



# Notice of variation and consolidation with introductory note

## The Environmental Permitting (England & Wales) Regulations 2016

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BWSC Generation Services UK Ltd  
Templeborough Biomass Power Plant  
River View  
Sheffield Road  
Rotherham  
S60 1FA

### **Variation application number**

EPR/NP3805BY/V003

### **Permit number**

EPR/NP3805BY

# Templeborough Biomass Power Plant

## Permit number EPR/NP3805BY

### Introductory note

#### This introductory note does not form a part of the notice

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

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

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

#### Brief description of the process

This permit controls the operation of a waste co-incineration plant. The relevant listed activity is Section 5.1 A(1)(b): *The incineration of non-hazardous waste in a waste co-incineration plant with a capacity exceeding 3 tonnes per hour*. The permit implements the requirements of the EU Directives on Industrial Emissions and Waste.

The main features of the permit are as follows:

|                                |                         |
|--------------------------------|-------------------------|
| Furnace technology             | Moving Grate            |
| Number of lines                | 1                       |
| Principal waste type           | waste wood              |
| Stack height                   | 60 m                    |
| Permitted plant capacity       | 320,000 tonnes per year |
| Electrical generation capacity | 40.1 MWe                |

The facility consists of a single Solid Biomass Plant which burns waste to produce steam. The waste consists of recycled waste wood. In total, the Plant is designed to burn up to 270,000 tonnes of waste per annum, with a maximum of 320,000 tonnes, depending on the operating hours and the calorific value of the waste. The steam produced is used to generate about 44.1 MWe. The majority of the electricity generated (about 40.1 MWe) is exported to the National Grid with the remainder used to power the Plant.

The following operations are included within the scope of this permit:

- combustion of fuel in a combined heat and power-ready (CHP-R) Plant
- reception, transfer and storage of waste wood;
- steam turbine operation and the generation and export of electrical energy;
- cooling and condensing of the exhaust steam in water cooled condensers;
- storage, pH control and discharge of process effluent; and
- storage and handling of process residues extracted from biomass fuel streams

The main pollutants from the co-incinerator are gaseous combustion products. Emissions from the co-incinerator are controlled to the IED standards. Combustion gases are cleaned before they are emitted via a 60-metre high stack. The abatement techniques used for cleaning the gases are:

- Selective Non-Catalytic Reduction (SNCR) where ammonia is injected into the gas stream to reduce oxides of nitrogen release
- Lime is injected to neutralise acid gases
- Activated carbon injection to remove heavy metals, dioxins and furans
- Fabric filters to remove particulates

Emissions from the stack are monitored in accordance with permit requirements and for process control purposes.

There are emissions to sewer and water in the permit. The discharge consists of boiler and cooling tower blowdown. Effluent is normally re-used but during periods of excess water such as during boiler blow down there is a discharge to sewer with an average daily discharge of approximately 400m<sup>3</sup>

At the time of writing, there are no discharges to water through discharge point W3. This is a local position agreed between the Environment Agency's local enforcement team and the operator due to the fact that the treatment process that is in place on site does not align with that which has been assessed. The operator would need to vary their permit prior to consent being given to use this discharge.

Main waste streams include the boiler and cooling tower blow down to sewer and ash residues from the boiler and flue gas cleaning. Ash is subject to testing to determine physical and chemical properties and pollution potential prior to determining the appropriate use. All wastes are managed in a way which prevents their accidental release and enable recycling as much as practicable.

There is a 1485 KWe Emergency Diesel Generator (EDG) to allow the safe shutdown of the plant in the event of an electrical grid failure present on site.

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

| <b>Status log of the permit</b>           |                         |   |
|---|-------------------------|---|
| <b>Description</b>                        | <b>Date</b>             | <b>Comments</b>                                 |
| Application received<br>EPR/QP3932KK/A001 | Duly made<br>24/08/2010 | Application for a waste co-incinerator facility |
| Schedule 5 notice issued                  | 09/03/2011              | -   |
| Response to Schedule 5 notice received    | 21/03/2011              | -   |
| Permit determined<br>EPR/QP3932KK         | 27/06/2011              | Permit issued to Brite Partnership              |

| <b>Status log of the permit</b>  |                         |  |
|--|-------------------------|--|
| <b>Description</b>   | <b>Date</b>             | <b>Comments</b>  |
| Environment Agency initiated variation EPR/QP3932KK/V002                   | 05/03/2014              | Environment Agency initiated variation to implement the changes introduced by the Industrial Emissions Directive (IED).  |
| Application<br>EPR/GP3433WS/T001<br>(Full transfer of Permit EPR/QP3932KK) | Duly Made<br>07/07/2014 | Application to transfer the permit in full from Brite Partnership to Brite Partnership (North East) Limited.   |
| Transfer determined<br>EPR/GP3433WS  | 18/07/2014              | Full transfer of permit complete.  |
| Application<br>EPR/GP3433WS/V002<br>(Variation and consolidation)          | Duly Made<br>18/08/2014 | Application to vary and update the permit to modern conditions.  |
| Additional information received  | 25/09/2014              | Response to Schedule 5 notice on several aspects of the Application – energy consumption & global warming potential calculations, plant design details, human health risk assessment, nitrogen dioxide abatement system. |
| Additional information received  | 22/10/2014              | Clarification of emission limit values used in the air quality assessment report.  |
| Additional information received  | 06/11/2014              | Confirmation of feedstock and annual throughput for co-incinerator. Confirmation of discharge to sewer of all boiler and cooling towers blow-down.   |
| Additional information received  | 18/11/2014              | Clarification of aspects of the Application including pollutant background data, process contributions and design aspects of the co-incinerator.   |
| Additional information received  | 26/11/2014              | Additional noise impact assessment data.   |
| Additional information received  | 02/12/2014              | Revised site plan.   |
| Variation Determined<br>EPR/GP3433WS/V002                                  | 05/12/2014              | Varied and consolidated permit issued in modern condition format.  |
| Application Variation<br>EPR/GP3433WS/V003                                 | Duly Made<br>09/12/2014 | Application to amend existing site plan to include demineralisation plant.   |
| Variation Determined<br>EPR/GP3433WS/V003                                  | 22/12/2014              | Varied permit issued.  |
| Notified of change of company name.  | 05/08/2015              | Name changed to Templeborough Biomass Power Plant Limited.   |
| Variation issued<br>EPR/GP3433WS/V004                                      | 29/09/2015              | Varied permit issued to Templeborough Biomass Power Plant Limited.   |
| Application Variation<br>EPR/GP3433WS/V005                                 | Duly made<br>29/02/2016 | Application to add a thermal discharge of blowdown water from a cooling tower to the River Don – W3.   |
| Variation determined<br>EPR/GP3433WS/V005                                  | 27/05/2016              | Varied permit issued.  |

| <b>Status log of the permit</b>  |                         |   |
|--|-------------------------|---|
| <b>Description</b>   | <b>Date</b>             | <b>Comments</b>   |
| Application Variation<br>EPR/GP3433WS/V006                                 | Duly made<br>24/02/2017 | Application to vary permit to add waste code 10 01 26 to the permit. Further Agency led amendments made including addition of FPP condition, condition 1.2.2 and 1.2.3, Improvement Condition 11, and Table S3.1(a). Amendment made to relevant conditions to reference Table S3.1(a). Amendment also made to Table S3.1. |
| Variation determined<br>EPR/GP3433WS/V006                                  | 04/05/2017              | Varied permit issued.   |
| Application Variation<br>EPR/GP3433WS/V007                                 | Duly made<br>15/04/2019 | Application to vary the permit to increase water discharge daily volume and add a backup generator.   |
| Schedule 5 notice issued   | 07/05/2019              | -   |
| Response to Schedule 5 notice received                                     | 04/09/2019              | Clarification on the bromine concentration in the effluent and controls for chlorine/chloride discharge to surface water.   |
| Variation determined<br>EPR/GP3433WS/V007                                  | 30/09/2019              | Varied permit issued.   |
| Application EPR/NP3805BY/T001<br>(full transfer of permit<br>EPR/GP3433WS) | Duly made<br>26/11/2019 | Application to transfer the permit in full to Babcock & Wilcox Vølund Limited   |
| Transfer determined<br>EPR/NP3805BY  | 30/01/2020              | Full transfer of permit complete.   |
| Application EPR/NP3805BY/T002<br>(full transfer of permit<br>EPR/NP3805BY) | Duly made<br>25/02/2023 | Application to transfer the permit in full to BWSC Generation Services UK Ltd   |
| Transfer determined<br>EPR/NP3805BY  | 09/03/2023              | Full transfer of permit complete  |
| Regulation 61 notice issued  | 05/04/2022              | Regulation 61 Notice requiring information for Statutory review of permit. BAT Conclusions published 03 December 2019.  |
| Regulation 61 notice response  | 05/12/2022              |   |
| Variation issued<br>EPR/NP3805BY/V003                                      | 24/11/2023              |   |

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/NP3805BY**

**Issued to**

**BWSC Generation Services UK Ltd** (“the operator”)

whose registered office is

**3 The Point  
Lions Way  
Sleaford  
Lincolnshire  
NG34 8GG**

company registration number 08366245

to operate a regulated facility at

**Templeborough Biomass Power Plant  
River View  
Sheffield Road  
Rotherham  
S60 1FA**

to the extent set out in the schedules.

The notice shall take effect from 24/11/2023

| Name          | Date       |
|---------------|------------|
| Sandra Cavill | 27/11/2023 |

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/NP3805BY**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/NP3805BY/V003 authorising,

**BWSC Generation Services UK Ltd** (“the operator”),

whose principal office is

**3 The Point**

**Lions Way**

**Sleaford**

**Lincolnshire**

**NG34 8GG**

company registration number 08366245

to operate an installation at

**Templeborough Biomass Power Plant**

**River View**

**Sheffield Road**

**Rotherham**

**S60 1FA**

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

| Name          | Date       |
|---------------|------------|
| Sandra Cavill | 27/11/2023 |

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

### 1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities.
  - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) take any further appropriate measures identified by a review.
- 1.2.2 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:
- (a) new plans for significant developments within 15 km of the installation;
  - (b) changes to the Local Plan;
  - (c) changes to the UK CHP Development Map or similar; and
  - (d) new financial or fiscal incentives for CHP.

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

### 1.3 Efficient use of raw materials

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

### **2.2 The site**

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

### **2.3 Operating techniques**

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

- 2.3.5 Waste paper, metal, plastic or glass that has been separately collected for the purpose of preparing for re-use or recycling shall not be accepted. Waste from the treatment of these separately collected wastes shall only be accepted if incineration delivers the best environmental outcome in accordance with regulation 12 of the Waste (England and Wales) Regulations 2011.
- 2.3.6 Separately collected fractions other than those listed in condition 2.3.5 shall not be accepted unless they are unsuitable for recovery by recycling.
- 2.3.7 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
  - (b) the composition of the waste;
  - (c) the handling requirements of the waste;
  - (d) the hazardous property associated with the waste, if applicable; and
  - (e) the waste code of the waste.
- 2.3.8 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.
- 2.3.9 The operator shall burn only those hazardous wastes where the throughputs, calorific values and pollutant compositions are within the ranges specified in table S2.2 of schedule 2, unless otherwise agreed in writing with the Environment Agency.
- 2.3.10 The operator shall ensure that prior to accepting waste subject to condition 2.3.9 at the site, it has obtained sufficient information about the hazardous wastes to be burned to demonstrate compliance with the characteristics described in condition 2.3.9.
- 2.3.11 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.
- 2.3.12 The operator shall record the beginning and end of each period of “abnormal operation”.
- 2.3.13 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.
- 2.3.14 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 could lead to an exceedance of an emission limit value in table S3.1.

2.3.15 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;

2.3.16 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 2.3.11 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.

2.3.17 Bottom ash and APC residues shall not be mixed.

## **2.4 Improvement programme**

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

## **3 Emissions and monitoring**

### **3.1 Emissions to water, air or land**

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

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

3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S 3.5. Additional samples shall be taken and tested and appropriate action taken, whenever:

- (a) disposal or recovery routes change; or
- (b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.

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

3.2.1 The limits for emissions to air apply as follows:

- (a) The limits in table S3.1 shall not be exceeded except during periods of abnormal operation.

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

3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1 and S3.1(a); the Continuous Emission Monitors shall be used such that;

(a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages of the emission limit values:

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

### **3.6 Monitoring**

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1, S3.1(a), S3.2 and S3.3;
  - (b) process monitoring specified in table S3.4;
  - (c) residue quality in table S3.5
- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing

CEMs, shall have MCERTS certification and unless otherwise agreed in writing by the Environment Agency have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges. Newly installed Data handling and acquisition systems (DAHS), or DAHS replacing existing DAHS, shall have MCERTS certification.

- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.1(a), S3.2, S3.3 unless otherwise agreed in writing by the Environment Agency.

### **3.7 Fire prevention**

- 3.7.1 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.
- 3.7.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
  - (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

## **4 Information**

### **4.1 Records**

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

### **4.2 Reporting**

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year using the annual report form specified in schedule 4, table S4.4 or otherwise in a format agreed with the Environment Agency. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2;
- (c) the performance parameters set out in schedule 4 table S4.3
- (d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by Chapter IV of the Industrial Emissions Directive) give an account of the running of the process and the emissions into air and water compared with the emission standards in the IED.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

### 4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately:
  - (i) inform the Environment Agency,
  - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
  - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately:
  - (i) inform the Environment Agency, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this



information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

- 4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

- 4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

- 4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

## 4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

## Schedule 1 – Operations

| <b>Table S1.1 activities</b>          |  |  |   |
|---------------------------------------|--|--|---|
| <b>Activity reference</b>             | <b>Activity listed in Schedule 1 of the EP Regulations</b> | <b>Description of specified activity</b>   | <b>Limits of specified activity</b>   |
| AR1                                   | S5.1 A1 (a)  | The incineration of hazardous waste in a waste co-incineration plant with a capacity of 10 tonnes per day or more.     | From receipt of waste to emission of exhaust gas and removal from site of waste arising. Waste types and quantities as specified in Table S2.2 of this permit. Mixing of premixed hazardous waste with non-hazardous wastes is permitted for the purposes of fuel storage and blending prior to incineration. |
| AR2                                   | S5.1 A1 (b)  | The incineration of non-hazardous waste in a waste co-incineration plant with a capacity of 3 tonnes per hour or more. | From receipt of waste to emission of exhaust gas and removal from site of waste arising.<br>Waste types and quantities as specified in Table S2.2 of this permit.   |
| <b>Directly Associated Activities</b> |  |  |   |
| AR3                                   | Electricity Generation                                     | Generation of 44.1 MWe electrical power using a steam turbine from energy recovered from the flue gases.               | The generation of electricity for export to the grid and for on-site operations.  |
| AR4                                   | Back-up Electrical supply                                  | Standby 1.485 MWe Emergency Diesel Generator   | The generation of electricity in the event of loss of grid supply to safely shutdown the plant only.<br><br>Emergency use to a maximum of 500 hours operation per year.<br><br>Maximum of 50 hours testing per year.  |

| <b>Table S1.2 Operating techniques</b>  |  |                      |
|---|--|----------------------|
| <b>Description</b>                      | <b>Parts</b>   | <b>Date Received</b> |
| Variation Application EPR/GP3433WS/V002 | Supporting Information dated 11 August 2014.   | 18/08/2014           |
| Additional information                  | Response to Schedule 5 notice dated 19/09/14 (questions 3 and 6 detailing plant annual throughput, operating hours and nitrogen dioxide abatement)       | 25/09/2014           |
| Additional information                  | Confirmation of feedstock and annual waste throughput for co-incinerator. Confirmation of discharge to sewer of all boiler and cooling towers blow down. | 06/11/2014           |

| <b>Table S1.2 Operating techniques</b>       |   |                      |
|--|---|----------------------|
| <b>Description</b>                           | <b>Parts</b>  | <b>Date Received</b> |
| Additional information                       | Clarification of aspects of the design aspects of the co-incinerator.                 | 18/11/2014           |
| Additional information                       | Revised site plan.  | 02/12/2014           |
| Response to pre-operational condition PO2    | Waste acceptance procedures agreed and approved in writing by the Environment Agency. | Date of approval     |
| Variation Application EPR/GP3433WS/V005      | Response to Application Part C3   | 29/02/2016           |
| Variation Application EPR/GP3433WS/V007      | Response to Application Part C3   | 15/04/2019           |
| Response to Schedule 5 notice dated 07/05/19 | Operational controls for discharge of chlorine/chloride to surface water              | 04/09/2019           |
| Response to regulation 61 notice             | Operating techniques as set out in the response to the regulation 61 notice.          | 05/12/2022           |

| <b>Table S1.3 Improvement programme requirements</b> |  |             |
|--|--|-------------|
| <b>Reference</b>                                     | <b>Requirement</b>   | <b>Date</b> |
| IC1  | <p>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/Nm<sup>3</sup> 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:</p> <ul style="list-style-type: none"> <li>• A brief description of the currently installed measures at the installation to minimise NOx emissions, including details of how the reagent dosing system responds to emissions monitoring data and historic data which illustrates the current achievable level of daily NOx emissions.</li> <li>• The results of trials conducted to further reduce daily average NOx emissions using currently installed measures, including: <ul style="list-style-type: none"> <li>○ 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</li> </ul> </li> </ul> | 24/05/2024  |

| <b>Table S1.3 Improvement programme requirements</b> |  |             |
|--|--|-------------|
| <b>Reference</b>                                     | <b>Requirement</b>   | <b>Date</b> |
|  | <ul style="list-style-type: none"> <li>○ the levels of NO<sub>x</sub> achieved and associated levels of ammonia and nitrous oxide emissions and reagent consumption</li> <li>○ observed effects and predicted long-term impacts on plant operation, reliability and maintenance regime</li> <li>○ 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</li> <li>○ any other relevant cross-media effects</li> </ul> <p>The report shall also include a description of the extent to which current systems in place at the plant to minimise NO<sub>x</sub> emissions can be optimised on a permanent basis, including justification and an implementation plan where relevant.</p> |             |
| IC2  | 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.  | 19/01/2024  |
| IC3  | 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.   | 19/01/2024  |
| IC4  | The operator shall review site practices relating to the storage of IBA on-site. The intention of this review shall be to identify appropriate changes to site practice and/or infrastructure that would ensure that no surface water that comes into contact with any IBA can flow into any surface water or dirty water drainage system. The findings of this review and the timescales of any implementation shall be submitted in writing to the Environment Agency for their agreement.   | 24/02/2024  |

## Schedule 2 – Waste types, raw materials and fuels

| Raw materials and fuel description | Specification  |
|------------------------------------|--|
| Gas Oil                            | Sulphur content to be in compliance with the Sulphur Content of Liquid Fuels Regulations |

| Maximum quantity | The maximum quantity of all waste types to be co-incinerated at the Solid Biomass Plant shall not exceed 320,000 tonnes per year.  |
|------------------|--|
| Waste code       | Description  |
| <b>02</b>        | <b>Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing</b>  |
| <b>02 01</b>     | <b>wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing</b>   |
| 02 01 07         | wastes from forestry   |
| <b>03</b>        | <b>Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard</b>   |
| <b>03 01</b>     | <b>wastes from wood processing and the production of panels and furniture</b>  |
| 03 01 05         | sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04  |
| <b>03 03</b>     | <b>wastes from pulp, paper and cardboard production and processing</b>   |
| 03 03 01         | waste bark and wood  |
| <b>10</b>        | <b>Wastes from thermal processes</b>   |
| <b>10 01</b>     | <b>wastes from power stations and other combustion plants (except 19)</b>  |
| 10 01 26         | wastes from cooling-water treatment  |
| <b>15</b>        | <b>Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified</b>  |
| <b>15 01</b>     | <b>packaging (including separately collected municipal packaging waste)</b>  |
| 15 01 03         | wooden packaging   |
| <b>17</b>        | <b>Construction and demolition wastes (including excavated soil from contaminated sites)</b>   |
| <b>17 02</b>     | <b>wood, glass and plastic</b>   |
| 17 02 01         | wood   |
| <b>19</b>        | <b>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</b> |
| <b>19 02</b>     | <b>Physico/chemical treatments of waste (including dechromation – decyanidation – neutralisation)</b>  |
| 19 02 04*        | Premixed hazardous and non-hazardous waste wood with a maximum content of 10% hazardous waste wood by mass.<br><br>The following hazardous waste wood types are excluded: ·    |

|              |   |
|--------------|---|
|              | <ul style="list-style-type: none"> <li>• railway sleepers ·</li> <li>• telegraph poles ·</li> <li>• waste wood from hydraulic engineering, such as wood from docks ·</li> <li>• waste wood from industrial applications such as cooling tower timbers,</li> <li>• wood block flooring or moulds ·</li> <li>• waste wood from boats, carriages and trailer beds ·</li> <li>• waste wood treated with creosote</li> </ul> |
| <b>19 05</b> | <b>wastes from aerobic treatment of solid wastes</b>  |
| 19 05 03     | off-specification compost   |
| <b>19 12</b> | <b>wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified</b>   |
| 19 12 07     | wood other than that mentioned in 19 12 06  |
| <b>20</b>    | <b>Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions</b>  |
| <b>20 01</b> | <b>separately collected fractions (except 15 01)</b>  |
| 20 01 38     | wood other than that mentioned in 20 01 37  |

## 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 as shown on the plan in Schedule 7   | Particulate matter         | Solid Biomass Plant | 10 mg/m <sup>3</sup><br>Until 02/12/2023 | daily average   | Continuous           | EN 14181                            |
|   |                            |                     | 5 mg/m <sup>3</sup><br>from 03/12/2023   |   |                      |                                     |
| A1 as shown on the plan in Schedule 7   | Total Organic Carbon (TOC) | Solid Biomass Plant | 10 mg/m <sup>3</sup>                     | daily average   | Continuous           | EN 14181                            |
| A1 as shown on the plan in Schedule 7   | Hydrogen chloride          | Solid Biomass Plant | 10 mg/m <sup>3</sup><br>Until 02/12/2023 | daily average   | Continuous           | EN 14181                            |
|   |                            | Solid Biomass Plant | 8 mg/m <sup>3</sup><br>from 03/12/2023   |   |                      |                                     |
| A1 as shown on the plan in Schedule 7   | Hydrogen fluoride          | Solid Biomass Plant | 2 mg/m <sup>3</sup> until<br>02/12/2023  | Average of three consecutive measurements of at least 30 minutes each | Bi-annually          | CEN TS 17340                        |
|   |                            |                     | 1 mg/m <sup>3</sup> from<br>03/12/2023   |   |                      |                                     |
| A1 as shown on the plan in Schedule 7   | Carbon monoxide            | Solid Biomass Plant | 50 mg/m <sup>3</sup>                     | daily average   | Continuous           | EN 14181                            |
| A1 as shown on the plan   | Sulphur dioxide            |                     | 50 mg/m <sup>3</sup><br>Until 02/12/2023 | daily average   | Continuous           | EN 14181                            |

| <b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements.</b> |   |                     |   |   |                              |  |
|--|---|---------------------|---|---|------------------------------|--|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b>  | <b>Source</b>       | <b>Limit (including unit)</b>               | <b>Reference period</b>   | <b>Monitoring frequency</b>  | <b>Monitoring standard(s) or method(s)</b> |
| in Schedule 7  |   | Solid Biomass Plant | 40 mg/m <sup>3</sup><br>from 03/12/2023     |   |                              |  |
| A1 as shown on the plan in Schedule 7  | Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> ) | Solid Biomass Plant | 180 mg/m <sup>3</sup>                       | daily average   | Continuous                   | EN 14181                                   |
| A1 as shown on the plan in Schedule 7  | Cadmium & thallium and their compounds (total)                            | Solid Biomass Plant | 0.033 until 02/12/2023                      | Average of three consecutive measurements of at least 30 minutes each | Bi-annually                  | BS EN 14385                                |
|  |   |                     | 0.02 mg/m <sup>3</sup><br>from 03/12/2023   |   |                              |  |
| A1 as shown on the plan in Schedule 7  | Mercury and its compounds   | Solid Biomass Plant | 0.033 mg/m <sup>3</sup><br>until 02/12/2023 | Average of three consecutive measurements of at least 30 minutes each | Bi-annually until 02/12/2023 | BS EN 13211                                |



| 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 the plan in Schedule 7   | Mercury and its compounds  | Solid Biomass Plant | 0.02 mg/m <sup>3</sup><br>from 03/12/2023<br><br>Limit does not apply if continuous monitoring has been specified by the Environment Agency | Average of three consecutive measurements of at least 30 minutes each | Bi-annually<br>from 03/12/2023<br><br>Not required if continuous monitoring has been specified by the Environment Agency                            | BS EN 13211                         |
| A1 as shown on the plan in Schedule 7   | Mercury and its compounds  | Solid Biomass Plant | 0.02 mg/m <sup>3</sup><br>from 03/12/2023   | Daily average   | Continuous from 03/12/2023<br>Not required unless continuous monitoring has been specified by the Environment Agency in line with sampling protocol | EN 14181                            |
| A1 as shown on the plan in Schedule 7   | Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total) | Solid Biomass Plant | 0.33 mg/m <sup>3</sup><br>Until 02/12/2023<br>0.3 mg/m <sup>3</sup><br>from 03/12/2023  | Average of three consecutive measurements of at least 30 minutes each | Bi-annually   | BS EN 14385                         |
| A1 as shown on the plan in Schedule 7   | Exhaust gas temperature  | Solid Biomass Plant | No limit set  | -   | Continuous  | Traceable to national standards     |

| <b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements.</b> |                                  |                     |   |                                     |                               |  |
|--|----------------------------------|---------------------|---|-------------------------------------|-------------------------------|--|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b>                 | <b>Source</b>       | <b>Limit (including unit)</b>           | <b>Reference period</b>             | <b>Monitoring frequency</b>   | <b>Monitoring standard(s) or method(s)</b> |
| A1 as shown on the plan in Schedule 7  | Exhaust gas pressure             | Solid Biomass Plant | No limit set                            | -                                   | Continuous                    | Traceable to national standards            |
| A1 as shown on the plan in Schedule 7  | Exhaust gas flow                 | Solid Biomass Plant | No limit set                            | -                                   | Continuous                    | BS EN 16911-2                              |
| A1 as shown on the plan in Schedule 7  | Exhaust gas oxygen content       | Solid Biomass Plant | No limit set                            | -                                   | Continuous                    | EN 14181                                   |
| A1 as shown on the plan in Schedule 7  | Exhaust gas water vapour content | Solid Biomass Plant | No limit set                            | -                                   | Continuous                    | EN 14181                                   |
| A1 as shown on the plan in Schedule 7  | Ammonia (NH <sub>3</sub> )       | Solid Biomass Plant | No limit set<br>Until 02/12/2023        | periodic over minimum 1 hour period | Bi-annual<br>Until 02/12/2023 | EN 14181                                   |
|  |                                  |                     | 15 mg/m <sup>3</sup><br>from 03/12/2023 | daily average                       | Continuous from 03/12/2023    | EN 14181                                   |
| A1 as shown on the plan in Schedule 7  | Nitrous oxide (N <sub>2</sub> O) | Solid Biomass Plant | No limit set                            | ½-hr average and daily average      | Continuous                    | EN 14181                                   |

| <b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements.</b> |  |                     |  |  |  |  |
|--|--|---------------------|--|--|--|--|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b>   | <b>Source</b>       | <b>Limit (including unit)</b>  | <b>Reference period</b>  | <b>Monitoring frequency</b>  | <b>Monitoring standard(s) or method(s)</b>   |
| A1 as shown on the plan in Schedule 7  | Carbon dioxide   | Solid Biomass Plant | No limit set   | Continuous   | Continuous   | EN 14181   |
| A1 as shown on the plan in Schedule 7  | Dioxins / furans (I-TEQ)                                 | Solid Biomass Plant | 0.066 ng/m <sup>3</sup><br>Until 02/12/2023  | periodic over minimum 6 hours, maximum 8 hour period   | Bi-annually until 02/12/2023   | BS EN 1948 Parts 1, 2 and 3  |
| A1 as shown on the plan in Schedule 7  | Dioxins / furans (I-TEQ)                                 | Solid Biomass Plant | 0.06 ng/m <sup>3</sup><br>from 03/12/2023<br><br>and<br><br>0.08 ng/m <sup>3</sup><br>if long term limit is specified by the Environment Agency in line with sampling protocol from 03/12/2023 | periodic over minimum 6 hours, maximum 8 hour period<br><br>and<br><br>value over sampling period of 2 to 4 weeks for long term sampling | Bi-annually from 03/12/2023<br><br>and<br><br>long term sampling if specified by the Environment Agency in line with sampling protocol from 03/12/2023 | EN 1948 Parts 1, 2 and 3<br><br>and<br><br>CEN TS 1948-5 if specified by the Environment Agency in line with sampling protocol |
| A1 as shown on the plan in Schedule 7  | Dioxin-like PCBs (WHO-TEQ Humans / Mammals, Fish, Birds) | Solid Biomass Plant | No limit set   | periodic over minimum 6 hours, maximum 8 hour period   | Bi-annually  | EN 1948 Parts 1, 2 and 4   |

| <b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements.</b> |  |                              |                               |   |   |   |
|--|--|------------------------------|-------------------------------|---|---|---|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b>   | <b>Source</b>                | <b>Limit (including unit)</b> | <b>Reference period</b>   | <b>Monitoring frequency</b>   | <b>Monitoring standard(s) or method(s)</b>  |
| A1 as shown on the plan in Schedule 7  | Dioxins / furans<br>(WHO-TEQ Humans / Mammals, Fish, Birds)                              | Solid Biomass Plant          | No limit set                  | periodic over minimum 6 hours, maximum 8 hour period  | Bi-annually   | BS EN 1948 Parts 1, 2 and 3   |
| A1 as shown on the plan in Schedule 7  | Polybrominated dibenzo-dioxins and furans  | Solid Biomass Plant          | No limit set                  | periodic over minimum 6 hours, maximum 8 hour period  | Bi-annually<br><br>Not required unless wastes containing brominated flame retardants are burned | Method based on procedural requirements of EN 1948  |
| A1 as shown on the plan in Schedule 7  | Specific individual polycyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6. | Solid Biomass Plant          | No limit set                  | periodic over minimum 6 hours, maximum 8 hour period  | Annually  | BS ISO 11338 Parts 1 and 2.   |
| EDG as shown on the Plan in Schedule 7   | 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) |

| <b>Table S3.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements</b> |                            |                             |                               |                         |                             |  |
|--|----------------------------|-----------------------------|-------------------------------|-------------------------|-----------------------------|--|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b>           | <b>Source</b>               | <b>Limit (including unit)</b> | <b>Reference period</b> | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b>   |
| A1 as shown on the plan in Schedule 7  | Particulate matter         | Incineration exhausts gases | 150 mg/m <sup>3</sup>         | ½-hr average            | Continuous                  | EN 14181<br><br>or<br>alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor |
| A1 as shown on the plan in Schedule 7  | Total Organic Carbon (TOC) |                             | 10 mg/m <sup>3</sup>          | ½-hr average            | Continuous                  | EN 14181<br><br>or<br>alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor |
| A1 as shown on the plan in Schedule 7  | Carbon monoxide            |                             | 100 mg/m <sup>3</sup>         | ½-hr average            | Continuous                  | EN 14181<br><br>or<br>alternative surrogate as agreed in writing with the environment agency during failure of the continuous emission monitor |

| <b>Table S3.2 Point source emissions to water (other than sewer) and land – emission limits and monitoring requirements</b> |                                 |   |                           |                         |                             |                                       |
|---|---------------------------------|---|---------------------------|-------------------------|-----------------------------|---------------------------------------|
| <b>Emission point ref. &amp; location</b>   | <b>Parameter</b>                | <b>Source</b>                             | <b>Limit (incl. unit)</b> | <b>Reference Period</b> | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b>  |
| W1 on site plan in schedule 7 emission to River Don   | No parameter set                | Uncontaminated site surface water         | No visible oil or grease  | --                      | Weekly                      |                                       |
| W2 on site plan in schedule 7 emission to River Don   | No parameter set                | Uncontaminated site surface water         | No visible oil or grease  | --                      | Weekly                      |                                       |
| W3 on site plan in schedule 7 emission to River Don   | Total daily volume of discharge | Discharge from closed loop cooling system | 750 m <sup>3</sup> /day   | 24-hour total           | Continuous                  | MCERTS self-monitoring of flow scheme |
| W3 on site plan in schedule 7 emission to River Don   | Temperature                     | Discharge from closed loop cooling system | 31 °C                     | Instantaneous           | Continuous                  | BS EN ISO 10523:2012                  |
| W3 on site plan in schedule 7 emission to River Don   | pH                              | Discharge from closed loop cooling system | 6 - 9                     | Instantaneous           | Continuous                  | BS EN ISO 10523:2012                  |

| <b>Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements</b> |                  |                                    |                           |                         |                             |                                      |
|--|------------------|------------------------------------|---------------------------|-------------------------|-----------------------------|--------------------------------------|
| <b>Emission point ref. &amp; location</b>  | <b>Parameter</b> | <b>Source</b>                      | <b>Limit (incl. Unit)</b> | <b>Reference period</b> | <b>Monitoring frequency</b> | <b>Monitoring standard or method</b> |
| S1   | No parameter set | Boiler and Cooling Tower Blow Down | -                         | -                       | -                           | --                                   |

| <b>Table S3.4 Process monitoring requirements</b>  |                             |  |  |                                       |
|--|-----------------------------|--|--|---------------------------------------|
| <b>Emission point reference or source or description of point of measurement</b>                   | <b>Parameter</b>            | <b>Monitoring frequency</b>  | <b>Monitoring standard or method</b>   | <b>Other specifications</b>           |
| As identified in the Application   | Wind Speed and Direction    | Continuous   | Anemometer   |                                       |
| Location close to the Combustion Chamber inner wall or as identified and justified in Application. | Temperature (° C)           | Continuous   | Traceable to national standards  | As agreed in writing with the Agency. |
| Incineration plant   | Gross electrical efficiency | within 6 months of any modification that significantly affects energy efficiency | Performance test at full load or other method as agreed in writing with the Environment Agency |                                       |

| <b>Table S3.5 Residue quality</b>  |   |   |   |  |  |
|--|---|---|---|--|--|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>  | <b>Limit</b>  | <b>Monitoring frequency</b>                     | <b>Monitoring standard or method *</b>   | <b>Other specifications</b>  |
| Bottom Ash   | LOI<br><br>or otherwise as agreed in writing with the Environment Agency  | 5%<br><br>or otherwise as agreed in writing with the Environment Agency | Quarterly                                       | EN 14899 and either EN 15169 or EN 15935 <i>f</i><br><br>or otherwise as agreed in writing with the Environment Agency | Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis' |
| Bottom Ash   | Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs. |   | Quarterly                                       | Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'                                       |  |
| Bottom Ash   | Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions              |   | Before use of a new disposal or recycling route | Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'                                       |  |
| APC Residues   | Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs. |   | Quarterly                                       | Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'                                       |  |



| <b>Table S3.5 Residue quality</b>  |  |              |   |  |                             |
|--|--|--------------|---|--|-----------------------------|
| <b>Emission point reference or source or description of point of measurement</b> | <b>Parameter</b>   | <b>Limit</b> | <b>Monitoring frequency</b>                     | <b>Monitoring standard or method *</b>   | <b>Other specifications</b> |
| APC Residues   | Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions |              | Before use of a new disposal or recycling route | Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis' |                             |

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

## Schedule 4 – Reporting

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

| <b>Table S4.1 Reporting of monitoring data</b>  |   |   |                               |
|---|---|---|-------------------------------|
| <b>Parameter</b>  | <b>Emission or monitoring point/reference</b> | <b>Reporting period</b>                         | <b>Period begins</b>          |
| Emissions to air<br>Parameters as required by condition 3.6.1.  | A1  | Quarterly                                       | 1 Jan, 1 Apr, 1 Jul and 1 Oct |
| Emissions to water<br>Parameters as required by condition 3.5.1   | W3  | Annually  | 1 Jan                         |
| TOC or LOI<br>or otherwise as agreed in writing with the Environment Agency<br>Parameters as required by condition 3.6.1  | Bottom Ash                                    | Quarterly                                       | 1 Jan, 1 Apr, 1 Jul and 1 Oct |
| Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs<br>Parameters as required by condition 3.6.1 | Bottom Ash                                    | Quarterly                                       | 1 Jan, 1 Apr, 1 Jul and 1 Oct |
| Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions<br>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<br>Parameters as required by condition 3.6.1 | APC Residues                                  | Quarterly                                       | 1 Jan, 1 Apr, 1 Jul and 1 Oct |
| Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions<br>Parameters as required by condition 3.6.1             | APC Residues                                  | Before use of a new disposal or recycling route |                               |

| <b>Parameter</b>                                    | <b>Units</b> |
|---|--------------|
| Total waste wood burnt at the Solid Biomass Plant   | tonnes       |
| Total support fuel burnt at the Solid Biomass Plant | 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          |

| <b>Parameter</b>  | <b>Frequency of assessment</b> | <b>Units</b>  |
|---|--------------------------------|---|
| 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 consumption   | Annually                       | kg / tonne of waste incinerated   |
| Activated Carbon consumption                                      | Annually                       | kg / tonne of waste incinerated   |
| Lime consumption  | Annually                       | kg / tonne of waste incinerated   |
| Water consumption   | Annually                       | kg / tonne of waste incinerated   |
| Periods of abnormal operation                                     | Annually                       | No of occasions and cumulative hours for current calendar year for each line. |

| <b>Media/parameter</b>                    | <b>Reporting format</b>   | <b>Date of form</b> |
|---|---|---------------------|
| Annual report required by condition 4.2.2 | Annual performance report template                                      | -                   |
| Emissions to air until 02/12/2023         | Form air 1 or other form as agreed in writing by the Environment Agency | 05/12/2014          |

| <b>Table S4.4 Reporting forms</b>   |  |                     |
|-------------------------------------|--|---------------------|
| <b>Media/parameter</b>              | <b>Reporting format</b>  | <b>Date of form</b> |
| Emissions to air from<br>03/12/2023 | Forms Air 1-9 or other forms as agreed in writing by the<br>Environment Agency       | 24/11/2023          |
| Water                               | Form Water 1 or other form as agreed in writing by the<br>Environment Agency         | 24/11/2023          |
| Residue quality                     | Form Residue 1 and 2 or other form as agreed in writing<br>by the Environment Agency | 24/11/2023          |

## 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 |  |

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

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

|   |                            |
|---|----------------------------|
| <b>Time periods for notification following detection of a breach of a limit</b> |                            |
| <b>Parameter</b>  | <b>Notification period</b> |
|   |                            |
|   |                            |
|   |                            |

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

|  |  |
|--|--|
| <b>(d) Notification requirements for the detection of any significant adverse environmental effect</b> |  |
| <b>To be notified within 24 hours of detection</b>   |  |
| 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 |  |

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

|           |  |
|-----------|--|
| Name*     |  |
| Post      |  |
| Signature |  |
| Date      |  |

\* authorised to sign on behalf of the operator

## Schedule 6 – Interpretation

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

“*abnormal operation*” means: any technically unavoidable stoppages, disturbances, or failures of the plant or the measurement devices. Abnormal operation starts as defined in condition 2.3.14 and ends as defined in condition 2.3.15. 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

“CEM” Continuous emission monitor

“CEN” means Comité Européen de Normalisation

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

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

“Commissioning” means testing of the new incineration plant that involves any operation of the furnace

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

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

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

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

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

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

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

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

“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 in relation to gases from co-incineration plants 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.

| <b>TEF schemes for dioxins and furans</b> |              |                         |               |              |
|---|--------------|-------------------------|---------------|--------------|
| <b>Congener</b>                           | <b>I-TEF</b> | <b>WHO-TEF</b>          |               |              |
|   | <b>1990</b>  | <b>2005</b>             | <b>1997/8</b> |              |
|   |              | <b>Humans / Mammals</b> | <b>Fish</b>   | <b>Birds</b> |
| <b>Dioxins</b>                            |              |                         |               |              |
| 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                  | -             | -            |
| <b>Furans</b>                             |              |                         |               |              |
| 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       |

| <b>TEF schemes for dioxin-like PCBs</b> |                         |               |              |
|---|-------------------------|---------------|--------------|
| <b>Congener</b>                         | <b>WHO-TEF</b>          |               |              |
|   | <b>2005</b>             | <b>1997/8</b> |              |
|   | <b>Humans / mammals</b> | <b>Fish</b>   | <b>Birds</b> |
| <b>Non-ortho PCBs</b>                   |                         |               |              |
| 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        |
| <b>Mono-ortho PCBs</b>                  |                         |               |              |
| 2,3,3',4,4'-PeCB (105)                  | 0.00003                 | <0.000005     | 0.0001       |
| 2,3,4,4',5-PeCB (114)                   | 0.00003                 | <0.000005     | 0.0001       |

| TEF schemes for dioxin-like PCBs |                  |           |         |
|----------------------------------|------------------|-----------|---------|
| Congener                         | WHO-TEF          |           |         |
|                                  | 2005             | 1997/8    |         |
|                                  | Humans / mammals | Fish      | Birds   |
| 2,3',4,4',5-PeCB (118)           | 0.00003          | <0.000005 | 0.00001 |
| 2',3,4,4',5-PeCB (123)           | 0.00003          | <0.000005 | 0.00001 |
| 2,3,3',4,4',5-HxCB (156)         | 0.00003          | <0.000005 | 0.0001  |
| 2,3,3',4,4',5'-HxCB (157)        | 0.00003          | <0.000005 | 0.0001  |
| 2,3',4,4',5,5'-HxCB (167)        | 0.00003          | <0.000005 | 0.00001 |
| 2,3,3',4,4',5,5'-HpCB (189)      | 0.00003          | <0.000005 | 0.00001 |

“year” means calendar year ending 31 December.

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

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

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

‘PCBs’ means

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

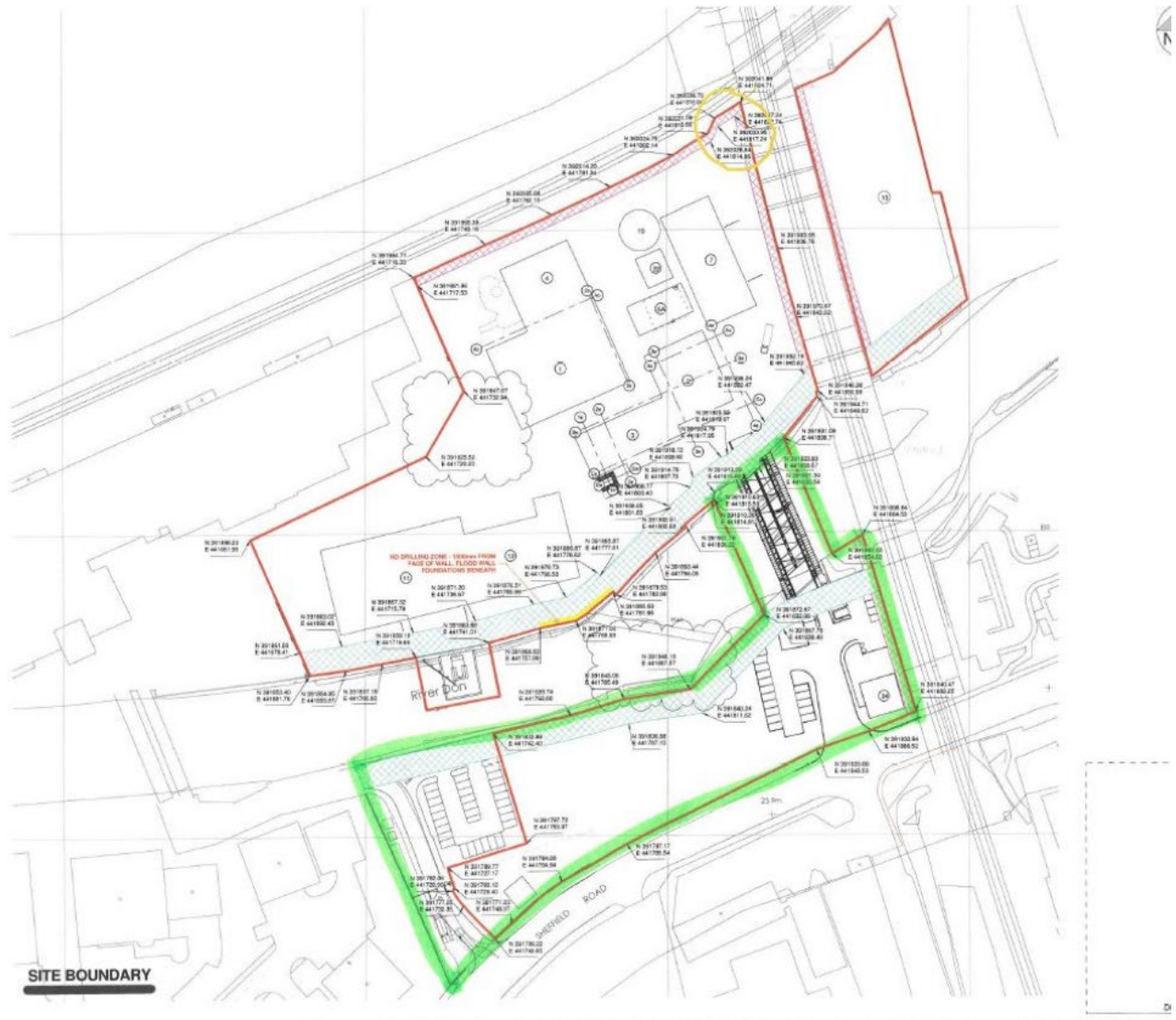
‘transition metals’ means any of the following metals: any compound of scandium, vanadium, manganese, cobalt, copper, yttrium, niobium, hafnium, tungsten, titanium, chromium, iron, nickel, zinc, zirconium, molybdenum and tantalum, as well as these materials in metallic form, as far as these are classified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

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

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

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

# Schedule 7 – Site plan



END OF PERMIT