

1

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Southmoor Energy Centre Limited

Southmoor Energy Centre Kellingley Regeneration Scheme Turvers Lane Knottingley WF11 8DT

Variation application number

EPR/FP3437QL/V002

Permit number

EPR/FP3437QL

# Southmoor Energy Centre Permit number EPR/FP3437QL

# 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.

Furnace technology	Moving Grate
Number of lines	1
Principal waste type	Municipal /commercial & industrial
Stack height	80 m
Permitted plant capacity	350,000 tonnes per year
Electrical generation capacity	32.4MWe
Heat export capacity	6MWth

#### Brief description of the process

This permit controls the operation of a waste incineration plant. The relevant listed activity is 5.1A(1)(b). The permit implements the requirements of the EU Directives on Industrial Emissions and Waste.

The main features of the permit are as follows:

The site is located within land that is part of the Kellingley regeneration scheme, 2.5 km away from the town of Knottingley. It is bordered to the south west by the Aire and Calder Navigation and to the north west by a

lagoon. A railway siding is close to the north of the installation. The centre of the site is located approximately at national grid reference SE 52240 23399. The nearest residential receptors are Calder Grange Farm (~200 m away) and houses on Turvers Lane (~200 m away). Air quality management areas (AQMAs) have been declared for NO2, the nearest of which is the M62 AQMA to the south west of the Installation (~250 m away at its closest point). There are no European Habitat sites within 10 km and no Sites of Special Scientific Interest within 2 km. There are five local wildlife sites within 2 km.

The installation will receive up to 350,000 tonnes per year of waste in enclosed road vehicles and tipped into a waste bunker inside a reception hall. A grab crane will be used to transfer waste to feed hoppers which will feed the moving grate furnace where the waste will be burned. Emissions to air will be via an 80 m high stack and will be minimised by cleaning the waste combustion gases as follows:

Oxides of nitrogen (NOx) will be abated using Selective Non-Catalytic Reduction (SNCR) • Acid Gases will be abatement using a dry lime abatement system • Dioxins, mercury and volatiles abated using activated carbon injection • Particulate matter and metals abated by bag filters. Hot gases from the incineration of waste will pass through a boiler to generate steam.

The boilers will be designed to ensure that the flue gas temperature is rapidly reduced to avoid dioxin reformation. The steam will be used to drive a steam turbine where electricity will be generated. Mains water will be treated in a demineralisation plant for supply to the boiler with the produced steam being condensed in an air cooled condenser for return to the boiler. Process water, including boiler blow down, will be used in the bottom ash quench. Any excess process water will be transferred off-site using tankers.

Burn-out of the waste will be optimised. However there will be some unburned material (incinerator bottom ash or IBA). The IBA will be quenched in water and stored on site in a building before being removed for treatment at an off-site facility. Air pollution control (APC) residues will be stored in silos prior to removal from site in sealed tankers

There will be no discharges to sewer from the installation.

Surface water run-off will drain to an on-site lagoon before discharge to Beal Drain. . Surface water run-off from vehicle movement areas will discharge via an interceptor to the on-site lagoon before discharge to Beal Drain.

The installation will be designed to generate electricity at a rate of approximately 32.4 MWe with approximately 28.4 MWe supplied to the grid. The facility will have the capability to alternatively provide up to 6 MWth of heat should a Combined Heat and Power (CHP) scheme become viable.

The operator will have an environmental management system and intends to have it certified to ISO 14001.

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

Status log of the permit	Status log of the permit		
Description	Date	Comments	
Application received	Duly made 11/06/19		
Response to schedule 5 notice issued on 11/07/19	Response received on 14/08/19		
Permit determined (EPR/FP3437QL/A001)	04/10/19		
Regulation 61 notice issued	18/11/2022	Regulation 61 Notice requiring information for Statutory review of permit. BAT Conclusions published 03 December 2019.	

Status log of the permit		
Description	Date	Comments
Regulation 61 notice response	11/07/2023	
Variation issued EPR/FP3437QL/V002	16/11/2023	

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/FP3437QL

#### Issued to

**Southmoor Energy Centre Limited** ("the operator")

whose registered office is

Unit 2 & 3 Whiteside Business Park Station Road Holmes Chapel Crewe CW4 8AA

company registration number 11725119

to operate a regulated facility at

Southmoor Energy Centre Kellingley Regeneration Scheme Turvers Lane Knottingley WF11 8DT

to the extent set out in the schedules.

The notice shall take effect from 16/11/2023

Name	Date	
Anne Lloyd	16/11/2023	

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/FP3437QL

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/FP3437QL/V002 authorising,

Southmoor Energy Centre Limited ("the operator"),

whose registered office is/whose principal office is

Unit 2 & 3 Whiteside Business Park Station Road Holmes Chapel Crewe CW4 8AA

company registration number 11725119

to operate an installation

Southmoor Energy Centre Kellingley Regeneration Scheme Turvers Lane Knottingley WF11 8DT

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

Name	Date
Anne Lloyd	16/11/2023

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:
  - in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
  - (c) referenced in schedule 1, table S1.1 (AR1), from 03/12/2023, in accordance with a written other than normal operating conditions (OTNOC) management plan.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 The operator shall review the written management system at least every 3 years or otherwise as requested by the Environment Agency.
- 1.1.4 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.5 The operator shall comply with the requirements of an approved competence scheme [or other approval issued by the Environment Agency.

### 1.2 Energy efficiency

- 1.2.1 The operator shall:
  - (a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and] energy is used efficiently in the activities.
  - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) take any further appropriate measures identified by a review.
- 1.2.2 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 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:

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

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

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

# 2 Operations

#### 2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the "activities").
- 2.1.2 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(s) S2.2, S2.3 etc]; 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 during abnormal operation; or
  - (c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than during abnormal operation; or
  - (d) continuous emission monitors to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than during abnormal operation; or
  - (e) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than during abnormal operation.
  - (f) continuous emission monitors to demonstrate compliance with the emission limit values for particulates, TOC or CO in schedule 3 are unavailable unless alternative techniques as agreed in writing with the Environment Agency, are used to demonstrate compliance with those emission limit values.
- 2.3.10 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) 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.
- (d) Any other technically unavoidable stoppage, disturbance, or failure of the plant which 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.

# 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

# 3.1Emissions 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
- 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 S 3.4. 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 during abnormal operation.
- 3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1 and S3.1(a); the Continuous Emission Monitors shall be used such that;
  - (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages of the emission limit values:

•	Carbon monoxide	10%
•	Sulphur dioxide	20%
•	Oxides of nitrogen (NO & NO <sub>2</sub> expressed as NO <sub>2</sub> )	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.
- 3.4.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

#### 3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to
- 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
- (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), 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.
- 3.7.2 The operator shall:
  - (a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;
  - (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

# 3.8 Fire prevention

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

#### 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.
- 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" "without delay"], 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	From receipt of waste to emission of exhaust gas and removal from site of waste arising. Includes treatment of bottom ash Waste types and quantities as specified in Table S2.2 of this permit.	
	Directly Associated A	Activities		
AR2	Electricity Generation	Generation of 32.4MWe electrical power using a steam turbine from energy recovered from the flue gases.		
AR3	Back up 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/FP3437QL/V002	, , , , , , , , , , , , , , , , , , , ,	
Response to Schedule 5 Notice dated DD/MM/YY	Response to questions: 4, 6, 7, 8, 9, 10, 11, 13 (excluding use of by-pass), 14, 15.  Fire Prevention Plan	14/08/19
Response to regulation 61 notice	Operating techniques as set out in the response to the regulation 61 notice.	11/07/23

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date

IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System (EMS) and the progress made in the certification of the system by an external body or if appropriate submit a schedule by which the EMS will be certified.	Within 12 months of the completion of commissioning.
IC2	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A1, identifying the fractions within the $PM_{10}$ , and $PM_{2.5}$ ranges. On receipt of written approval from the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	Within 6 months of the completion of commissioning.
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 and confirm that the Environmental Management System (EMS) has been updated accordingly.	Within 4 months of the completion of commissioning.
IC4	The operator shall notify the Environment Agency of the proposed date(s) that validation testing is planned for.	Notification at least 3 weeks prior to validation testing
	During commissioning the operator shall carry out validation testing to validate the residence time, minimum temperature and oxygen content of the gases in the furnace whilst operating under normal load and most unfavourable operating conditions. The validation shall be to the methodology as approved through preoperational condition PO8.	Validation tests completed before the end of commissioning
	The operator shall submit a written report to the Environment Agency on the validation of residence time, oxygen and temperature whilst operating under normal load, minimum turn down and overload conditions.  The report shall identify the process controls used to ensure residence time and temperature requirements are complied with during operation of the incineration plant	Report submitted within 2 months of the completion of commissioning.
IC5	<ul> <li>The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of:         <ul> <li>The Selective Non Catalytic Reduction (SNCR) system and combustion settings to minimise oxides of nitrogen (NOx). The report shall include an assessment of the level of NOx, N<sub>2</sub>O and NH<sub>3</sub> emissions that can be achieved under optimum operating conditions.</li> <li>The lime injection system for minimisation of acid gas emissions</li> <li>The carbon injection system for minimisation of dioxin and heavy metal emissions.</li> </ul> </li> </ul>	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 metals subject to emission limit values:  • As  • 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 against the relevant Environmental Standard (ES). In the event that the assessment shows that an ES can be exceeded, the report shall include proposals for further investigative work.	15 months from the completion of commissioning
IC7	The Operator shall submit a written summary report to the Environment Agency to confirm 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. The report shall include the results of calibration and verification testing,	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 completion of commissioning.
IC8	During commissioning, the operator shall carry out tests to demonstrate whether the furnace combustion air will ensure that negative pressure is achieved throughout the reception hall. The tests shall demonstrate whether air is pulled through the reception hall and bunker area and into the furnace with dead spots minimised. The operator shall also carry out tests of methods used to maintain negative pressure during shut-down periods to ensure that adequate extraction will be achieved. The operator shall submit a report to the Environment Agency, for approval, summarising the findings along with any proposed improvements if required	Within 3 months of completion of commissioning.
IC9	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, including details of how the reagent dosing system responds to emissions monitoring data and	6 months from issue of variation notice

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 injected, air flows, and the range over which they were varied o 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 The report shall also include a description of the extent to which current systems in place at the plant to minimise NOx emissions can be optimised on a permanent basis, including justification and an implementation plan where relevant.

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC10	The 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 the Environment Agency Mercury Monitoring Protocol.	30/10/23
IC11	The operator shall submit a report to the Environment Agency on whether dioxin emissions to air are stable. The report shall have regard to BAT 4 of the BAT conclusions, be based on historic dioxin emissions monitoring data and have regard to the Environment Agency Dioxins Monitoring Protocol.	30/10/23
IC12	[The operator shall calculate the gross electrical efficiency using the method set out in the general considerations section of the BAT conclusions and submit details of the calculation to the Environment Agency.	12 months from issue of variation notice
	Where the calculated gross electrical efficiency is below the range specified in BAT 20 of the BAT conclusions, the operator shall carry out an assessment of the opportunities to increase the energy efficiency of the installation.]	

Reference	Requirement							
	The assessment shall include but not necessarily be limited to:							
	<ul> <li>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.</li> <li>Where relevant, improvements that could be made to the steam system and related components to allow a greater quantity of electricity to be generated per unit of thermal energy in the steam.</li> <li>Improvements in the heat and electrical efficiency of the plant's ancillary systems that could be made in order to reduce the heat and electrical loads of the plant.</li> <li>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.</li> </ul>							
	A written copy of the assessment shall be submitted to the Environment Agency.							
	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:							
	<ul> <li>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.</li> <li>Where relevant, improvements that could be made to the steam system and related components to allow a greater quantity of electricity to be generated per unit of thermal energy in the steam.</li> <li>Improvements in the heat and electrical efficiency of the plant's ancillary systems that could be made in order to reduce the heat and electrical loads of the plant.</li> <li>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.</li> </ul>							
	A written copy of the assessment shall be submitted to the Environment Agency.							

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 obtain the Environment Agency's written approval to it. The Operator shall make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements set out in Environment Agency web guide on developing a management system for environmental permits (found on www.gov.uk). 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, and obtain the Environment Agency's written approval to it, which will contain a comprehensive review of the options available for utilising the heat generated, including operating as CHP or supplying district heating, by the waste incineration process in order to ensure that it is recovered as far as practicable. The review shall detail any identified proposals for improving the recovery and utilisation of heat and shall provide a timetable for their implementation.
PO3	Prior to the commencement of commissioning, the Operator shall submit to the Environment Agency, and obtain the Environment Agency's written approval to it, 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 submit to the Environment Agency, and obtain the Environment Agency's written approval to it, 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, and obtain the Environment Agency's written approval to it, 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	No later than one month after the final design of the furnace and combustion chamber, the operator shall submit a written report to the Environment Agency, and obtain the Environment Agency's written approval to it, of the details of the computational fluid dynamic (CFD) modelling. The report shall explain how the furnace has been designed to comply with the residence time and temperature requirements as defined by Chapter IV and Annex VI of the IED whilst operating under normal load and the most unfavourable operating conditions (including minimum turn down and overload conditions), and that the design includes sufficient monitoring ports to support subsequent validation of these requirements during commissioning.
PO7	At least three months before (or other date agreed in writing with the Environment Agency) the commencement of commissioning, the Operator shall submit a written report to the Environment Agency, and obtain the Environment Agency's written approval to it, specifying arrangements for continuous and periodic monitoring of emissions to air to comply with Environment Agency guidance notes M1, M2 and M20. The report shall include the following:  Plant and equipment details, including accreditation to MCERTS  Methods and standards for sampling and analysis  Details of monitoring locations, access and working platforms

PO8	At least 3 months before the commencement of commissioning (or other date agreed in writing with the Environment Agency) the Operator shall submit, for approval by the Environment Agency, a methodology (having regard to Technical Report P4-100/TR Part 2 Validation of Combustion Conditions) to verify the residence time, minimum temperature and oxygen content of the gases in the furnace whilst operating under normal load, minimum turn down and overload conditions.
PO9	After the detailed design stage and at least 3 months before the commencement of commissioning the operator shall confirm whether ammonia or urea will be used as the reagent for the SNCR system.

# 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	350,000 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 03	plant-tissue waste
02 06	wastes from the baking and confectionery 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 07	mechanically separated rejects from pulping of waste paper and cardboard
03 03 08 04	wastes from sorting of paper and cardboard destined for recycling  Wastes from the leather, fur and textile industries
04 02	wastes from the textile industry
04 02 10	organic matter from natural products (for example grease, wax)
04 02 21	wastes from unprocessed textile fibres
04 02 22	wastes from processed textile fibres
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 which is contaminated and not suitable for recycling
15 01 03	wooden packaging
15 01 05	composite packaging
15 01 06	mixed packaging which is contaminated and not suitable for recycling
15 01 09	textile packaging
17	Construction and demolition wastes (including excavated soil from contaminated sites)

Table S2.2 Permitted	waste types and quantities for incineration plant
Maximum quantity	350,000 tonnes per year
Waste code	Description
17 02	wood, glass and plastic
17 02 01	Wood
19	Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
19 02	wastes from physico/chemical treatments of waste (including dechromatation decyanidation, neutralisation)
19 02 03	premixed wastes composed only of non-hazardous wastes
19 05	wastes from aerobic treatment of solid wastes
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 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 12	wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	paper and cardboard which is contaminated and not suitable for recycling
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 (rejects from materials recovery plants only)
20 01 10	Clothes
20 01 11	Textiles
20 01 38	wood other than that mentioned in 20 01 37 (rejects from materials recovery plants only)
20 01 39	Plastics (rejects from materials recovery plants only)
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 99	municipal wastes not otherwise specified

# Schedule 3 – Emissions and monitoring

Table S3.1 P	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 [As shown on drawing number 2539-007 R2 in the application]	Particulate matter	Incineration exhausts gases	30 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181			
A1 [As shown on	Particulate matter	Incineration exhausts	10 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181			
drawing number 2539-007 R2		gases	yases	gases	gases	5 mg/m <sup>3</sup> from 03/12/2023			
in the application]									
A1 [As shown on drawing number 2539-007 R2	Total Organic Carbon (TOC)	Incineration exhausts gases	20 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181			
in the application]									

Table S3.1 P	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 [As shown on drawing number 2539-007 R2 in the application]	Total Organic Carbon (TOC)	Incineration exhausts gases	10 mg/m <sup>3</sup>	daily average	Continuous	EN 14181		
A1 [As shown on drawing number 2539-007 R2 in the application]	Hydrogen chloride	Incineration exhausts gases	60 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181		
A1 [As shown on drawing number 2539-007 R2 in the application]	Hydrogen chloride	Incineration exhausts gases	10 mg/m <sup>3</sup> Until 02/12/2023 6 mg/m <sup>3</sup> from 03/12/2023	daily average	Continuous	EN 14181		
A1 [As shown on drawing number 2539-007 R2 in the application]	Hydrogen fluoride	Incineration exhausts gases	2 mg/m³ until 02/12/2023 1 mg/m³ from 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Quarterly in first year of operation Then Bi-annually	CEN TS 17340		

Table S3.1 P	oint source emissions to a	ur – emission	limits and monitor	ing requirements.			
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)	
A1 [As shown on drawing number 2539-007 R2	Carbon monoxide	Incineration exhausts gases	100 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181	
in the application]							
A1 [As shown on drawing number 2539-007 R2	Carbon monoxide	Incineration exhausts gases	50 mg/m <sup>3</sup>	daily average	Continuous	EN 14181	
in the application]							
A1 [As shown on drawing number 2539-007 R2	Sulphur dioxide	Incineration exhausts gases	200 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181	
in the application]							
A1 [As shown on drawing	Sulphur dioxide Incineration exhausts	50 mg/m <sup>3</sup> Until 02/12/2023	daily average	Continuous	EN 14181		
number 2539-007 R2		gases	30 mg/m <sup>3</sup>	30 mg/m <sup>3</sup> from 03/12/2023			
in the application]							

Emission	Parameter	Source	Limit (including	Reference period	Monitoring frequency	Monitoring standard(s)
point ref. & location			unit)			or method(s)
A1 [As shown on drawing number 2539-007 R2	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	Incineration exhausts gases	400 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
in the application]						
A1 [As shown on drawing number	J \	nd NO₂ expressed as exhausts Until 02/12/2023	Continuous	EN 14181		
2539-007 R2			120 mg/m <sup>3</sup>			
in the application]			from 03/12/2023			
A1 [As shown on	Cadmium & thallium and their compounds (total)	Incineration exhausts	0.05 mg/m <sup>3</sup> until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Quarterly in first year of operation then bi-annually	BS EN 14385
drawing number 2539-007 R2		gases	0.02 mg/m <sup>3</sup> from 03/12/2023			
in the application]						
A1 [As shown on drawing number 2539-007 R2	Mercury and its compounds	Incineration exhausts gases	0.05 mg/m <sup>3</sup> until 02/12/2023	Average of three consecutive measurements of at least 30 minutes each	Quarterly in first year then Biannually until 02/12/2023	BS EN 13211
n the application]						

	oint source emissions to a					
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 [As shown on drawing number 2539-007 R2	Mercury and its compounds	Incineration exhausts gases	0.01 mg/m <sup>3</sup> from 03/12/2023	Average of three consecutive measurements of at least 30 minutes each	Quarterly in first year of operation then bi-annually from 03/12/2023	BS EN 13211
in the application]			Limit does not apply if continuous monitoring has been specified by the Environment Agency		Not required if continuous monitoring has been specified by the Environment Agency	
A1 [As shown on drawing	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	Incineration exhausts	0.5 mg/m <sup>3</sup> Until 02/12/2023	Average of three consecutive measurements of at	Quarterly in first year of operation then bi-annually	BS EN 14385
number 2539-007 R2	compounds (total)	gases	0.3 mg/m <sup>3</sup> from 03/12/2023	least 30 minutes each		
in the application]						
A1 [As shown on drawing number 2539-007 R2	Exhaust gas temperature	Incineration exhausts gases	No limit set	-	Continuous	Traceable to national standards
in the application]						

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 [As shown on drawing number 2539-007 R2	Exhaust gas pressure		No limit set	-	Continuous	Traceable to national standards
in the application]						
A1 [As shown on drawing number 2539-007 R2	Exhaust gas flow		No limit set	-	Continuous	BS EN 16911-2
in the application]						
A1 [As shown on drawing number 2539-007 R2	Exhaust gas oxygen content		No limit set	-	Continuous	EN 14181
in the application]						
A1 [As shown on drawing number 2539-007 R2	Exhaust gas water vapour content		No limit set	-	Continuous	EN 14181
in the application]						

Table S3.1 P	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 [As shown on drawing number 2539-007 R2	Ammonia (NH₃)	Incineration exhausts gases	10 mg/m <sup>3</sup> from 03/12/2023	daily average	Continuous from 03/12/2023	EN 14181
in the application]						
A1 [As shown on drawing number 2539-007 R2	Nitrous oxide (N <sub>2</sub> O)	Incineration exhausts gases	No limit set	1/2-hr average and daily average	Continuous	EN ISO 21258
in the application]						
A1 [As shown on drawing number 2539-007 R2	Carbon dioxide	Incineration exhausts gases	No limit set	Continuous	Continuous	EN 14181
in the application]						
A1 [As shown on drawing number 2539-007 R2	Dioxins / furans (I-TEQ)	Incineration exhausts gases	0.1 ng/m <sup>3</sup> Until 02/12/2023	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year of operation then bi-annually until 02/12/2023	BS EN 1948 Parts 1, 2 and 3
in the application]						

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 [As shown on drawing number 2539-007 R2	Dioxins / furans (I-TEQ)	Incineration exhausts gases	0.04 ng/m <sup>3</sup> from 03/12/2023	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year of operation then bi-annually from 03/12/2023	EN 1948 Parts 1, 2 and 3
in the application]			and	and		and
			0.06 ng/m³ if long term limit is specified by the Environment Agency in line with sampling protocol from 03/12/2023	value over sampling period of 2 to 4 weeks for long term sampling	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
A1 [As shown on drawing number 2539-007 R2 in the application]	Dioxin-like PCBs (WHO- TEQ Humans / Mammals, Fish, Birds)	Incineration exhausts gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year of operation then bi-annually	EN 1948 Parts 1, 2 and 4

Table 53.1 P	oint source emissions to a	ur – emission	ilmits and monitor	ing requirements.	<del>_</del>	<b>,</b>
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A1 [As shown on drawing number 2539-007 R2	Dioxins / furans (WHO-TEQ Humans / Mammals, Fish, Birds)	Incineration exhausts gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year of operation then bi-annually	BS EN 1948 Parts 1, 2 and 3
in the application]						
A1 [As shown on drawing number 2539-007 R2	Polybrominated dibenzo- dioxins and furans	Incineration exhausts gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year of operation then Bi-annually	Method based on procedural requirements of EN 1948
in the application]						
A1 [As shown on drawing number 2539-007 R2	Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	Incineration exhausts gases	No limit set	periodic over minimum 6 hours, maximum 8 hour period	Annually	BS ISO 11338 Parts 1 and 2.
in the application]						

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard(s) or method(s)
A2(As shown on the site plan approved through the pre operational condition PO11)	Carbon monoxide	Back-up electrical generator	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 16 February 2021 (formerly known as TGN M5)	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)

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1(As shown on drawing number 2539- 007 in Application	Particulate matter	Incineration exhausts gases	150 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
A1(As shown on drawing number 2539- 007 in Application	Total Organic Carbon (TOC)	Incineration exhausts gases	20 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181
A1(As shown on drawing number 2539- 007 in Application	Carbon monoxide	Incineration exhausts gases	100 mg/m <sup>3</sup>	½-hr average	Continuous	EN 14181

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and	
monitoring requirements	

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method	
W1 [Emission to Beal Drain as shown on drawing number 2539- 007 R2 in the application]	Uncontaminated surface water run off	No parameters set	No limit set	-	-	-	

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Table S3.3 Process monito	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 first operation and then 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					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
Bottom Ash	TOC or otherwise as agreed in writing with the Environment Agency	3%	Monthly in the first year of operation then Quarterly	EN 14899 and either EN 13137 or EN 15936  or otherwise as agreed in writing with the Environment Agency	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'
Bottom Ash	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.		Monthly in the first year of operation then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
Bottom Ash	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions		Before use of a new disposal or recycling route	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
APC Residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.		Monthly in the first year of operation then Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	

Table S3.4 Residue quality					
Emission point reference or source or description of point of measurement	Parameter	Limit	Monitoring frequency	Monitoring standard or method *	Other specifications
APC Residues	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions		Before use of a new disposal or recycling route	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	

<sup>\*</sup> Or other equivalent standard as agreed in writing with the Environment Agency.

## Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data				
Parameter	Emission or monitoring point/reference	Reporting period	Period begins	
Emissions to air Parameters as required by condition 3.6.1.	A1	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct	
Emissions to water Parameters as required by condition 3.6.1	W1	Annually	1 Jan	
TOC or LOI or otherwise as agreed in writing with the Environment Agency Parameters as required by condition 3.6.1	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 3.6.1	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 3.6.1	Bottom Ash	Before use of a new disposal or recycling route		
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.6.1	APC Residues	Quarterly (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 3.6.1	APC Residues	Before use of a new disposal or recycling route		

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		
[Other solid residues]	Annually	Route, tonnes and tonnes / tonne of waste incinerated		
[Ammonia / Urea] consumption	Annually	kg / tonne of waste incinerated		
Activated Carbon consumption	Annually	kg / tonne of waste incinerated		
[Lime / Sodium Bicarbonate] consumption	Annually	kg / tonne of waste incinerated		
Water consumption	Annually	kg / tonne of waste incinerated		
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	16/10/2023		
Emissions to air until 02/12/2023	Forms air 1-8 or other forms as agreed in writing by the Environment Agency	16/10/2023		

Table S4.4 Reporting forms				
Media/parameter	Reporting format	Date of form		
Emissions to air from 03/12/2023	Forms air 1-9 or other forms as agreed in writing by the Environment Agency	16/10/2023		
Water and Land	Form water 1 or other form as agreed in writing by the Environment Agency	16/10/2023		
Residue quality	Form residue 1 and 2 or other form as agreed in writing by the Environment Agency	16/10/2023		

### 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	
	any malfunction, breakdown or failure of equipment or techniques, ince not controlled by an emission limit which has caused, is 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	he breach of a lim	nit	
To be notified within 24 hours of	detection unless of	otherwise specified bel	ow
Measures taken, or intended to be taken, to stop the emission			
Time periods for notification follo	wing detection of	a breach of a limit	
Parameter	<u> </u>		Notification period
L			<u>.</u>
(a) Notification requirements for t	he breech of marri	nit conditions not relate	ed to limits
(c) Notification requirements for to be notified within 24 hours of details.	-	int conditions not relate	eu to minits
Condition breached	CUUII		
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.			
( I) No ((C) - (C)	h - 1-4		
(d) Notification requirements for t		ny significant adverse e	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 submit	ted as soon	n as practicable	9
Any more accurate information on the	no matters for		
Any more accurate information on the notification under Part A.	ie mallers for		

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*	
Doot	

Name*	
Post	
Signature	
Date	

<sup>\*</sup> 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 falling through the grate][transported by the grate

"CEM" Continuous emission monitor

"CEN" means Commité Européen de Normalisation

"bi-annually" 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 or background concentration limit.

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

"Hazardous property" has the meaning in Annex III of the Waste Framework Directive

"Hazardous waste" has the meaning given in the Hazardous Waste (England and Wales) Regulations 2005 (as amended)

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 as agreed in writing with the Environment Agency.

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

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

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

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

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

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

- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content
- (c) in relation to gases from incineration plants other than those burning waste oil, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 11% dry. For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their

respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should be reported as a range based on: all congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum. However the minimum value should be used when assessing compliance with the emission limit value in table S3.1.

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 Humans / mammals	1997/8	1997/8	
		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	

TEF schemes for dioxin-like PCBs			
Congener	WHO-TEF		
	2005	1997/8	
	Humans / mammals	Fish	Birds
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	<0.00005	0.00001

<sup>&</sup>quot;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

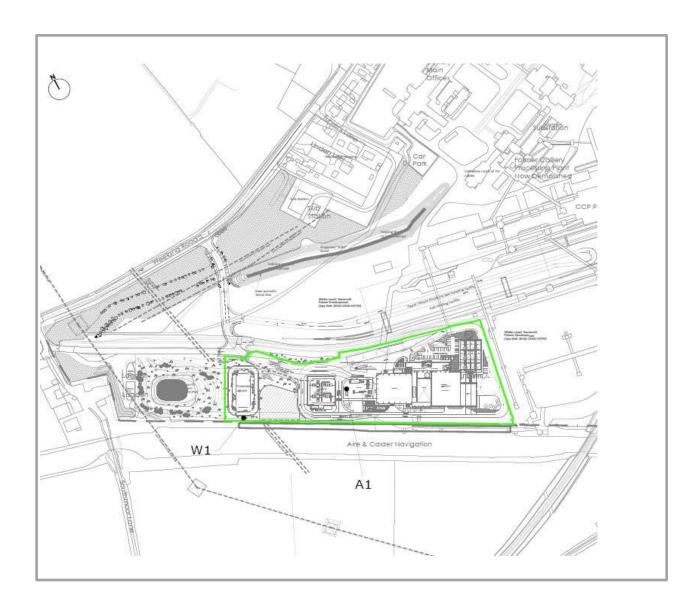
'transition metals' means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified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