Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Amey LG Limited

Isle of Wight Waste Recovery Park
Forest Road
Newport
Isle of Wight
PO30 5YS

Variation application number

EPR/QP3337AD/V003

Permit number

EPR/QP3337AD

Isle of Wight Waste Recovery Park
Permit number EPR/QP3337AD

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.

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 changes introduced by this variation notice:

The operator (Amey LG Limited) has applied for a variation to this permit in order to change the thermal treatment technology type from a gasification plant to a direct burn incinerator plant. The direct burn technology is referred to as a "moved bed incinerator" and is described as offering characteristics of both "rotary kiln" and "moving grate" technology.

Waste (RDF) is fed into an initial combustion chamber which is of refractory lined bed (similar to that of a rotary kiln) with incline towards the combustion zone. A series of paddles (fixed to horizontal shafts) will rotate (with independent speed control) to transport the waste along the bed (akin to the movement provided by moving grate technology) whilst incineration of the RDF occurs.

There are no changes to existing permitted waste types or quantities.

Brief description of the process:

This permit covers the following activities:-

- a waste pre-treatment process [Mechanical Treatment] for the production of 'RDF' [Refuse Derived Fuel],
- a 'MRF' [Materials Recycling Facility] for sorting dry mixed recyclables (for recovery), and
- a thermal treatment plant [Incinerator] for the incineration of RDF to produce energy.

The Installation is located near Newport in the Isle of Wight at national grid reference SZ 471 897. Parkhurst Forest is situated on the boundary for the site.

The facility will have a total capacity of 80,000 tonnes per year. The pre-treatment plant will have a capacity of 47,400 tonnes per year with the incineration plant having a capacity of 44,000 tonnes per year and the MRF plant a capacity of 32,600 tonnes per year.

Pre-treatment process

Municipal waste is received within the waste processing building whereby it undergoes treatment in order to remove recyclable materials. Once such recyclables have been removed, the remaining waste undergoes shredding and blending in order to produce RDF. RDF is then conveyed to the thermal treatment building for incineration. The recovered recyclable materials will be stored prior to transfer offsite.

The treatment building can also operate as a waste sorting facility (MRF). Mixed recyclables will be received and sorted into recyclable categories before being sent off site for recovery.

Thermal treatment process

A waste feeding system divides the RDF waste stream into two, allowing waste to be fed into each side of an initial combustion chamber (for pre-heat). A triple sequence of double flaps ensure tight insulation from this initial combustion chamber to external environment.

The primary combustion chamber is designed to maintain temperatures in excess of 800°C. Gas oil is utilised as start-up fuel, and for any circumstances where support fuel is required to maintain such temperatures. Once temperature is achieved, waste is transported from the initial combustion chamber into the primary combustion chamber by a series of rotating paddles.

The rotating paddles are fixed in position (above the waste mass) via a series of water cooled horizontal shafts which are controlled by a computer system in order to control the speed and rotation (on an individual shaft basis). The control system is programmed to control the speed of waste movement throughout the combustion chamber in order to achieve complete combustion with required residence time for waste gas destruction. Combustion air (originating from the waste bunker at negative pressure) is supplied throughout the combustion chambers at lateral air injection points by an adjustable independent fan. This minimises the escape of any odours from the waste bunker whilst ensuring even distribution of air for complete combustion. A post combustion chamber destroys any unburnt gases from the primary chamber, by an independent burner (under abnormal operations) providing a minimum residence time of 2 seconds at a temperature between 850°C and 1200°C.

Following incineration of the waste, hot gases from the process pass through a horizontally mounted modular boiler allowing heat exchange to occur of boiler water into steam. A condensation steam turbine with generator set will utilise the steam to generate up to 26,500 MWh of electricity (gross) per annum for the National Grid. No users of waste heat have been identified, however the plant will be constructed for CHP (combined heat and power) ready operation so that if future outlets for the heat arise, the plant can be easily adapted. The boiler includes a heat recovery unit which will provide pre-heating of combustion air in order to improve the energy efficiency of the process.

Water used within the boiler is currently used as single pass, with storage by sub-surface storage tank and subsequent removal off-site by licenced contractor. An improvement condition will require the operator to reconsider this position (following a period of operational data) which relates to the water hardness experienced within the location of the facility. Surface water run-off will be discharged to an unnamed brook via an interceptor. There are no discharges of process water to sewer or controlled water.

The existing stack height of 26 meters will remain. Abatement of incineration gases will be provided utilising a dry flue gas cleaning system which will incorporate lime and activated carbon (for control of acid gases and dioxins), ceramic filtration (for particulate matter) and selective non-catalytic reduction [SNCR] (for the control of NOx). Continuous (and periodic) monitors will measure air emissions in order to ensure compliance with limits specified within schedule 3 of this permit.

The schedules specify the changes made to the permit.

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

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/JP3132LH/A001 determined	07/11/2006	
Application for variation (EPR/JP3132LH/V002) received	Duly made 12/05/2010	
Variation (EPR/JP3132LH/V002) determined	17/08/2010	
Environment Agency led variation (EPR/JP3132LH/V003)	Issued 17/05/2011	
Environment Agency led variation (EPR/JP3132LH/V004)	Issued 18/02/2014	Variation to implement the changes introduced by the IED.

Status log of the permit		
Description	**Date**	**Comments**
Application for full transfer EPR/QP3337AD/T001 (of permit EPR/JP3132LH)	Duly made 31/07/2015	Application to transfer the permit in full to Amey LG Limited.
Transfer EPR/QP3337AD/T001 determined	Effective 15/09/2015	Full transfer of permit to permit number EPR/QP3337AD
Variation and Consolidation (EPR/QP3337AD/V002) application	Duly made 12/02/2016	
Variation and Consolidation (EPR/QP3337AD/V002)	Determined 07/06/16	
Variation and Consolidation (EPR/QP3337AD/V003) application	Duly made 31/05/17	Change technology from Gasification to Moved Bed (direct burn incineration)
Response to Schedule 5 Notice (requiring further information)	Response dated 07/07/2017 and 12/07/2017	Response to notice dated 16/06/2017
Additional Information	09/08/2017	Email confirming reporting reference conditions (incineration)
	06/09/2017	AQIA Forest Road EP Variation rev3
	22/09/2017	Confirmation that the CEMs monitoring will include Ammonia and N_2O monitoring
	20/10/2017	Confirmation of separate abatement feed / injection and abnormal emissions for HCL (at receptor)
Variation and Consolidation (EPR/QP3337AD/V003)	Determined 15/11/2017	

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/QP3337AD

Issued to

Amey LG Limited ("the operator")

whose registered office is

The Sherard Building
Edmund Halley Road
Oxford
OX4 4DQ

company registration number **03612746**

to operate a regulated facility at

Isle of Wight Waste Recovery Park
Forest Road
Newport
Isle of Wight
PO30 5YS

to the extent set out in the schedules.

The notice shall take effect from 15/11/2017

Name	Date
Philip Lamb	**15/11/2017**

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/QP3337AD

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/QP3337AD/V003 authorising,

Amey LG Limited ("the operator"),

whose registered office is

The Sherard Building
Edmund Halley Road
Oxford
OX4 4DQ

company registration number 03612746

to operate a regulated facility at

Isle of Wight Waste Recovery Park
Forest Road
Newport
Isle of Wight
PO30 5YS

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

Name	Date
Philip Lamb	**15/11/2017**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

1.2.1 For activity AR1 referenced in schedule 1, table S1.1 the operator shall:

(a) take appropriate measures to ensure that energy is recovered with a high level of energy efficiency and energy is used efficiently in the activities.

(b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and

(c) take any further appropriate measures identified by a review.

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

1.2.3 The operator shall review the viability of Combined Heat and Power (CHP) implementation at least every 4 years, or in response to any of the following factors, whichever comes sooner:

(a) new plans for significant developments, if they are located on the Isle of Wight and within 15km of the installation;

(b) changes to the Local Plan;

(c) changes to the DECC 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 For activity AR1, referenced in schedule 1, table S1.1 the operator shall:

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

(b) maintain records of raw materials and water used in the activities;

(c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and

(d) take any further appropriate measures identified by a review.

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

1.4.1 The operator shall take appropriate measures to ensure that:

(a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and

(b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

(c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

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

2 Operations

2.1 Permitted activities

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

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

2.2 The site

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

2.3 Operating techniques

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

2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan , and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

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

2.3.4 Waste shall only be accepted if:

(a) it is of a type and quantity listed in schedule 2 tables S2.2, S2.3, S2.4 and S2.5; and

(b) it conforms to the description in the documentation supplied by the producer or holder; and

(c) it having been separately collected for recycling, it is subsequently unsuitable for recovery by recycling.

2.3.5 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.

2.3.6 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.

2.3.7 Waste shall not be charged, or shall cease to be charged, if:

(a) the boiler radiation, first pass [at the height of the end of the inner dividing wall] temperature is below, or falls below, 850°C; or

(b) any continuous emission limit value in schedule 3 table S3.1(a) is exceeded; or

(c) any continuous emission limit value in schedule 3 table S3.1 is exceeded, other than under abnormal operating conditions; or

(d) monitoring results required to demonstrate compliance with any continuous emission limit value in schedule 3 table S3.1 are unavailable other than under abnormal operating conditions; or

(e) there is a stoppage, disturbance or failure of the activated carbon abatement system, other than under abnormal operating conditions.

2.3.8 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 2.3.7 is maintained as long as incompletely burned waste is present in the combustion chamber. Unless the temperature specified in condition 2.3.7 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.

2.3.9 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 rapidly as possible.

2.3.11 Where, during “ abnormal operation”, on an incineration line, any of the following situations arise, waste shall cease to be charged on that line until normal operation can be restored:

(a) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 due to disturbances or failures of the abatement plant, or continuous emission monitor(s) are out of service, as the case may be, for a total of 4 hours uninterrupted duration;

(b) there is a technically unavoidable stoppage, disturbance or failure of the activated carbon abatement system for a total of 4 hours uninterrupted duration;

(c) the cumulative duration of “ abnormal operation” periods over 1 calendar year has reached 60 hours;

(d) continuous measurement shows that an emission exceeds any emission limit value in schedule 3 table S3.1 (a) due to disturbances or failures of the abatement systems.

(e) continuous emission monitors or alternative techniques to demonstrate compliance with the emission limit value(s) for particulates, TOC and / or CO in schedule 3 table S3.1 (a) as agreed in writing with the Environment Agency, are unavailable.

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 the Environment Agency;

(c) when a period of four hours has elapsed from the start of the “abnormal operation”;

(d) when, in any calendar year, an aggregated period of 60 hours “abnormal operation” has been reached on an incineration line.

2.3.13 Bottom ash and APC residues shall not be mixed.

2.4 Improvement programme

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

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

2.5 Pre-operational conditions

2.5.1 The operations specified in schedule 1 table S1.4 shall not commence until the measures specified in that table 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 and S3.2 except in “abnormal operation”, when there shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1(a), 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.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan

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.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.2.4 The Operator shall carry out monitoring of soil and groundwater in accordance with IED articles 14(1)(b), 14(1)(e) and 16(2) to the protocol approved in writing with the Environment Agency under IC6.

3.3 Odour

3.3.1 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 Noise and vibration

3.4.1 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.

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to 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.

3.5 Monitoring

3.5.1 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

3.5.2 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.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Environment Agency. Newly installed CEMs, or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in schedule 3 table S3.1. The CEM shall also be able to measure instantaneous values over the ranges which are to be expected during all

operating conditions. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.1(a), and 3.2 unless otherwise agreed in writing by the Environment Agency.

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

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

- Carbon monoxide 10%
- Sulphur dioxide 20%
- Oxides of nitrogen (NO & NO2 expressed as NO2) 20%
- Particulate matter 30%
- Total organic carbon (TOC) 30%
- Hydrogen chloride 40%

(b) valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods) from the measured values after having subtracted the value of the confidence intervals in condition 3.5.5 (a);

(c) where it is necessary to calibrate or maintain the monitor and this means that data are not available for a complete half-hour period , the half-hourly average shall in any case be considered valid if measurements are available for a minimum of 20 minutes during the half-hour. The number of half-hourly averages so validated shall not exceed 5 per day;

(d) daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value shall be considered valid if no more than five half-hourly average values in any day have been determined not to be valid;

(e) no more than ten daily average values per year shall be determined not to be valid.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.6.2 The operator shall:

(a) if notified by the Environment Agency, submit to the Environment Agency for approval within the period specified, a pests management plan which identifies and minimises risks of pollution from pests;

(b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.7 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.

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 For activity AR1, referenced in schedule 1, table S1.1 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. The report(s) shall include as a minimum:

(a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;

(b) the annual production /treatment data set out in schedule 4 table S4.2; and

(c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

(d) the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall, as a minimum requirement (as required by 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 (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 the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

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

Where the operator is a registered company:

(a) any change in the operator's trading name, registered name or registered office address; and

(b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

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

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

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

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

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

4.4 Interpretation

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

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

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	S5.1 Part A(1)(b)	The incineration of non-hazardous waste in a waste incineration plant with a capacity of 3 tonnes per hour or more.	From receipt of waste to emission of exhaust gas and disposal of waste arising. Waste types and quantities as specified in Table S2.2 and S2.3 of this permit. Incineration within a 'Moved Bed Incinerator' with maximum volume flow of 6.1 Nm^3/s (at reference conditions of 273K, 6% oxygen, dry gas).
	Directly Associated Activities		
AR2	Electricity Generation	Generation of electrical power using a steam turbine from energy recovered from the flue gases.	From receipt of steam to export of electricity
AR3	Surface water drainage	Transfer of surface water run-off into site drainage system	Uncontaminated surface water run-off transfer to site drainage system
	Description of activities for waste operations		**Limits of activity**
AR4	Mechanical Treatment and Materials Recycling Facility	R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced) R3: Recycling/reclamation of organic substances which are not used as solvents R4: Recycling/reclamation of metals and metal compounds R5: Recycling/reclamation of other inorganic materials	From receipt of waste to transfer of treated waste to the RDF bunker and export of recyclable materials off-site. Waste types and quantities as specified in Table S2.2 of this permit.
AR5			From receipt of waste to removal from site. Treatment consisting of sorting, separation, screening, baling and shredding. Waste types and quantities as specified in Table S2.4 of this permit.
AR6		R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Waste storage during maintenance periods. Waste types and quantities as specified in Table S2.2 of this permit.
AR7		R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	Food waste storage Waste types and quantities as specified in Table S2.5 of this permit.
	Description of activities for water discharges		**Limits of activity**
AR8	Discharge of surface water	Discharge of surface water from waste operation area of the site	Discharge of surface water from emission point W1

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application	Application documents: Section II – summary of proposed changes Section III – Supporting information Excluding references to Gasification plant (as replaced by incineration plant covered within Application for variation EPR/QP3337AD/V003).	12/02/16
Response to Schedule 5 Notice dated 03/03/16	The response to questions 6 and 7 Odour management plan	24/03/16
Response to schedule 5 notice dated 06/04/16	Fire prevention plan	26/04/16
Application for variation EPR/QP3337AD/V003	Variation application documents : change technology from Gasification to Moved Bed Incinerator (direct burn incineration)	31/05/17
Response to Schedule 5 Notice dated 16/06/17	All – part 1:	07/07/17
	All – part 2:	12/07/17
Additional Information	Email confirming reporting reference conditions (incineration)	09/08/17
	AQIA Forest Road EP Variation rev3	06/09/17
	Confirmation that the CEMs monitoring will include Ammonia and N_2O monitoring	22/09/17
	Confirmation of separate abatement feed / injection and abnormal emissions for HCL (at receptor)	20/10/17

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	The Operator shall submit a written report to the Environment Agency on the implementation of its Environmental Management System and the progress made in the certification of the system by an external body or if appropriate submit a schedule by which the EMS will be certified.	Within 12 months of the date on which waste is first burnt.
IC2	The Operator shall submit a written proposal to the Environment Agency to carry out tests to determine the size distribution of the particulate matter in the exhaust gas emissions to air from emission point A5, identifying the fractions within the PM_{10}, and $PM_{2.5}$ ranges. On receipt of written approval from the Environment Agency to the proposal and the timetable, the Operator shall carry out the tests and submit to the Environment Agency a report on the results.	Within 6 months of the completion of commissioning of activity reference AR1.
IC3	The Operator shall submit a written report to the Environment Agency on the commissioning of activity references AR4 – AR7. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions and confirm that the Environmental Management System (EMS) has been updated accordingly.	Within 4 months of the completion of commissioning of activity references AR4 – AR7.
IC4	The Operator shall submit a written report to the Environment Agency on the commissioning of activity reference AR1. The report shall summarise the environmental performance of the plant as installed against the design parameters set out in the Application. The report shall also include a review of the performance of the facility against the conditions of this permit and details of procedures developed during commissioning for achieving and demonstrating compliance with permit conditions and confirm that the Environmental Management System (EMS) has been updated accordingly.	Within 4 months of the completion of commissioning of activity reference AR1.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC5	The Operator shall carry out checks to verify the residence time, minimum temperature and oxygen content of the exhaust gases in the furnace whilst operating under the anticipated most unfavourable operating conditions. The results shall be submitted in writing to the Environment Agency and include a comparison with the CFD modelling submitted by pre-operational condition PO5.	Within 4 months of the completion of commissioning of activity reference AR1.
IC6	The Operator shall submit a written report to the Environment Agency describing the performance and optimisation of: • The Selective Non Catalytic Reduction (SNCR) system and combustion settings to minimise oxides of nitrogen (NO_x).The report shall include an assessment of the level of NO_x, N_2O and NH_3 emissions that can be achieved under optimum operating conditions. • The lime injection system for minimisation of acid gas emissions • The carbon injection system for minimisation of dioxin and heavy metal emissions.	Within 4 months of the completion of commissioning of activity reference AR1.
IC7	The Operator shall submit the written protocol referenced in condition 3.2.4 for the monitoring of soil and groundwater for approval by the Environment Agency. The protocol shall demonstrate how the Operator will meet the requirements of Articles 14(1)(b), 14(1)(e) and 16(2) of the IED. The procedure shall be implemented in accordance with the written approval from the Agency.	Within 12 months from completion of commissioning of activity reference AR1.
IC8	The Operator shall carry out an assessment of the impact of emissions to air of the following component metals subject to emission limit values : Cr(VI) and As. A report on the assessment shall be made to the Environment Agency. Emissions monitoring data obtained during the first year of operation shall be used to compare the actual emissions with those assumed in the impact assessment submitted with the Application. An assessment shall be made of the impact of each metal against the relevant environmental standard (ES). In the event that the assessment shows that an ES can be exceeded, the report shall include proposals for further investigative work.	15 months from the completion of commissioning of activity reference AR1.
IC9	The Operator shall submit a written summary report to the Environment Agency to confirm by the results of calibration and verification testing that the performance of Continuous Emission Monitors for parameters as specified in Table S3.1 and Table S3.1(a) complies with the requirements of BS EN 14181, specifically the requirements of QAL1, QAL2 and QAL3.	Initial calibration report to be submitted to the Agency within 3 months of completion of commissioning of activity reference AR1. Full summary evidence compliance report to be submitted within 18 months of completion of commissioning of activity reference AR1.
IC10	The Operator shall undertake a review of water usage and management throughout the site with consideration of BAT (Best Available Techniques), and provide a written report to the Environment Agency of the review. The report shall include:- • An updated water balance diagram. • A feasibility study for options to use water more efficiently within the Installation, including but not limited to, the replacement of the single pass water system with a multi-pass water system. Where efficiency measures cannot be made, the operator shall provide detailed justification (with evidence such as cost benefit analysis) for not implementing such measures. Where any improvement measures are identified, the operator shall provide a timescale for their implementation for written approval by the Environment Agency.	Within 12 months from completion of commissioning of activity reference AR1.

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO1	Prior to the commencement of commissioning, the Operator shall send a summary of the updated site Environment Management System (EMS) to the Environment Agency and make available for inspection all documents and procedures which form part of the EMS. The EMS shall be developed in line with the requirements set out in Section 1 of How to comply with your environmental permit – Getting the basics right. The documents and procedures set out in the EMS shall form the written management system referenced in condition 1.1.1 (a) of the permit.
PO2	Prior to the commencement of commissioning of activity references AR4 – AR7, the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO3	Prior to the commencement of commissioning of activity reference AR1, the Operator shall provide a written commissioning plan, including timelines for completion, for approval by the Environment Agency. The commissioning plan shall include the expected emissions to the environment during the different stages of commissioning, the expected durations of commissioning activities and the actions to be taken to protect the environment and report to the Environment Agency in the event that actual emissions exceed expected emissions. Commissioning shall be carried out in accordance with the commissioning plan as approved.
PO4	At least three months before commissioning of activity reference AR1, the Operator shall submit a written report to the Environment Agency specifying arrangements for continuous and periodic monitoring of emissions to air to comply with Environment Agency guidance notes M1 and M2. The report shall include the following: • Plant and equipment details, including accreditation to MCERTS • Methods and standards for sampling and analysis • Details of monitoring locations, access and working platforms
PO5	Prior to the commencement of commissioning activity reference AR1, the Operator shall submit to the Environment Agency for approval a protocol for the sampling and testing of incinerator bottom ash for the purposes of assessing its hazard status. Sampling and testing shall be carried out in accordance with the protocol as approved.
PO6	After completion of furnace design and at least three calendar months before commencement of commissioning of activity reference AR1, the operator shall submit a written report to the Agency of the details of the computational fluid dynamic (CFD) modelling. The report shall demonstrate whether the design combustion conditions comply with the residence time and temperature requirements as defined by Chapter IV and Annex VI of the IED.
PO7	Prior to the commencement of commissioning of activity references AR4 – AR7, the Operator shall confirm any relevant changes to the odour management plan (as referred to within table S1.2 of this permit) and submit an updated odour management plan (where relevant) to the Environment Agency for approval.
PO8	Prior to the commencement of commissioning of activity reference AR1, the Operator shall confirm details of the construction of the subsurface storage tank to the Environment Agency for approval in writing. Confirmation shall include but not be limited to containment measures of double skinned / tank reinforcement, and a leak detection system linked to the installation's control office.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Fuel Oil	< 0.1% sulphur content

Table S2.2 Permitted waste types and quantities for mechanical treatment plant and then incineration after treatment.	
Maximum quantity	**47,400 tonnes per year for mechanical treatment. 44,000 tonnes per year of waste for incineration after treatment. 2000 tonnes per year for storage prior to transfer off-site.**
Waste code	**Description**
15	**Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 03	wooden packaging
15 01 05	composite packaging
15 01 06	Mixed packaging
15 02	**absorbents, filter materials, wiping cloths and protective clothing**
15 02 03	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
17	**Construction and demolition wastes (including excavated soil from contaminated sites)**
17 02	**wood, glass and plastic**
17 02 01	wood
17 02 03	plastic
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 02	**wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)**
19 02 03	premixed wastes composed only of non-hazardous wastes
19 02 10	combustible wastes other than those mentioned in 19 02 08 and 19 02 09
19 05	**wastes from aerobic treatment of solid wastes**
19 05 01	non-composted fraction of municipal and similar wastes
19 05 02	non-composted fraction of animal and vegetable waste
19 05 03	off-specification compost
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 07	wood other than that mentioned in 19 12 06
19 12 10	combustible waste (refuse derived fuel)
19 12 12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11

Table S2.2 Permitted waste types and quantities for mechanical treatment plant and then incineration after treatment.	
Maximum quantity	**47,400 tonnes per year for mechanical treatment. 44,000 tonnes per year of waste for incineration after treatment. 2000 tonnes per year for storage prior to transfer off-site.**
Waste code	**Description**
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 38	wood other than that mentioned in 20 01 37
20 01 39	plastics
20 01 99	other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection)
20 02	**garden and park wastes (including cemetery waste)**
20 02 01	biodegradable waste
20 02 03	other non-biodegradable wastes
20 03	**other municipal wastes**
20 03 01	mixed municipal waste
20 03 02	waste from markets
20 03 03	street-cleaning residues
20 03 07	bulky waste

Table S2.3 Permitted waste types and quantities for incineration	
Maximum quantity	**44,000 tonnes per year including waste from onsite mechanical treatment plant**
Waste code	**Description**
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 10	combustible waste (refuse derived fuel)
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 99	other fractions not otherwise specified (comprising only of non-clinical human and animal offensive/hygiene waste (not arising from healthcare and/or related research i.e. not including waste from natal care, diagnosis, treatment or prevention of disease) which is not subject to special requirements in order to prevent infection)

Table S2.4 Permitted waste types and quantities for materials recovery facility	
Maximum quantity	**32,600 tonnes per year**
Waste code	**Description**
15	**Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified**
15 01	**packaging (including separately collected municipal packaging waste)**
15 01 01	paper and cardboard packaging
15 01 02	plastic packaging
15 01 03	wooden packaging
15 01 04	metallic packaging
15 01 05	composite packaging
15 01 06	mixed packaging
15 01 07	glass packaging
15 01 09	textile packaging
19	**Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use**
19 12	**wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified**
19 12 01	paper and cardboard
19 12 02	ferrous metal
19 12 03	non-ferrous metal
19 12 04	plastic and rubber
19 12 10	combustible waste (refuse derived fuel)
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 01	paper and cardboard
20 01 08	biodegradable kitchen and canteen waste
20 01 10	clothes
20 01 11	textiles
20 01 39	plastics
20 01 40	metals

Table S2.5 Permitted waste types and quantities for storage	
Maximum quantity	**5000 tonnes per year**
Waste code	**Description**
20	**Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions**
20 01	**separately collected fractions (except 15 01)**
20 01 08	biodegradable kitchen and canteen waste

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard(s) or method(s)**
A1 – A4	No emissions permitted	Previous gasification plant emission points	-	-	**-**	**-**
A5	Particulate matter	Incineration exhaust gases	30 mg/m^3	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3
			10 mg/m^3	daily average		
	Total Organic Carbon (TOC)		20 mg/m^3	½-hr average		
			10 mg/m^3	daily average		
	Hydrogen chloride		60 mg/m^3	½-hr average		
			10 mg/m^3	daily average		
	Hydrogen fluoride		2 mg/m^3	periodic over minimum 1-hour period	Quarterly in first year. Then Bi-annual	BS ISO 15713
	Carbon monoxide		150 mg/m^3	95% of all 10-minute averages in any 24-hour period	Continuous measurement	BS EN 14181 and BS EN 15267-3
			50 mg/m^3	daily average		
	Sulphur dioxide		200 mg/m^3	½-hr average		
			50 mg/m^3	daily average		
	Oxides of nitrogen (NO and NO_2 expressed as NO_2)		400 mg/m^3	½-hr average		
			200 mg/m^3	daily average		
	Ammonia		20 mg/m^3 Note 1	daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3
			No limit set	½-hr average		
	Nitrous oxide (N_2O)		No limit set	½-hr average and daily average	Continuous measurement	BS EN 14181 and BS EN 15267-3

	Cadmium & thallium and their compounds (total)		0.05 mg/m^3	periodic over minimum 30 minute, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 14385
	Mercury and its compounds		0.05 mg/m^3			BS EN 13211
	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total)		0.5 mg/m^3			BS EN 14385
	Dioxins / furans (I-TEQ)		0.1 ng/m^3	periodic over minimum 6 hours, maximum 8 hour period	Quarterly in first year. Then Bi-annual	BS EN 1948 Parts 1, 2 and 3
	Dioxins / furans (WHO-TEQ Humans / Mammals)		No limit set			
	Dioxins / furans (WHO-TEQ Fish)					
	Dioxins / furans (WHO-TEQ Birds)					
	Dioxin-like PCBs (WHO-TEQ Humans / Mammals)					BS EN 1948-4
	Dioxin-like PCBs (WHO-TEQ Fish)					
	Dioxin-like PCBs (WHO-TEQ Birds)					
	Specific individual poly-cyclic aromatic hydrocarbons (PAHs), as specified in Schedule 6.					BS ISO 11338 Parts 1 and 2.
A6	No parameters set	Carbon filter for odour abatement on waste processing building	No limit set	-	-	-
A7		Supplementary fuel tank vent				
A8		Lime and activated carbon storage silo vents				
A9		Ash quench steam release vent				

Note 1 Limit subject to change following the completion of improvement condition IC5.

Table S3.1(a) Point source emissions to air during abnormal operation of incineration plant – emission limits and monitoring requirements						
Emission point ref. & location	**Parameter**	**Source**	**Limit (including unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
A5	Particulate matter	Incineration exhaust gases	150 mg/m^3	½-hr average	Continuous measurement	BS EN 14181 and BS EN 15267-3 during abatement plant failure
	Total Organic Carbon (TOC)		20 mg/m^3	½-hr average	Continuous measurement	
	Carbon monoxide		150 mg/m^3	95% of all 10-minute averages in any 24-hour period	Continuous measurement	

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
W1 (Emission to unnamed Brook as shown on figure 2 in application EPR/QP3337AD/V002)	Uncontaminated surface water run off (comprising roof water drainage and drainage from uncontaminated areas of the site only) via interceptor	No parameters set	No limits 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**
No process releases	-	-	-	-	-	-

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**
As identified in Application EPR/JP3132LH/A001	Wind Speed and Direction	Continuous	Anemometer	
Location close to the Combustion Chamber inner wall or as identified and justified in Application.	Temperature (° C)		Traceable to national standards	As agreed in writing with the Agency.
A5	Exhaust gas temperature			As agreed in writing with the Agency.
	Exhaust gas pressure			As agreed in writing with the Agency.
	Exhaust gas oxygen content		BS EN 15267-3 BS EN 14181	
	Exhaust gas water vapour content			Unless gas is dried before analysis of emissions.

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	**Parameter**	**Limit**	**Monitoring frequency**	**Monitoring standard or method ***	**Other specifications**
Bottom Ash	LOI	<5%	Monthly in the first year of operation. Then Quarterly	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.				
	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		
APC Residues	Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs.		Monthly in the first year of operation. Then Quarterly		

Table S3.5 Residue quality					
Emission point reference or source or description of point of measurement	**Parameter**	**Limit**	**Monitoring frequency**	**Monitoring standard or method ***	**Other specifications**
	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		

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

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Emissions to air Parameters as required by condition 3.5.1	A5	Quarterly	1 Jan, 1 Apr, 1 Jul and 1 Oct
LOI Parameters as required by condition 3.5.1	Bottom Ash	Quarterly (but monthly for the first year of operation (for activity AR1, Table S1.1)	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1			
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1		Before use of a new disposal or recycling route	
Metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) and their compounds, dioxins/furans and dioxin-like PCBs Parameters as required by condition 3.5.1	APC Residues	Quarterly (but monthly for the first year of operation (for activity AR1, Table S1.1)	1 Jan, 1 Apr, 1 Jul and 1 Oct
Total soluble fraction and metals (Antimony, Cadmium, Thallium, Mercury, Lead, Chromium, Copper, Manganese, Nickel, Arsenic, Cobalt, Vanadium, Zinc) soluble fractions Parameters as required by condition 3.5.1		Before use of a new disposal or recycling route	
Functioning and monitoring of the incineration plant as required by condition 4.2.2	Activity AR1, Table S1.1	Annually	1 Jan

Table S4.2: Annual production/treatment	
Parameter	**Units**
Total Waste Incinerated	tonnes

Table S4.2: Annual production/treatment	
Parameter	**Units**
Electrical energy produced	kWh
Thermal energy produced e.g. steam for export	kWh
Electrical energy exported	kWh
Electrical energy used on installation	kWh
Waste heat utilised by the installation	kWh

Table S4.3 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Electrical energy exported, imported and used at the installation	Quarterly	kWh / tonne of waste incinerated
Fuel oil consumption		Kg / tonne of waste incinerated
Mass of Bottom Ash produced		Kg / tonne of waste incinerated
Mass of APC residues produced		Kg / tonne of waste incinerated
Mass of Other solid residues produced		Kg / tonne of waste incinerated
Urea consumption		Kg / tonne of waste incinerated
Activated Carbon consumption		Kg / tonne of waste incinerated
Lime consumption		Kg / tonne of waste incinerated
Water consumption		Kg / tonne of waste incinerated
Periods of abnormal operation		No of occasions and cumulative hours for current calendar year for each line.

Table S4.4 Reporting forms		
Media/parameter	**Reporting format**	**Date of form**
Air	Form air 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Water and raw material usage	Form WU/RM1 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Energy usage	Form energy 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Waste disposal/recovery	Form R1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Residue quality	Form residue 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY
Other performance indicators	Form performance 1 or other form as agreed in writing by the Environment Agency	DD/MM/YY

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	**EPR/QP3337AD**
Name of operator	**Amey LG Limited**
Location of Facility	**Isle of Wight Waste Recovery Park**
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

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

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

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

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“abnormal operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the emissions into the air and the discharges of waste water may exceed the prescribed emission limit values

“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.

“bottom ash” means ash falling which is generated during the incineration process and which is mechanically moved along the incinerator bed prior to extraction by an ash conveyor.

“CEM” Continuous emission monitor

“CEN” means Commité Européen de Normalisation

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

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

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

“disposal”. Means any of the operations provided for in Annex 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 limit.

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

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

“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.

"shut down" is any period where the plant is being returned to a non-operational state and there is no waste being burned or agreed in writing with the Environment Agency.

"start up" is any period, where the plant has been non-operational, after igniting the auxiliary burner until waste has been fed to the plant in sufficient quantity along the bed and to initiate steady-state conditions or agreed in writing with the Environment Agency.

"TOC" means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC.

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

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

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

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

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

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

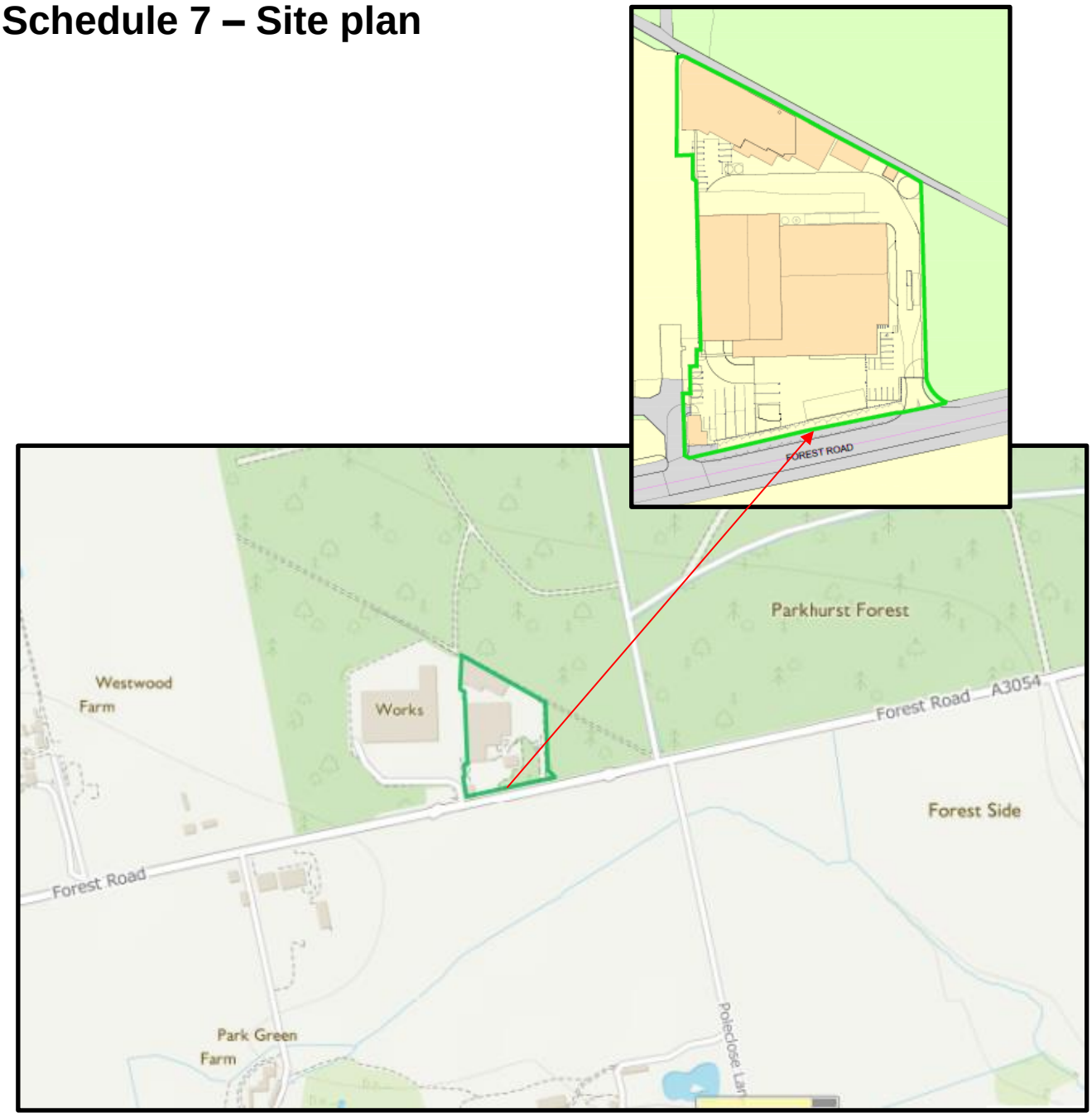
TEF schemes for dioxins and furans				
Congener	**I-TEF**	**WHO-TEF**		
	1990	**2005**	**1997/8**	
		Humans / Mammals	**Fish**	**Birds**
Dioxins				
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	0.5	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01

TEF schemes for dioxins and furans				
Congener	**I-TEF**	**WHO-TEF**		
	1990	**2005**	**1997/8**	
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.001	<0.001
OCDD	0.001	0.0003	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.03	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.3	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8_HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.001	0.0003	0.0001	0.0001

TEF schemes for dioxin-like PCBs			
Congener	**WHO-TEF**		
	2005	**1997/8**	
	Humans / mammals	**Fish**	**Birds**
Non-ortho PCBs			
3,4,4',5-TCB (81)	0.0001	0.0005	0.1
3,3',4,4'-TCB (77)	0.0003	0.0001	0.05
3,3',4,4',5 - PeCB (126)	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(169)	0.03	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	0.00003	<0.000005	0.0001
2,3,4,4',5-PeCB (114)	0.00003	<0.000005	0.0001
2,3',4,4',5-PeCB (118)	0.00003	<0.000005	0.00001
2',3,4,4',5-PeCB (123)	0.00003	<0.000005	0.00001
2,3,3',4,4',5-HxCB (156)	0.00003	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (157)	0.00003	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (167)	0.00003	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (189)	0.00003	<0.000005	0.00001

“year” means calendar year ending 31 December.

Schedule 7 – Site plan



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