

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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**Margam Green Energy Limited**

**Margam Green Energy Plant  
Land Off Longlands Lane (Heol Cae'r  
Bont)  
Margam  
Port Talbot  
SA13 2NU**

Permit number

**EPR/DP3137EG**

# Margam Green Energy Plant

## Permit number EPR/DP3137EG

### Introductory note

#### **This introductory note does not form a part of the permit**

This permit controls the operation of a waste co-incineration plant. 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
Waste	Wood
Stack height	65 m
Permitted plant capacity	335,000 tonnes per year
Energy Generated	Approximately 41.8 MW <sub>e</sub>
Gross electrical efficiency	34.3 %
Electricity exported	Approximately 38 MW <sub>e</sub>

The Margam Green Energy Plant consists of a non-hazardous waste biomass fuelled electricity generating station located in Margam, Port Talbot.

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

- combustion of fuel in a boiler;
- reception, screening and storage of pre-processed waste wood biomass fuels;
- steam turbine operation and the generation and export of electrical energy;
- cooling and condensing of the turbine exhaust steam in an air cooled condenser;
- water treatment to produce boiler quality make-up water;
- discharge of process effluent to sewer;
- storage and handling of process residues, specifically bottom ash and Air Pollution Control residues (APCr).

The plant consists of a single 125 MWth input boiler which combusts fuel to produce steam. The fuel consists of waste wood sourced from commercial, industrial, construction and demolition waste streams. The fuel is delivered to site in the form of pre-processed wood chips, so there will be no wood chipping operations at the installation. The plant can process up to 335,000 tonnes per annum of fuel.

The plant uses Liquefied Petroleum Gas (LPG) and gas oil for start-up purposes and combustion stabilisation where required.

The steam produced in the boiler is used in a steam turbine / generator to generate approximately 41.8 MW of electricity. The majority of the electricity generated is exported to the National Grid, with the remainder accounting for the site electrical load.

Exhaust steam from the turbine is condensed in an air cooled condenser and recycled to the boiler. The plant has also been designed with the potential to export up to 9 MWth of heat to local heat users, and is considered CHP ready. Flue gases are treated prior to being released to the atmosphere using well established methods: Selective Non-Catalytic Reduction (SNCR), hydrated lime and activated carbon injection and a fabric filter to remove particulate matter. The cleaned flue gases are released to atmosphere via a 65 m high stack. Emissions from the stack are monitored in accordance with permit requirements and for process control purposes. Main waste streams include the boiler blowdown 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 will be managed in a way which prevents their accidental release and enables recycling as much as practicable. The plant, in Margam, Port Talbot, is on land between the M4 and the Port Talbot Steelworks, and is adjacent to a second, separately permitted, co-incineration plant. There are a number of ecologically sensitive sites in the vicinity of the installation including the Kenfig and Glaswelltiroedd Cefn SACs and Margam Moors and Eglwys Nunydd Reservoir SSSIs. The closest designated site to the facility is Eglwys Nunydd Reservoir SSSI, which is located approximately 900m to the south of the installation.

The status log of the 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 EPR/DP3137EG/A001	Duly made 10/04/14	Application for a waste wood co-incinerator
Additional information requested	15/07/14	
Additional information received	11/08/14	Further data and clarification provided in support of the air quality, habitats and human health and noise assessments
Additional information requested	16/09/14	
Additional information received	22/09/14	Clarification on emission points and surface water drainage. Amended site plan provided.
Additional information requested	05/11/14	
Additional information received	07/11/14	Clarification on grate cooling, fabric filter pressure drop monitoring, standby CEMs operation and separation of metals
Permit determined EPR/DP3137EG/A001	20/11/14	Permit issued to Margam Green Energy Limited
Regulation 61 Notice sent to the Operator	15/06/21	Issue of a Notice under Regulation 61(1) of the EPR. Natural Resources Wales initiated review and variation to vary the permit following the publication of the revised Best

		Available Techniques (BAT) Reference Document (BRef) for Waste Incineration.
Regulation 61 Notice response	13/12/21	Response received from the Operator.
Additional information received	31/03/22	Additional information relating to Regulation 61 Notice response
Variation application EPR/DP3137EG/V002	31/03/22	Change of registered office address
Variation application determined EPR/DP3137EG/V002	13/04/22	Varied permit issued to Margam Green Energy Limited
Variation application EPR/DP3137EG/V003	13/06/22	Change of registered office address
Variation application determined EPR/DP3137EG/V003	15/06/22	Varied permit issued to Margam Green Energy Limited
Additional information received	09/09/22	Additional information relating to Regulation 61 Notice response
Natural Resources Wales initiated variation determined EPR/DP3137EG/V004	19/12/22	Varied permit issued to Operator

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number  
**EPR/DP3137EG**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/DP3137EG/V004 authorising

**Margam Green Energy Limited** (“the operator”),  
whose registered office is

**4<sup>th</sup> Floor The Peak  
5 Wilton Road  
London  
England  
SW1V 1AN**

company registration number **08441850**

to operate an installation at:

**Margam Green Energy Plant  
Land Off Longlands Lane (Heol Cae'r Bont)  
Margam  
Port Talbot  
SA13 2NU**

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

Signed	Date
<b>Holly Noble</b>	<b>19/12/2022</b>

Authorised on behalf of Natural Resources Wales

# Conditions

## 1 Management

### 1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

### 1.2 Energy efficiency

1.2.1 The operator shall:

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

1.2.2 The operator shall provide and maintain steam and/or hot water pass-outs such that opportunities for the further use of waste heat may be capitalised upon should they become practicable.

1.2.3 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every four 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 Natural Resources Wales within two months of each review, including where there has been no change to the original assessment in respect of the above factors

### 1.3 Efficient use of raw materials

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
- (b) maintain records of raw materials and water used in the activities;

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

## **2 Operations**

### **2.1 Permitted activities**

2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.1.2 Waste authorised by this permit shall be clearly distinguished from any other waste on the site.

### **2.2 The site**

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

### **2.3 Operating techniques**

2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.

(b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“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 Natural Resources Wales.

2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.3 Waste shall only be accepted if:

- (a) it is of a type and quantity listed in schedule 2 table S2.2; and
- (b) it conforms to the description in the documentation supplied by the producer and holder.

- 2.3.4 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.
- 2.3.5 Separately collected fractions other than those listed in condition 2.3.4 shall not be accepted unless they are unsuitable for recovery by recycling.
- 2.3.6 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.
- 2.3.7 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.
- 2.3.8 Waste shall not be charged if:
- (a) the combustion chamber temperature is below 850 °C,
  - (b) it is hazardous waste with a hazardous halogenated organic content of more than 1% (expressed as chlorine) and the combustion chamber temperature is below 1,100 °C.
  - (c) it is cytotoxic or cytostatic waste and the combustion chamber temperature is below 1,000 °C
  - (d) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than during abnormal operation; or
  - (e) 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
  - (f) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than during abnormal operation.
  - (g) 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 Natural Resources Wales, are used to demonstrate compliance with those emission limit values.
- 2.3.9 The operator shall record the beginning and end of each period of "abnormal operation".
- 2.3.10 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.
- 2.3.11 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.
- 2.3.12 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 Natural Resources Wales;
  - (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 a co-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 co-incineration line;
- 2.3.13 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 2.3.8 is maintained as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.8 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.
- 2.3.14 Bottom ash and APC residues shall not be mixed.
- 2.3.15 For the following activity referenced in schedule 1, table S1.1 (AR3) the activity shall be operated using the techniques and, in the manner, described in schedule 1, table S1.2A.

## **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 Natural Resources Wales.
- 2.4.2 Except in the case of an improvement which consists only of a submission to Natural Resources Wales, the operator shall notify Natural Resources Wales within 14 days of completion of each improvement.

## **2.5 Pre-operational conditions**

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

# **3 Emissions and monitoring**

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

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.

- 3.1.3 Wastes produced at the site shall, as a minimum, be sampled and analysed in accordance with schedule 3 table S3.5. Additional samples shall be taken and tested and appropriate action taken, whenever:
- (a) disposal or recovery routes change; or
  - (b) it is suspected that the nature or composition of the waste has changed such that the route currently selected may no longer be appropriate.
- 3.1.4 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
- 3.1.5 For the following activity referenced in schedule 1, table S1.1 (AR3) Limited Operating Hours MCPs shall:
- (a) Not exceed 500 hours operation in a 12-month period as a rolling average over a 5-year period, and thereafter assessed annually
  - (b) Not operate for more than 750 hours in any single year

## 3.2 Emissions limits and monitoring for emission to air for co-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
- 3.2.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in schedule 3 table S3.1; the Continuous Emission Monitors shall be used such that;
- (a) the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed the following percentages 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%
• Hydrogen fluoride	40%
• Ammonia	40%
• Mercury (Hg)	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: the average of valid half hourly averages or 10 minute averages over a calendar day. 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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales 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 Natural Resources Wales.

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.

### **3.4 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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales 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 Natural Resources Wales.

### **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 Natural Resources Wales, 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 Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales 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 Natural Resources Wales.

## **3.6 Monitoring**

- 3.6.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
  - (a) point source emissions specified in tables S3.1, 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), where available, unless otherwise agreed in writing by Natural Resources Wales. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges. 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, S3.2 and S3.3 unless otherwise agreed in writing by Natural Resources Wales.
- 3.6.5 For the following activity referenced in schedule 1, table S1.1 (AR3) the first monitoring measurements shall be carried out at any time for existing MCPs, but no later than 4 months after the relevant compliance date.
- 3.6.6 For the following activity referenced in schedule 1, table S1.1 (AR3) monitoring shall not take place during periods of start up or shut down

## **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 Natural Resources Wales, 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 Natural Resources Wales.

4.1.3 The operator shall maintain a record of the type and quantity of fuel used and the total annual hours of operation for each MCP and/or generator.

## 4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production / treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) the functioning and monitoring of the incineration plant in a format agreed with Natural Resources Wales. 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 Natural Resources Wales, 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 Natural Resources Wales, 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 Natural Resources Wales 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 (a) In the event 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 Natural Resources Wales,
  - (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) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.
- 4.3.2 Any information provided under condition 4.3.1(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, 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 Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales 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) Natural Resources Wales 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 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

## **4.4 Interpretation**

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “immediately”, in which case it may be provided by telephone.

# Schedule 1 - Operations

**Table S1.1 activities**

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity and waste types
AR1	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.  Co-incineration of waste wood biomass in a single co-incineration line with a 125 MW thermal input capacity.	From receipt of waste to emission of exhaust gas and disposal of waste arising.  Waste types and quantities as specified in Table S2.2 of this permit.

**Directly Associated Activities**

AR2	Electricity Generation	Generation of approximately 41.8 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.
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**Medium Combustion Plant**

Activity reference	Activity listed in the EP Regulations	Description of Medium Combustion Plant	Limits of specified activity
AR3	Schedule 25A – Medium Combustion Plant as detailed in Schedule 8 and Schedule 25B Specified Generator that is excluded.	Back-up generator for provision of emergency electrical power.  1x 3.4 MWth input gas oil fuelled generator (existing Medium Combustion Plant)	The use of electricity on-site plant and equipment operation in the event of supply interruption.  Operating hours limited as per condition 3.1.5

**Table S1.2 Operating techniques**

Description	Parts	Date Received
Application EPR/DP3137EG/A001	Application Form B3: Response to Q3a – Section 1.4 of the application supporting information describing the process operation; Response to Q3b – Environmental Risk assessment in Annex 4 of the application describing the control measures in place to mitigate noise, fugitive releases and accidents; Response to Q3c – Section 2.1 of the application supporting information describing the raw materials and reagents to be used. Response to Appendix 6, Q4 – Section 2.5 of the application supporting information describing how the plant meets IED requirements; Response to Appendix 6, Q5 – Section 2.6 of the application supporting information describing energy efficiency measures and future proposed measures for heat recovery in the form of a Heat Plan and CHP-ready application;	Duly made 10/04/2014

Response to Appendix 6, Q6 – Section 2.7 of the application supporting information describing residue recovery and disposal; and  
 Response to Appendix 6, Q7 confirming that a standby probe and standby CEM will be available in the event of failure of the duty CEM.

The application supporting information also includes a description of:

- Plant capacity
- The waste feed cessation system
- Start-up and shut down
- Temperature monitoring in the combustion chamber
- Energy recovery from the installation
- Temperature, oxygen, water vapour and pressure at air release sampling points.

Response to Improvement Condition IC3 as approved in writing by Natural Resources Wales	As stated in written approval to the response to Improvement Condition IC3	Post permit issue
Response to regulation 61(1) Notice – request for information dated 15/06/2021 detailing how the Operator will comply with the BAT conclusions for Waste Incineration, under Directive 2010/75/EU of the European Parliament and of the Council	All	13/12/2021
Additional information received	All	31/03/2022 and 09/09/2022
Other than normal operating conditions (OTNOC) management plan	As stated in written approval to the response to Improvement Condition IC12.	Post variation V004 issue

**Table S1.2A Operating techniques for Medium Combustion Plant as detailed in Schedule 8**

**Description**

Each MCP must be operated in accordance with the manufacturer's instructions and records must be made and retained to demonstrate this

The operator must keep periods of start-up and shut-down of each MCP as short as possible

There must be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993

**Table S1.3 Improvement programme requirements**

Reference	Requirement	Date
IC1 – 8 are deemed complete		
IC9	The operator shall perform a study to determine the extent to which the operation of the current systems in place at the plant to minimise NOx emissions can be further optimised such that emissions are reduced as far as possible below 270 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	30/09/2023 or as agreed in writing with Natural Resources

be based on the results of trials carried out at the installation. A written report of the study shall be submitted to Natural Resources Wales which shall include but not necessarily be limited to the following:

- A brief description of the currently installed measures at the installation to minimise NOx emissions, including details of how the reagent dosing system responds to emissions monitoring data and historic data which illustrates the current achievable level of daily NOx emissions.
- The results of trials conducted to further reduce daily average NOx emissions using currently installed measures, including:
  - a description of the parameters that were varied during the trial e.g. ammonia or urea feed rates, physical form of urea injected, air flows, and the range over which they were varied
  - the levels of NOx achieved and associated levels of ammonia and nitrous oxide emissions and reagent consumption
  - observed effects and predicted long-term impacts on plant operation, reliability and maintenance regime
  - any changes to the composition of the bottom ash and boiler ash and the implications of those changes for the ability to process and use the ash, as well as for the pollution potential of the ash both during processing and its subsequent use as a secondary aggregate
  - any other relevant cross-media effects

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

IC10	The operator shall carry out a programme of dioxin monitoring over a period and frequency agreed with Natural Resources Wales. The operator shall submit a report to Natural Resources Wales with an analysis of whether dioxin emissions can be considered to be stable.	30/09/2023 or as agreed in writing with Natural Resources Wales
IC11	The operator shall carry out a programme of mercury monitoring over a period and frequency agreed with Natural Resources Wales. The operator shall submit a report to Natural Resources Wales with an analysis of whether the waste feed to the plant can be proven to have a low and stable mercury content.	30/09/23 or as agreed in writing with Natural Resources Wales
IC12	<p>The operator shall submit an Other than normal operating conditions (OTNOC) management plan to Natural Resources Wales for approval.</p> <p>The OTNOC management plan shall be produced in line with all relevant current guidance provided by Natural Resources Wales to the operator and shall consider the requirements of the following BAT conclusions of the Waste Incineration BREF Document (EU 2019):</p> <ul style="list-style-type: none"> <li>• BAT 1 (xxiv) – BAT is also to incorporate the following features in the EMS:           <ul style="list-style-type: none"> <li>○ (xxiv) for incineration plants, an OTNOC management plan (see BAT 18)</li> </ul> </li> <li>• BAT 5 – BAT is to appropriately monitor channelled emissions to air from the incineration plant during OTNOC</li> <li>• BAT 18 – In order to reduce the frequency of the occurrence of OTNOC and to reduce emissions to air and, where relevant, to water from the incineration plant during OTNOC, BAT is to set up and implement a risk based OTNOC management plan as</li> </ul>	03/06/23 or as agreed in writing with Natural Resources Wales

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part of the environmental management system (BAT 1) that includes all of the following elements:

- Identification of potential OTNOC (e.g. failure of equipment critical to the protection of the environment ('critical equipment')), of their root causes and of their potential consequences, and regular review and update of the list of identified OTNOC following the periodic assessment below;
- Appropriate design of critical equipment (e.g. compartmentalisation of the bag filter, techniques to heat up the flue-gas and obviate the need to bypass the bag filter during start-up and shutdown, etc.);
- Set-up and implementation of preventative maintenance plan for critical equipment (see BAT 1(xii))
- Monitoring and recording of emissions during OTNOC and associated circumstances (see BAT 5)
- Periodic assessment of the emissions during OTNOC (e.g. frequency of events, duration, amount of pollutants emitted) and implementation of corrective actions if necessary.

The OTNOC management plan shall be submitted to Natural Resources Wales for approval by the date specified.

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<b>Table S1.4A Pre-operational measures</b>	
<b>Reference</b>	<b>Pre-operational measures</b>
PO1 – PO12	are complete

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

**Table S2.1 Raw materials and fuels**

Raw materials and fuel description	Specification
Gas oil	Less than 0.1% sulphur content.

**Table S2.2 Permitted waste types and quantities for co-incineration plant**

Maximum quantity	335, 000 tonnes of waste wood per annum
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 03	plant-tissue waste
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 01	waste bark and cork
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>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 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(a) – Emissions and monitoring effective until 2 December 2023

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

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 (65 m Stack – [Point A1 as shown on site plan in Schedule 7])	Cleaned exhaust gases from combustion furnace	Particulate matter	45 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			15 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Hydrogen chloride	90 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			15 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Hydrogen fluoride	6 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			1.5 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Sulphur dioxide	300 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			75 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	600 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			300 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Carbon monoxide	150 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			75 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
		Total Organic Carbon (TOC)	30 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181
			15 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181
Ammonia (NH <sub>3</sub> )	No limit set	daily average	Continuous	EN 14181		
Nitrous Oxide (N <sub>2</sub> O)	No limit set	daily average	Continuous	EN 14181		
Cadmium & thallium and their compounds (total)	0.05 mg/Nm <sup>3</sup>	Periodic over minimum 30 minute, maximum 8 hour period	Bi-annually	EN 14385		
Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.5 mg/Nm <sup>3</sup>	Periodic over minimum 30 minute, maximum 8 hour period	Bi-annually	EN 14385		
Mercury and its compounds	0.05 mg/Nm <sup>3</sup>	Periodic over minimum 30 minute, maximum 8 hour period	Bi-annually	EN 13211		

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

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
		Dioxins / furans (I-TEQ)	0.1 ng/Nm <sup>3</sup>	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948
		Dioxin-like PCBs (WHO-TEQ Humans / Mammals, Fish, Birds)	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948
		Dioxins / furans (WHO-TEQ Humans / Mammals, Fish, Birds)	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948
		Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	BS ISO 11338 Parts 1 and 2.
A2 [Point A2 as shown on site plan in Schedule 7]	Back-up diesel generator	Carbon monoxide	No limit set	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years from date of acceptance of first monitoring measurements under condition 3.6.5	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators

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

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 as shown on site plan in Schedule 7]	Accumulated surface and roof water run-off released from balancing pond	No parameters set	No limit set	-	-	-

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 [Point S1 as shown on site plan in Schedule 7] trade effluent discharge to Dŵr Cymru Welsh Water foul sewer	Boiler blowdown collected in sedimentation basin	No parameters set	No limit set	-	-	-

**Table S3.4 Process monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Location close to Combustion Chamber inner wall or as identified and justified in Application.	Temperature (°C)	Continuous	Traceable to national standards	As agreed in writing with Natural Resources Wales.
A1	Exhaust gas temperature	Continuous	Traceable to national standards	As agreed in writing with Natural Resources Wales.
	Exhaust gas pressure	Continuous	Traceable to national standards	As agreed in writing with Natural Resources Wales
	Exhaust gas oxygen content	Continuous	EN 14181	None
	Exhaust gas water vapour content	Continuous	EN 14181	Unless gas is dried before analysis of emissions
Bag filter	Pressure drop	Continuous	Not applicable	None

**Table S3.5 Residue quality**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method*</b>	<b>Other specification</b>
Bottom Ash (including Boiler Ash)	TOC	<3%	Quarterly	Environment Agency ash sampling protocol	None
	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	No limit set	Quarterly	Environment Agency ash sampling protocol	None
	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	Before use of a new disposal or recycling route	Environment Agency ash sampling protocol	None
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.	No limit set	Quarterly	Environment Agency ash sampling protocol	None
	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	Before use of a new disposal or recycling route	Environment Agency ash sampling protocol	None

\*Or other equivalent standard as agreed in writing with Natural Resources Wales

## Schedule 3(b) – Emissions and monitoring effective from 3 December 2023

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
A1 (65 m Stack – [Point A1 as shown on site plan in Schedule 7])	Cleansed exhaust gases from combustion furnace	Particulate matter	45 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255 and EN 13284
			7.5 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255 and EN13284
		Hydrogen chloride	90 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255
			12 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Hydrogen fluoride	6 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255
			1.5 mg/Nm	daily average	Continuous	EN 14181 and EN 17255
		Sulphur dioxide	300 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255
			60 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	600 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255
			270 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Carbon monoxide	150 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255
			75 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Total Organic Carbon (TOC)	30 mg/Nm <sup>3</sup>	½-hr average	Continuous	EN 14181 and EN 17255

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

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
			15 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Ammonia (NH <sub>3</sub> )	22.5 mg/Nm <sup>3</sup>	daily average	Continuous	EN 14181 and EN 17255
		Nitrous Oxide (N <sub>2</sub> O)	No limit set	½-hr average and daily average	Continuous	EN 14181 and EN 17255
		Cadmium & thallium and their compounds (total)	0.03 mg/Nm <sup>3</sup>	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	EN 14385
		Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)	0.45 mg/Nm <sup>3</sup>	Average of three consecutive measurements of at least 30 minutes each	Bi-annually	EN 14385
		Mercury and its compounds	0.03 mg/Nm <sup>3</sup>	Average of three consecutive measurements of at least 30 minutes each	Bi-annually unless otherwise agreed in writing with Natural Resources Wales	EN 13211
			0.03 mg/Nm <sup>3</sup>	Daily average	Continuous unless otherwise agreed in writing with Natural Resources Wales <sup>1</sup>	EN 14181 and EN 17255 and EN14884
		Dioxins / furans (I-TEQ)	0.09 ng/Nm <sup>3</sup>	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948
			0.12 ng/Nm <sup>3</sup>	Value over sampling period of 2 to 4 weeks for long term sampling	Monthly unless otherwise agreed in writing with Natural Resources Wales <sup>2</sup>	CEN TS 1948-5
		Dioxin-like PCBs (WHO-TEQ Humans / Mammals, Fish, Birds)	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948

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

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
		Dioxins / furans (WHO-TEQ Humans / Mammals, Fish, Birds)	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	Relevant parts of EN 1948
		Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.	No limit set	Periodic over minimum 6 hours, maximum 8 hour period	Bi-annually	BS ISO 11338 Parts 1 and 2.
		Exhaust gas temperature	No limit set	½-hr average and daily average	Continuous	Traceable to national standards
		Exhaust gas pressure	No limit set	½-hr average and daily average	Continuous	Traceable to national standards
		Exhaust gas flow	No limit set	½-hr average and daily average	Continuous	EN 16911-2
		Exhaust gas oxygen content	No limit set	½-hr average and daily average	Continuous	EN 14181 and EN 17255
		Exhaust gas water vapour content	No limit set	½-hr average and daily average	Continuous	EN 14181 and EN 17255
A2 [Point A2 as shown on site plan in Schedule 7]	Back-up diesel generator	Carbon monoxide	No limit set	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years from date of acceptance of first monitoring measurements under condition 3.6.5	In line with web guide: Monitoring stack emissions: low risk MCPs and specified generators

Note 1: Continuous monitoring does not apply for plants incinerating wastes with a proven low and stable mercury content

Note 2: Long term sampling does not apply if the emission levels are proven to be sufficiently stable

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

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1 [Point W1 as shown on site plan in Schedule 7]	Accumulated surface and roof water run-off released from balancing pond	No parameters set	No limit set	-	-	-

**Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 [Point S1 as shown on site plan in Schedule 7] trade effluent discharge to Dŵr Cymru Welsh Water foul sewer	Boiler blowdown collected in sedimentation basin	No parameters set	No limit set	-	-	-

**Table S3.4 Process monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Location close to Combustion Chamber inner wall or as identified and justified in Application.	Temperature (°C)	Continuous	Traceable to national standards	As agreed in writing with Natural Resources Wales.
Incineration Plant	Gross electrical efficiency <sup>[1]</sup> or Gross energy efficiency <sup>[2]</sup>	within 6 months of any modification that significantly affects energy efficiency	Performance test at full load	Recovery with a high level of energy efficiency as required by permit condition 1.2.1(a) and as may be agreed in writing with NRW. In any case of no lower than: <ul style="list-style-type: none"> <li>• 20 % for Gross electrical efficiency<sup>[1]</sup></li> <li>• 72 % for Gross energy efficiency<sup>[2]</sup></li> </ul>

**Table S3.4 Process monitoring requirements**

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Bag Filter	Pressure drop	Continuous	Not applicable	None

Note [1]: Gross electrical efficiency only applies to plants or parts of plants producing electricity using a condensing turbine

Note [2]: Gross energy efficiency only applies to plants or parts of plants producing only heat or producing electricity using a back-pressure turbine and heat with the steam leaving the turbine

**Table S3.5 Residue quality**

Emission point reference or source or description of point of measurement	Parameter	Limit (including unit)	Monitoring frequency	Monitoring standard or method*	Other specification
Bottom Ash (including Boiler Ash)	TOC	3%	Quarterly	BS EN 14899 and either BS EN 13137 or BS EN 15936	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'.
	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.	No limit set	Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	
	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	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.	No limit set	Quarterly	Environment Agency Guidance, 'TGN M4 – Guidelines for Ash Sampling and Analysis'	

**Table S3.5 Residue quality**

<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method*</b>	<b>Other specification</b>
	Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions	No limit set	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 Natural Resources Wales

## Schedule 4(a) – Reporting until 2 December 2023

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 Parameters as required by condition 3.6.1.	A1	Quarterly	1 January, 1 April, 1 July & 1 October
Emissions to air Parameters as required by condition 3.6.1	A2	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years from date of acceptance of first monitoring measurements under condition 3.6.5	1 January
TOC Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Quarterly	1 January, 1 April, 1 July & 1 October
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Quarterly	1 January, 1 April, 1 July & 1 October
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Before use of a new disposal or recycling route	-
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.6.1	APC residues	Quarterly	1 January, 1 April, 1 July & 1 October
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.6.1	APC residues	Before use of a new disposal or recycling route	-
Functioning and monitoring of the co-incineration plant as required by condition 4.2.2	-	Annually	1 January

**Table S4.2: Annual production/treatment**

Parameter	Units
Total waste wood received (1)	tonnes
Total waste wood co-incinerated	tonnes
Electrical energy generated	MWh
Electrical energy exported	MWh
Electrical energy used on installation	MWh
Thermal energy produced e.g. steam	MWh
Thermal energy exported	MWh
Thermal energy used on installation	MWh
Total Bottom Ash (including Boiler Ash) produced	tonnes
Total APC residue produced	tonnes

(1): All waste wood delivered to the installation, including waste which is subsequently rejected

**Table S4.3 Performance parameters**

Parameter	Frequency of assessment	Units
Electrical energy exported, imported and used at the installation	Quarterly	MWh / tonne of waste co-incinerated
Gas oil consumption	Quarterly	tonnes / tonne of waste co-incinerated
LPG consumption	Quarterly	m <sup>3</sup> / tonne of waste co-incinerated
Mass of Bottom Ash (including Boiler Ash produced)	Quarterly	tonnes / tonne of waste co-incinerated
Mass of APC residues produced	Quarterly	tonnes / tonne of waste co-incinerated
Ammonia consumption	Quarterly	tonnes / tonne of waste co-incinerated
Activated carbon consumption	Quarterly	tonnes / tonne of waste co-incinerated
Lime consumption	Quarterly	tonnes / tonne of waste co-incinerated
Water consumption	Quarterly	m <sup>3</sup> / tonne of waste co-incinerated
Periods of abnormal operation	Quarterly	No. of occasions and cumulative hours for current calendar year

**Table S4.4 Reporting forms**

Media/parameter	Reporting format	Date of form
Annual report required by condition 4.2.2	No specific format specified	N/A
Air	Form Air 1-2 or other form as agreed in writing by Natural Resources Wales	20/11/14
Residue Quality	Form residue 1 or other form as agreed in writing by Natural Resources Wales	20/11/14
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	20/11/14
Waste Subject to Conditions 4.2.5	Waste tonnage return form from Natural Resources Wales or other form as agreed in writing by Natural Resources Wales	N/A

## Schedule 4(b) - Reporting from 3 December 2023

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 Parameters as required by condition 3.6.1.	A1	Quarterly	1 January, 1 April, 1 July & 1 October
Emissions to air Parameters as required by condition 3.6.1	A2	After 3 times the maximum average annual operating hours have elapsed and no less frequent than every 5 years from date of acceptance of first monitoring measurements under condition 3.6.5	1 January
TOC Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Quarterly	1 January, 1 April, 1 July & 1 October
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Quarterly	1 January, 1 April, 1 July & 1 October
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.6.1	Bottom Ash (including Boiler Ash)	Before use of a new disposal or recycling route	-
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.6.1	APC residues	Quarterly	1 January, 1 April, 1 July & 1 October

**Table S4.1 Reporting of monitoring data**

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.6.1	APC residues	Before use of a new disposal or recycling route	-
Functioning and monitoring of the co-incineration plant as required by condition 4.2.2	-	Annually	1 January

**Table S4.2: Annual production/treatment**

Parameter	Units
Total waste wood received (1)	tonnes
Total waste wood co-incinerated	tonnes
Electrical energy generated	MWh
Electrical energy exported	MWh
Electrical energy used on installation	MWh
Thermal energy produced e.g. steam	MWh
Thermal energy exported	MWh
Thermal energy used on installation	MWh
Total Bottom Ash (including Boiler Ash) produced	tonnes
Total APC residue produced	tonnes

(1): All waste wood delivered to the installation, including waste which is subsequently rejected

**Table S4.3 Performance parameters**

Parameter	Frequency of assessment	Units
Electrical energy exported, imported and used at the installation	Quarterly	MWh / tonne of waste co-incinerated
Gas oil consumption	Quarterly	tonnes / tonne of waste co-incinerated
LPG consumption	Quarterly	m <sup>3</sup> / tonne of waste co-incinerated
Mass of Bottom Ash (including Boiler Ash produced)	Quarterly	Route / tonnes / tonne of waste co-incinerated
Mass of APC residues produced	Quarterly	Route / tonnes / tonne of waste co-incinerated
Ammonia	Quarterly	tonnes / tonne of waste co-incinerated
Activated carbon consumption	Quarterly	tonnes / tonne of waste co-incinerated
Lime consumption	Quarterly	tonnes / tonne of waste co-incinerated
Water consumption	Quarterly	m <sup>3</sup> / tonne of waste co-incinerated

**Table S4.3 Performance parameters**

<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Periods of abnormal operation	Quarterly	No. of occasions and cumulative hours for current calendar year

**Table S4.4 Reporting forms**

<b>Media/parameter</b>	<b>Reporting format</b>	<b>Date of form</b>
Annual report required by condition 4.2.2	No specific format specified	N/A
Air	For CEMS monitoring data - In the format indicated in forms Air 1-16 as a direct output from Data Acquisition and Handling system. For other monitoring results – Form Air 17. Or other forms as agreed in writing by Natural Resources Wales	03/12/2023
Residue Quality	Forms residues 1 and 2 or other form as agreed in writing by Natural Resources Wales	03/12/2023
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	03/12/2023
Water usage	Form water usage 1 or other form as agreed in writing by Natural Resources Wales	03/12/2023
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	03/12/2023
Waste Subject to Conditions 4.2.5	Waste tonnage return form from Natural Resources Wales or other form as agreed in writing by Natural Resources Wales	N/A

## 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	<b>EPR/DP3137EG</b>
Name of operator	
Location of Facility	
Time and date of the detection	

<b>(a) Notification requirements for any activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment</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 permit condition</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	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) In the event 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:	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

**Part B - to be submitted as soon as practicable**

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* 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 2.3.11 and ends as defined in condition 2.3.12. 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 Natural Resources Wales 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.

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

“*boiler ash*” means ash collected at the bottom of the boiler passes.

“*bottom ash*” means ash transported by the grate.

“*CEM*” means Continuous emission monitor.

“*CEN*” means *Comité Européen de Normalisation*.

“*co-incineration*” line or plant means all of the co-incineration equipment related to a common discharge to air location.

“*completion of commissioning*” means the date on which the listed activity is first operated

“*compliance date*” means 01/01/2030 for existing MCPs and a tranche A specified generator with a net rated thermal input of less than or equal to 5MW.

“*DAHS*” means data handling and acquisition system and includes software and hardware

“*daily average emissions limit 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 minute averages’

“*dioxin(s) [and furan(s)]*” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

“*disposal*” or “*D*” 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.

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

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

“*existing MCP*” means an MCP first put into operation before 20/12/2018.

“*first put into operation*” means that the plant must have been fired with its design fuel up to its full load. This can be, but does not have to be, during commissioning.

“gas oil” in relation to the MCP includes diesel and is defined in Article 3(19) of the MCPD.

“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

“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.

“limited operating hours MCP” means an MCP that meets the requirements of paragraph 7 or 8 of Part 2 of Schedule 25A of the EP Regulations.

‘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

“low and stable mercury content” can be demonstrated using the latest version of the UK WI BREF Mercury monitoring protocol (V0.28 or as updated) or an appropriate alternative method as agreed in writing with Natural Resources Wales.

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

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

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

“new MCP” means an MCP first put into operation on or after 20/12/2018.

“normal operation” consists of any operation of the plant other than that as defined as “OTNOC” unless otherwise agreed in writing with Natural Resources Wales

“operating hours” in respect of a medium combustion plant means the time, expressed in hours, during which the plant is operating and discharging emissions into the air, excluding start-up and shut-down periods.

“OTNOC” means other than normal operating conditions. OTNOC consists of start-up, shut-down and abnormal operation only, unless additional definitions are agreed in writing with Natural Resources Wales

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

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

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

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

“recovery” or “R” 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.

“shut down” is any period where the plant is being returned to a non-operational state and there is no waste being burned as described in the application or agreed in writing with Natural Resources Wales.

“specified generator” has the meaning given in paragraph 2(1) of Schedule 25B of The EP Regulations.

“start up” is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste fuel has been fed to the plant in sufficient quantity to cover the grate and to initiate steady-state conditions as described in the application or agreed in writing with Natural Resources Wales.

“sufficiently stable” in respect of dioxins/furans emissions can be demonstrated using the latest version of the UK WI BREF PCDD/F monitoring protocol (V0.28 or as updated) or an appropriate alternative method as agreed in writing with Natural Resources Wales.

“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 (including Boiler 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 established by Commission Decision 2000/532/EC as amended from time to time (the ‘List of Wastes Decision’) and in relation to hazardous waste, includes the asterisk.

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

“year” means calendar year ending 31 December.

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

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

- (a) in relation to emissions from combustion processes (excluding incineration and co-incineration), the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3 % dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.
- (c) in relation to gases from 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 6% dry

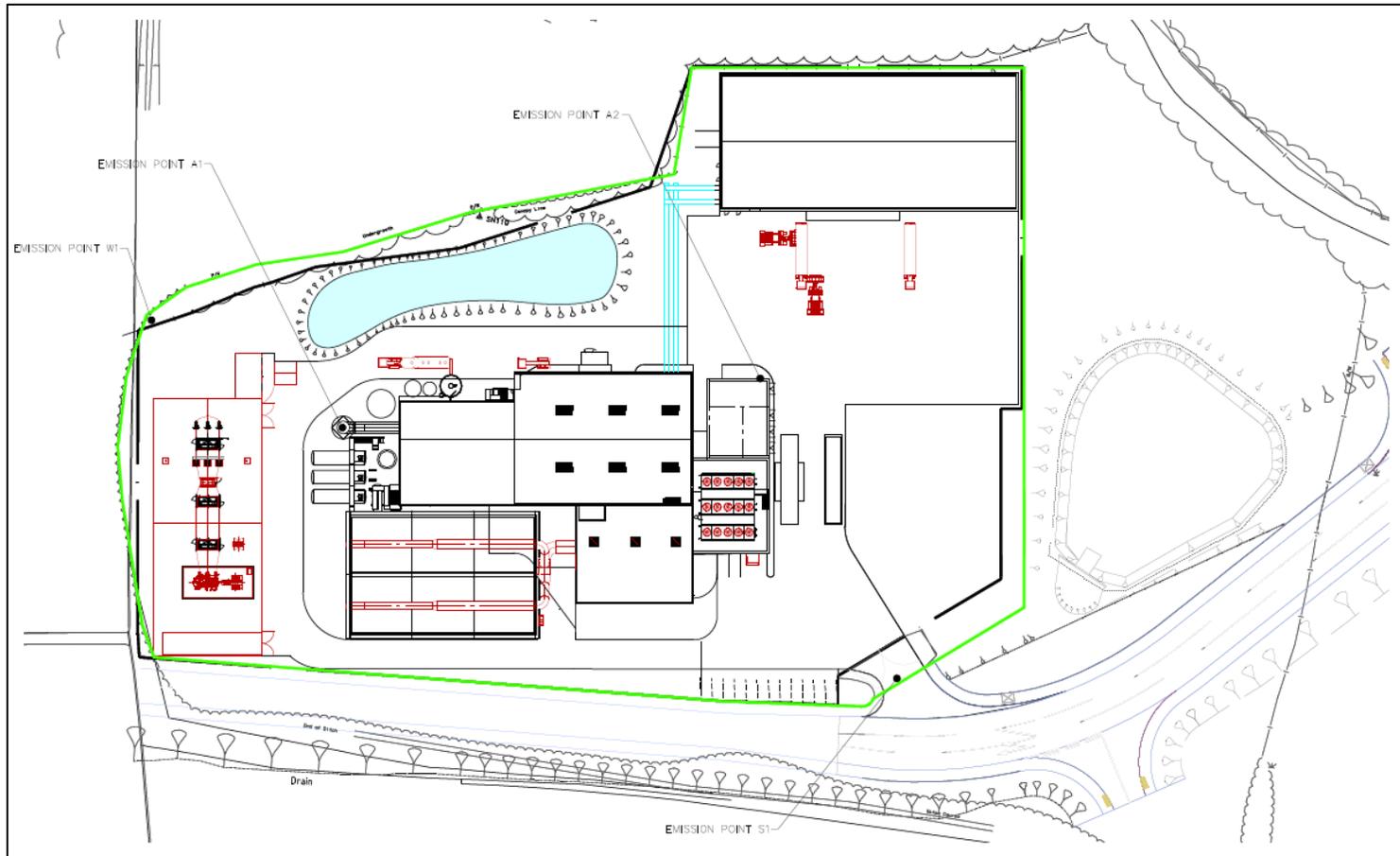
For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ, & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/ or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing. When reporting on measurements of dioxins/furans and dioxin-like PCBs, the toxic equivalence concentrations should be reported as a range based on: all congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum. However the minimum value should be used when assessing compliance with the emission limit value in table S3.1.

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

TEF schemes for dioxins and furans				
Congener	I-TEF	WHO-TEF		
	1990	2005	1997/8	
<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

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

# Schedule 7 - Site plan



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## Schedule 8 – Annex I of MCPD

1. Rated thermal input (MW) of the medium combustion plant.	3.4 MW <sub>th</sub>
2. Type of the medium combustion plant (diesel engine, gas turbine, dual fuel engine, other engine or other medium combustion plant).	Diesel engine
3. Type and share of fuels used according to the fuel categories laid down in Annex II.	Gas oil, 100 %
4. Date of the start of the operation of the medium combustion plant or, where the exact date of the start of the operation is unknown, proof of the fact that the operation started before 20 December 2018.	29 October 2018
5. Sector of activity of the medium combustion plant or the facility in which it is applied (NACE code).	D35.1.1 – Production of electricity
6. Expected number of annual operating hours of the medium combustion plant and average load in use.	<500 hours, average load in use 202.2 kW
7. Where the option of exemption under Article 6(3) or Article 6(8) is used, a declaration signed by the operator that the medium combustion plant will not be operated more than the number of hours referred to in those paragraphs.	Yes
8. Name and registered office of the operator and, in the case of stationary medium combustion plants, the address where the plant is located.	<p><i>Name and registered office address of the operator:</i>  Margam Green Energy Limited, 4<sup>th</sup> Floor The Peak, 5 Wilton Road, London, England, SW1V 1AN</p> <p><i>The address where the plant is located:</i>  Margam Green Energy Plant, Land Off Longlands Lane, Heol Cae'r Bont), Margam, Port Talbot, SA13 2NU</p>

**END OF PERMIT**