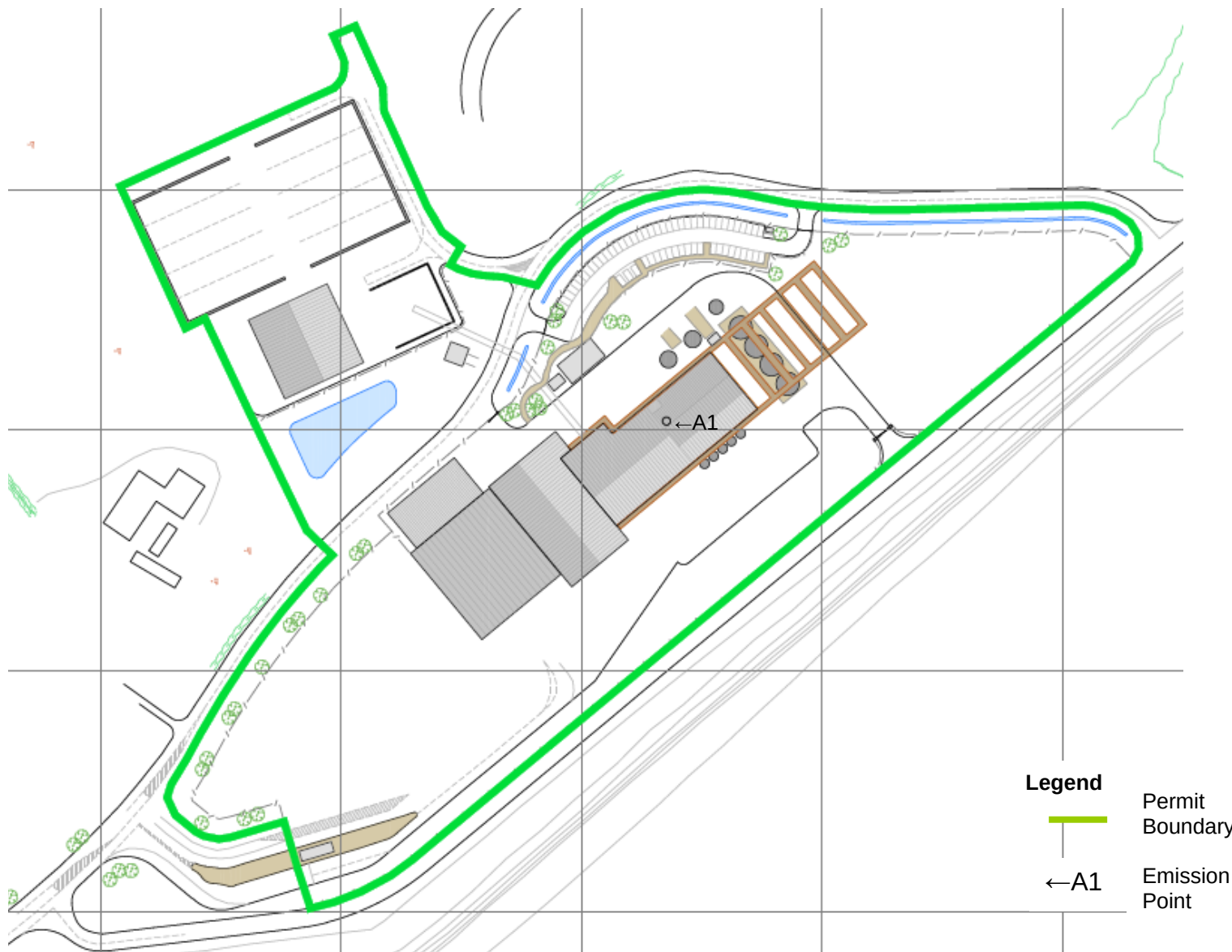
TEF schemes for dioxins and furans				
Congener	I-TEF	WHO-TEF		
	1990	2005	1997/8	
		Humans / Mammals	Fish	Birds
Dioxins				
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	0.5	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	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 plans



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