

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Saltend Cogeneration Company Limited

Saltend Cogeneration Plant
Saltend Power Station
Hedon Road
Hull
HU12 8GA

Variation application number

EPR/QP3539LE/V004

Permit number

EPR/QP3539LE

Saltend Cogeneration Plant

Permit number EPR/QP3539LE

Introductory note

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

Under the Environmental Permitting (England & Wales) Regulations 2010 (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 and contains all conditions relevant to this permit.

The requirements of the Industrial Emissions Directive (IED) 2010/75/EU are given force in England through the Environmental Permitting (England and Wales) Regulations 2010 (the EPR) (as amended).

This Permit, for the operation of large combustion plant (LCP), as defined by articles 28 and 29 of the Industrial Emissions Directive (IED), is varied by the Environment Agency to implement the special provisions for LCP given in the IED, by the 1 January 2016 (Article 82(3)). The IED makes special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V.

As well as implementing Chapter III of IED, the consolidated variation notice takes into account and brings together in a single document all previous variations that relate to the original permit issued. It also modernises all conditions to reflect the conditions contained in our current generic permit template.

The Operator has chosen to operate this LCP 299, LCP 300, LCP 301 and LCP 302 under the Transitional National Plan (TNP) compliance route and LCP 298 is under IED ELVs

The variation notice uses updated LCP numbers in accordance with the most recent DEFRA LCP reference numbers. The LCP references have changed as follows:

- LCP 252 is changed to LCP 300;
- LCP 253 is changed to LCP 301;
- LCP 254 is changed to LCP 302;
- LCP 250 is changed to LCP 298; and
- LCP 251 is changed to LCP 299.

The net thermal input of the LCPs are as follows: LCP 300, 301 and 302 – are 727.7MWth CCGT with 65m stacks, LCP 298 is a 79.72MWth start up boiler with a 45m stacks and LCP 299 is a 153.19 MWth secondary boiler with a 45m stack.

This variation permits the operation of LCP 300 or LCP 302 in the Trip to House Load mode. This will be upon notification of a system-wide emergency (or similar) from the National grid, reducing either one or both of the operational LCP's 300 and 301 to approximately 100MW electrical output to ensure the continuation of the supply of electricity to the Saltend Chemicals Park adjacent. The operating mode will then also be available to the National Grid for Black Start operation. Improvement condition IC11 has been added for the operator to assess the impacts of operating in this mode to confirm that it will not have significant environmental impacts.

The rest of the installation is unchanged and continues to be operated as follows:

The main features of the installation are as follows.

The Saltend Cogeneration Plant is located on a 10.5 hectare site adjacent to the Saltend Chemicals Park, which traverses along the north and eastern boundary of the site. Beyond the Saltend Chemicals Park to the north lies the A1033 Hedon Road with a number of residential properties which border the business park and a variety of small factory units and garages. Adjacent to this is the Yorkshire Water Limited Wastewater Treatment Works. Further to the west beyond the Saltend Chemicals Park at approximately 7 km distant lies the city of Hull, which lies in turn within the administrative area of Hull City Council. Immediately to the west of the site is Fleet Drain, which runs south into the Humber Estuary. Further to the west is the Queen Elizabeth and King George dock where cooling water is respectively abstracted and discharged. Directly to the south of the site is the Humber Estuary and to the south-east is the village of Paull at approximately 1.1km from the site. The centre of the site is at National Grid Reference TA160279.

The installation is operated by Saltend Cogeneration Company Limited (SCCL) and generates 1200MW of energy burning natural gas. Electricity is exported primarily to the National Grid Transmission System with an additional supply of electricity and steam going to the Saltend Chemicals Park.

The primary process at the installation is the generation of electricity in a combined cycle gas turbine (CCGT) cogeneration plant using three large gas turbines with low NOx burners, one steam turbine and one heat recovery steam generator (HRSG). In addition to the electricity exported to the National Grid transmission system the cogeneration plant also produces electricity and up to 240 tonnes/hour of steam for the adjacent Saltend Chemicals Park. There is also a secondary gas boiler (150 MW thermal input) providing steam for the Saltend Chemicals Park and a start-up gas boiler (80 MW thermal input) to start one of the CCGT units. This unit is also used for auxiliary heating and gland sealing.

The CCGT plant uses an indirect water cooling system which incorporates forced draft low level cooling towers with make up water abstracted from the King George Dock. Discharge from the cooling towers and boiler is treated prior to discharge via above/underground pipe-work to the Queen Elizabeth dock.

The water treatment plant uses towns' water providing water for steam generation and incorporates reverse osmosis and ion exchange units.

Gas is brought to the site via an underground pipeline via the National Transmission System (NTS) to an above ground installation (AGI). The AGI and gas pipeline are maintained by SCCL.

Other plant and activities at the site include: -

- The storage and site distribution of a variety of raw materials including chemicals used in the treatment of effluent from the onsite sewage treatment plant, treatment of circulating cooling water and demineralised water used for the generation of steam.
- Associated turbine equipment including generators, associated turning gear and transformers for the generation and export of electricity.
- Three oil lubrication systems including storage tanks provide lubrication for the gas turbine, generator, steam turbine and associated turning gear.

Other on site activities include maintenance and disposal of waste from plant operation and cleaning activities.

It is anticipated that SCCL will procure equipment to facilitate the provision of 'black start' services to the National Grid in the event of a grid collapse.

The Humber Estuary is a special area of Conservation (SAC) and a Special Protection Area (SPA) but does not receive any direct discharges from the prescribed processes at the installation. All process and surface waters are directed to the storm water basin prior to treatment and final discharge into the Queen Elizabeth Dock. Export of electricity from the installation started at the beginning of 2000.

The Operator operates an environmental management system with accreditation to ISO14001.

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 received	Duly made 22/03/2006	
Additional information received	30/08/2006	
Additional information received	08/02/2007	
Additional information received	14/02/2007	
Permit determined EPR/QP3539LE (PAS Billing ref. QP3539LE)	25/05/2007	Permit issued to Saltend Cogeneration Company Limited
Variation determination EPR/QP3539LE/V002 (PAS Billing ref: MP3137ZZ)	11/03/2013	Environment Agency Initiated Variation, to incorporate Eel Regulations improvement condition.
Variation determined EPR/QP3539LE/V003 (Billing Reference) (PAS Billing ref: MP3735WA)	Issued 29/09/14	Environment Agency Initiated Variation issued, to add an improvement condition requiring a cost benefit appraisal to ensure compliance with the Eels Regulations. Effective 1/10/14.
Regulation 60 Notice sent to the Operator	31/10/14	Issue of a Notice under Regulation 60(1) of the EPR. Environment Agency Initiated review and variation to vary the permit under IED to implement the special provisions for LCP under Chapter III, introducing new Emission Limit Values (ELVs) applicable to LCP, referred to in Article 30(2) and set out in Annex V. The permit is also updated to modern conditions
Regulation 60 Notice response	31/03/15	Response received from the Operator.
Additional information received	17/07/15	Response to request for further information (RFI) dated 18/05/15.
Additional information received	05/10/15	Response to request for further information (RFI) dated 28/09/15.
Additional information received	20/10/15	Response to request for further information (RFI) dated 20/10/15
Additional information received	09/11/15	Response to request for further information (RFI) via telephone dated 06/11/15.
Variation determined EPR/QP3539LE/V004 (Billing ref: LP3034AL)	22/12/15	Varied and consolidated permit issued. Variation effective from 01/01/2016.

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/QP3539LE

Issued to

Saltend Cogeneration Company Limited (“the operator”)

whose registered office is

**Level 20
25 Canada Square
London
E14 5LQ
United Kingdom**

company registration number 3274929

to operate a regulated facility at

**Saltend Cogeneration Plant
Saltend Power Station
Hedon Road
Hull
HU12 8GA**

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
Anne Nightingale	22/12/2015

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of an Environment Agency initiated variation.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/QP3539LE

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/QP3539LE/V004 authorising,

Saltend Cogeneration Company Limited (“the operator”),

whose registered office is

**Level 20
25 Canada Square
London
E14 5LQ
United Kingdom**

company registration number 3274929

to operate an installation at

**Saltend Cogeneration Plant
Saltend Power Station
Hedon Road
Hull
HU12 8GA**

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

Under regulation 27(2) of the Regulations, standard rules [number(s)] are conditions of this permit.

Name	Date
Anne Nightingale	22/12/2015

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

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

1.3 Efficient use of raw materials

1.3.1 The operator shall:

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

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

1.4.1 The operator shall take appropriate measures to ensure that:

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

2.2 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 Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 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 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 the Environment Agency.
- 2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP 300 and LCP 302 operating in Trip to House Load mode. The activities shall not operate for more than 500 hours per year.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP 298. The activities shall operate for no more than 500 hours per year.
- 2.3.7 For the following activities referenced in schedule 1, table S1.1: LCP 300, LCP 301, LCP 302, 298 and LCP 299. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.4
- 2.3.8 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.
- 2.3.9 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.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Total annual emissions from the LCP emission points set out in schedule 3 tables S3.1 and S3.2 of a substance listed in schedule 3 table S3.3 shall not exceed the relevant limit in table S3.3.
- 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.

3.2 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.

3.3 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.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 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, S3.2;
 - (b) process monitoring specified in table S3.4.
- 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 continuous), 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), where available, unless otherwise agreed in writing by the Environment Agency.
- 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, S3.2, S3.3 and S3.4 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for the purposes of the Industrial Emissions Directive Chapter III

- 3.6.1 All monitoring required by this permit shall be carried out in accordance with the provisions of Annex V of the Industrial Emissions Directive.
- 3.6.2 If the monitoring results for more than 10 days a year are invalidated within the meaning set out in condition 3.6.7, the operator shall:
- (a) within 28 days of becoming aware of this fact, review the causes of the invalidations and submit to the Environment Agency for approval, proposals for measures to improve the reliability of the continuous measurement systems, including a timetable for the implementation of those measures; and
 - (b) implement the approved proposals.
- 3.6.3 Continuous measurement systems on emission points from the LCP shall be subject to quality control by means of parallel measurements with reference methods at least once every calendar year.
- 3.6.4 Unless otherwise agreed in writing by the Environment Agency in accordance with condition 3.6.5 below, the operator shall carry out the methods, including the reference measurement methods, to

use and calibrate continuous measurement systems in accordance with the appropriate CEN standards.

- 3.6.5 If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality shall be used, as agreed in writing with the Environment Agency.
- 3.6.6 Where required by a condition of this permit to check the measurement equipment, the operator shall submit a report to the Environment Agency in writing, within 28 days of the completion of the check.
- 3.6.7 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:
- for the continuous measurement systems fitted to the LCP release points defined in Table S3.1 the validated hourly, monthly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;
 - the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;
 - the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;
 - the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;
 - an invalid hourly average means an hourly average period invalidated due to malfunction of, or maintenance work being carried out on, the continuous measurement system. However, to allow some discretion for zero and span gas checking, or cleaning (by flushing), an hourly average period will count as valid as long as data has been accumulated for at least two thirds of the period (40 minutes). Such discretionary periods are not to exceed more than 5 in any one 24-hour period unless agreed in writing. Where plant may be operating for less than the 24-hour period, such discretionary periods are not to exceed more than one quarter of the overall valid hourly average periods unless agreed in writing; and
 - any day, in which more than three hourly average values are invalid shall be invalidated.

4 Information

4.1 Records

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

4.2 Reporting

- 4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.
- 4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. 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 resource efficiency metrics 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; and
 - (d) where condition 2.3.5 and 2.3.6 applies the hours of operation in any year;
- 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 For the following activities referenced in schedule 1, table S1.1: LCP300, 301, 302 and LCP 299. Unless otherwise agreed in writing with the Environment Agency, within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form IED RTA1, listed in table S4.4, the information specified on the form relating to the site's mass emissions,

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) and 4.3.1 (b)(i) where the information relates to the breach of a condition 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:

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

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

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

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

4.3.7 The operator shall inform the Environment Agency in writing of the closure of any LCP within 28 days of the date of closure.

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
A1	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP300: GT for production of electricity and steam. LCP301: GT for production of electricity and steam. LCP302: GT for production of electricity and steam. LCP298: Boiler for production of steam LCP299: Boiler for production of steam Emergency diesel generator 4.45MW	From receipt of natural gas to discharge of exhaust gases and wastes, and the generation of electricity and steam for export. From receipt of raw materials to dispatch for use.
Directly Associated Activity			
A2	Directly associated activity	Surface water drainage	Handling and storage of site drainage via discharge to the site surface water system and final discharge to the Queen Elizabeth dock.
A3	Directly associated activity	Water treatment, reverse osmosis, ion exchange water treatment	From receipt of raw materials to dispatch of treated effluent, process cooling waters and dirty water system to final discharge.
A4	Directly associated activity	Miscellaneous utility systems including fire pumps, lubricating and control systems.	From receipt of raw materials to dispatch for use.

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application	The response to section 2.1, and 2.2 in the Application.	22/02/06
Receipt of additional information to the application	Responses to question 2 detailing clarification on boiler thermal input rating, emission limits to water, release points to air, gas odourisation, cooling water discharge impact, pipe-work maintenance and environmental improvement plan.	30/08/06, 08/02/07, 14/02/07,
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance routes and operating techniques identified in response to questions 2 (compliance route), 4 (LCP configuration), 5 (net rated thermal input), 6 (MSUL/MSDL), 9i,iii (proposed ELV's)	Received 31/03/15
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 18/05/15	Compliance route and operating techniques identified in response to questions 6 (MSUL/MSDL), 9i,ii (proposed ELV's), 11 (monitoring requirements).	Received 17/07/15
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 28/09/15	Compliance route and operating techniques identified in response to questions 6 (MSUL/MSDL), 9i,ii (proposed ELV's).	Received 05/10/15
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/10/15	Compliance route and operating techniques identified in response to question 2 (compliance route).	Received 20/10/15
Receipt of additional information to the regulation 60(1) Notice. requested during telephone call 09/10/15	Operating techniques for LCP 300 and LCP 302 in Trip to House Load service (TTHL). 500 hr operation only.	Received 09/10/15

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall submit in writing details of the method for the determination of particulate matter and sulphur dioxide from emission points A1 to A5 including details of the verification of the suitability of such a method.	Complete
IC2	A written procedure shall be submitted to the agency detailing the measures to be used so that monitoring equipment, personnel and organisations employed for the emissions monitoring programme shall have either MCERTS certification or accreditation in accordance with condition 3.6.3. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure. The procedure shall be implemented by the operator from the date of approval in writing by the Agency	Complete
IC3	The Operator shall once every 4 years, and until further notice, measure the gas flow from at least one stack in accordance with the standard reference method listed in the latest version of Environment Agency guidance document M2.	Complete
IC4	A written plan shall be submitted to the Agency for approval detailing the results of a review of the parameters and monitoring techniques employed for determining the composition and control of water intake and discharge in accordance with sections 2.2.6 and 2.10.1 of the IPPC Sector Guidance Note for Combustion Activities. Where appropriate the plan shall contain dates for the implementation of individual measures. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the plan. The plan shall be implemented by the operator from the date of approval by the Agency.	Complete
IC5	The Operator shall carry out a waste minimization audit for the installation in accordance with section 2.4.2 of the IPPC Sector guidance Note for combustion Activities. The Operator shall provide the Agency with a written report summarizing the key findings and recommendations of the audit and shall implement improvements to a time table agreed in writing with the Agency.	Complete
IC6	The Operator shall carry out a water efficiency audit for the installation in accordance with section 2.4.3 of the IPPC Sector guidance Note for combustion Activities. The Operator shall provide the Agency with a written report summarizing the key findings and recommendations of the audit and shall implement improvements to a timetable agreed in writing with the Agency.	Complete

<p>IC7</p>	<p>The Operator shall undertake a review of the existing screening measures at the intakes and outfalls which provide and discharge water to and from the Installation. The review shall be undertaken with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency "Safe Passage of Eel" Regulatory Position Statement version 1 dated July 2012.</p> <p>The Operator shall submit details of the arrangement suitable to meet the requirements for the safe passage of eels [of the Eels (England and Wales) Regulations 2009 (SI 2009/3344)] by either:-</p> <ul style="list-style-type: none"> • Providing a written proposal for the installation of an eel screen. • Providing a written proposal to the modification of existing screening arrangements. • Providing a written response with an explanation and description of how the existing screening arrangements can be regarded to meet the requirements for the safe passage of eels [of SI 2009/3344] either without change or with mitigation measures. • Providing a written response setting out a case for an exemption <p>In all cases, the proposal shall be submitted in writing for the approval of the Environment Agency. Where appropriate, each proposal shall contain an assessment of alternative options considered including impacts on other fish species and an explanation of why the proposed option has been chosen.</p> <p>Where installation of eel screen; modification of existing arrangements; or mitigation measures are proposed, the submission shall contain relevant timescales for installation in accordance with the Safe Passage of Eel Regulatory Position Statement version 1 dated July 2012.</p> <p>The proposals shall be implemented in accordance with the Environment Agency's written approval.</p>	<p>Complete</p>
------------	---	-----------------

<p>IC8</p>	<p>The Operator has undertaken a review of the existing screening arrangements with reference to the Eels (England and Wales) Regulations 2009 (SI 2009/3344) and the Environment Agency "Safe Passage for Eel" Regulatory Position Statement version 1 dated July 2012 (and as amended February 2013) in response to Improvement Programme reference IC7</p> <p>The Environment Agency has determined that the site does not comply with the requirements for safe passage of eel and the Operator is now required to complete a cost benefits appraisal of best available technique with reference to the Environment Agency "Safe Passage for Eel: Guidance on Exemptions" as a screening tool.</p> <ul style="list-style-type: none"> a) If the Cost Benefit Assessment shows that the Benefits are greater than the costs by a factor of 1.5 or more, then the Operator shall submit to the Environment Agency for review a report setting out the costs and the technical and economic feasibility to introduce the improvements to achieve best available technique. b) If the Cost Benefit Assessment shows that the Benefits are not greater than the costs by a factor of 1.5 or more, then the Operator shall, with reference to the Environment Agency "Safe Passage for Eel: Guidance on exemptions, assess which alternative measure, or combination of alternative measures, could be implemented under a case of a conditioned Exemption. The Operator shall submit a report to the Environment Agency setting out the costs and the technical and economic feasibility of implementing their proposed alternative measure or measures. <p>In all cases, the submission shall contain relevant timescales in accordance with the Safe Passage for Eel Regulatory Position Statement version 1 dated July 2012 (as amended 2013).</p> <p>The proposals shall be implemented following written approval of the Environment Agency.</p> <p>Whilst undertaking this Improvement Condition, the Operator shall be operating under exemption from the requirements to place eel screen diversion structures pursuant to Regulation 17(5)(a) of the Eels (England and Wales) Regulations 2009. The exemption will remain in place until the Environment Agency has provided written approval that the Improvement Condition has been deemed complete.</p>	<p>30/06/15 (Response received 28/05/15 under assessment by the Environment Agency)</p>
------------	--	---

IC9	<p>The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input LCP 300, 301 and 302. The net rated thermal input is the 'as built' value unless the plant has been modified significantly resulting in an improvement of the plant efficiency or output that increases the rated thermal input (which typically requires a performance test to demonstrate that guaranteed improvements have been realised).</p> <p>Evidence to support this figure, in order of preference, shall be in the form of:-</p> <ul style="list-style-type: none"> a) Performance test results* during contractual guarantee testing or at commissioning (quoting the specified standards or test codes), b) Performance test results after a significant modification (quoting the specified standards or test codes), c) Manufacturer's contractual guarantee value, d) Published reference data, e.g., Gas Turbine World Performance Specifications (published annually); e) Design data, e.g., nameplate rating of a boiler or design documentation for a burner system; f) Operational efficiency data as verified and used for heat accountancy purposes, g) Data provided as part of Due Diligence during acquisition, <p>*Performance test results shall be used if these are available.</p> <p>Use this IC where you are not satisfied with the Operator's evidence for the Net Thermal input figure(s) they have given.</p>	31/12/16
IC10	<p>The operator shall submit a written report to the Environment Agency requesting the lowering of its Stable Export Limit (SEL) for LCP 300, 301 and 302. The report should be submitted on completion of the viability trial and must confirm the new Minimum Start Up Level (MSUL) and the Minimum Shut Down Level (MSDL) along with a Carbon Monoxide emission limit. This report should be submitted to the Environment Agency for approval, the operator shall not revert to this lower SEL and higher CO limit until agreement from the Environment Agency has been received.</p> <p>The notification requirements of condition 4.3.5 will be deemed to have been complied with on submission of the plan.</p> <p>You must implement the change in plant operation as approved, and from the date stipulated by the Environment Agency</p>	30/06/16
IC11	<p>The operator shall submit a written report to the Environment Agency for approval. The report must contain an assessment of the impacts of emissions to air, during operations under Trip to House Load mode.</p>	30/06/16

IC12	<p>The Operator shall submit a report in writing to the Environment Agency for acceptance. The report shall define and provide a written justification of the “minimum start up load” and “minimum shut-down load”, for LCP 298 as required by the Implementing Decision 2012/249/EU in terms of:</p> <ul style="list-style-type: none"> i. The output load (i.e. electricity, heat or power generated) (MW); and ii. This output load as a percentage of the rated thermal output of the combustion plant (%). <p>And / Or</p> <ul style="list-style-type: none"> iii. At least three criteria (operational parameters and / or discrete processes as detailed in the Annex) or equivalent operational parameters that suit the technical characteristics of the plant, which can be met at the end of start-up or start of shut-down as detailed in Article (9) 2012/249/EU. 	31/03/16
------	---	----------

Table S1.4 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum start up load” Load in MW and as percent of rated (gross) power output (%)	“Minimum shut-down load” Load in MW and as percent of rated (gross) power output (%)
A1 Unit LCP 300	170 MW; 42.5%	170 MW; 42.5%
A1 Unit LCP 301	170 MW; 42.5%	170 MW; 42.5%
A1 Unit LCP 302	170 MW; 42.5%	170 MW; 42.5%
A1 Unit LCP 298	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC12	To be agreed in writing with by Environment Agency, following the outcome of improvement condition IC12
A1 Unit LCP 299	27.9 MW; 20%, 30 th steam	27.9 MW; 20%, 30 th steam

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1 [[Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 300 Gas turbine fired on natural gas	60 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 300 Gas turbine fired on natural gas	60 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A1 [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 300 Gas turbine fired on natural gas	60 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Note 1]	Carbon Monoxide	LCP No. 300 Gas turbine fired on natural gas	25 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Note 1]	Carbon Monoxide	LCP No. 300 Gas turbine fired on natural gas	25 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Note 1]	Carbon Monoxide	LCP No. 300 Gas turbine fired on natural gas	25 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1 Point source emissions to air from Gas Turbines and boilers

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Note 1]	Sulphur dioxide	LCP No. 300 Gas turbine fired on natural gas	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1	Oxygen	LCP No. 300 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1	Water Vapour	LCP No. 300 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A1	Stack gas temperature	LCP No. 300 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1	Stack gas pressure	LCP No. 300 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A1	Stack Gas Volume Flow	LCP No. 300 Gas turbine fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
A1	As required by the Method Implementation Document for BS EN 15259	LCP No. 300 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A2	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 301 Gas turbine fired on natural gas	60 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 301 Gas turbine fired on natural gas	60 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A2	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 301 Gas turbine fired on natural gas	60 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2	Carbon Monoxide	LCP No. 301 Gas turbine fired on natural gas	25 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A2	Carbon Monoxide	LCP No. 301 Gas turbine fired on natural gas	25 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A2	Carbon Monoxide	LCP No. 301 Gas turbine fired on natural gas	25 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A2	Sulphur dioxide	LCP No. 301 Gas turbine fired on natural gas	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A2	Oxygen	LCP No. 301 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A2	Water Vapour	LCP No. 301 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A2	Stack gas temperature	LCP No. 301 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A2	Stack gas pressure	LCP No. 301 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A2	Stack Gas Volume Flow	LCP No. 301 Gas turbine fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
A2	As required by the Method Implementation Document for BS EN 15259	LCP No. 301 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 302 Gas turbine fired on natural gas	60 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A3 [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 302 Gas turbine fired on natural gas	60 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A3 [Note 1]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 302 Gas turbine fired on natural gas	60 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 [Note 1]	Carbon Monoxide	LCP No. 302 Gas turbine fired on natural gas	25 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A3 [Note 1]	Carbon Monoxide	LCP No. 302 Gas turbine fired on natural gas	25 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A3 [Note 1]	Carbon Monoxide	LCP No. 302 Gas turbine fired on natural gas	25 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A3 [Note 1]	Sulphur dioxide	LCP No. 302 Gas turbine fired on natural gas	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A3	Oxygen	LCP No. 302 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A3	Water Vapour	LCP No. 302 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A3	Stack gas temperature	LCP No. 302 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A3	Stack gas pressure	LCP No. 302 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A3	Stack Gas Volume Flow	LCP No. 302 Gas turbine fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
A3	As required by the Method Implementation Document for BS EN 15259	LCP No. 302 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A4	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 298 Start up boiler fired on natural gas	110 mg/m ³	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A4 [Note 2]	Carbon Monoxide	LCP No. 298 Start up boiler fired on natural gas	110 mg/m ³	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A4 [Note 2]	Sulphur dioxide	LCP No. 298 Start up boiler fired on natural gas	35mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A4 [Note 2]	Dust	LCP No. 298 Start up boiler fired on natural gas	5mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A4 [Note 2]	Oxygen	LCP No. 298 Start up boiler fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A4 [Note 2]	Water Vapour	LCP No. 298 Start up boiler fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A4 [Note 2]	-	LCP No. 298 Start up boiler fired on natural gas	-	-	Concentration by calculation, every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A5	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 299 Secondary boiler fired on natural gas	140 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A5	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 299 Secondary boiler fired on natural gas	140 mg/m ³	95% of validated daily means within a calendar year	Continuous	BS EN 14181
A5	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	LCP No. 299 Secondary boiler fired on natural gas	140 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A5	Carbon Monoxide	LCP No. 299 Secondary boiler fired on natural gas	100 mg/m ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A5	Carbon Monoxide	LCP No. 299 Secondary boiler fired on natural gas	110 mg/m ³	Daily mean of validated hourly averages	Continuous	BS EN 14181
A5	Carbon Monoxide	LCP No. 299 Secondary boiler fired on natural gas	200 mg/m ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A5	Sulphur dioxide	LCP No. 299 Secondary boiler fired on natural gas	35mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A5	Dust	LCP No. 299 Secondary boiler fired on natural gas	5mg/m ³	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A5	Oxygen	LCP No. 299 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A5	Water Vapour	LCP No. 299 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	BS EN 14181
A5	Stack gas temperature	LCP No. 299 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A5	Stack gas pressure	LCP No. 299 Gas turbine fired on natural gas	-	-	Continuous As appropriate to reference	Traceable to national standards
A5	Stack gas volume flow	LCP No. 299 Gas turbine fired on natural gas	-	-	Continuous	BS EN 16911 & TGN M2
A5	As required by the Method Implementation Document for BS EN 15259	LCP No. 299 Gas turbine fired on natural gas	-	-	Pre-operation and when there is a significant operational change	BS EN 15259

Table S3.1 Point source emissions to air from Gas Turbines and boilers						
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period	Monitoring frequency	Monitoring standard or method
A6		Potterton Boiler gas system relief valves and vents				
A7	-	Standby Diesel Generator	-	-	-	-
A8	-	Emergency fire pumps	-	-	-	-
A9 - A66	-	Air system relief valves	-	-	-	-
A67 - A96	-	Gas system relief valves	-	-	-	-
A97 - A158	-	Steam system relief valves	-	-	-	-
A159 - A164	-	Hydrogen system relief valves	-	-	-	-
A165- A168	-	Carbon dioxide system relief valves	-	-	-	-
A169	-	Water treatment bulk acid tank	-	-	-	-
A170	-	Sodium hypochlorite storage tank	-	-	-	-
A171	-	Sulphuric acid storage tank	-	-	-	-

Note 1: Emission limit values for emission points A1 and A3 do not apply when the units are operating in "Trip to house load" mode of operation.

Note 2: As per IC13

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 2 emission to Queen Elizabeth Dock	pH	Blowdown and Site discharge	6-9	Instantaneous	Weekly Spot sample	BS6068-2.50
W1 on site plan in schedule 2 emission to Queen Elizabeth Dock	Flow	Blowdown and Site discharge	1,000,000 m ³ per day	24 hour period beginning 00.01hrs	Continuous	Permanent sampling access not required
W1 on site plan in schedule 2 emission to Queen Elizabeth Dock	Oil or grease	Site discharge	No visible emission	24-hour flow proportional sample	Fortnightly	Permanent sampling access not required
W1 Cooling pond/ Storm basin discharge on site plan in schedule 2 emission to Queen Elizabeth Dock	Temperature	Blowdown and Site discharge	Ambient temperature + 8 ^o C (Max 28 ^o C)	24 hour period beginning 00.01hrs	Continuous	Calibrated digital thermometer (UKAS approved)

Substance	Medium	Limit (including unit)		Emission Points
LCP: 300, 301, 302 and 299 for Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	Define each LCP as per the TNP
		01/01/16 and subsequent years until 31/12/19	Emission allowance figure shown in the TNP Register as at 30 April the following year	
		01/01/20-30/06/20		

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
W1	Cooling water outlet temperature	continuous	Not applicable	

Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Oxides of nitrogen	A1, A2, A3, A5	Every 3 months	1 January, 1 April, 1 July, 1 October
	A4	Every 2 years	1 January
Carbon Monoxide	A1, A2, A3, A5	Every 3 months	1 January, 1 April, 1 July, 1 October
	A4	Every 2 Years	1 January
Sulphur dioxide	A1, A2, A3, A5	Every 6 months	1 January, 1 July, 1 January
	A4	Every 2 years	
Dust	A4	Every 6 months	1 January, 1 July
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 6 months	1 January, 1 July

Parameter	Units
Electricity Exported	GWhr
Heat Exported	GWhr
Mechanical Power Provided	GWhr
Fossil Fuel Energy Consumption	GWhr
Non-Fossil Fuel Energy Consumption	GWhr
Annual Operating Hours	hr
Water Abstracted from Fresh Water Source	m ³
Water Abstracted from Borehole Source	m ³
Water Abstracted from Estuarine Water Source	m ³
Water Abstracted from Sea Water Source	m ³
Water Abstracted from Mains Water Source	m ³
Gross Total Water Used	m ³
Net Water Used	m ³
Hazardous Waste Transferred for Disposal at another installation	t
Hazardous Waste Transferred for Recovery at another installation	t
Non-Hazardous Waste Transferred for Disposal at another installation	t

Table S4.2: Resource Efficiency Metrics	
Parameter	Units
Non-Hazardous Waste Transferred for Recovery at another installation	t
Waste recovered to Quality Protocol Specification and transferred off-site	t
Waste transferred directly off-site for use under an exemption / position statement	t

Table S4.3 Chapter III Performance parameters for reporting to DEFRA		
Parameter	Frequency of assessment	Units
Thermal Input Capacity for each LCP	Annually	MW
Annual Fuel Usage for each LCP	Annually	TJ
Total Emissions to Air of NO _x for each LCP	Annually	t
Total Emissions to Air of SO ₂ for each LCP	Annually	t
Total Emissions to Air of Dust for each LCP	Annually	t
Operating Hours for each LCP	Annually	hr

Table S4.4 Reporting forms				
Media/parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	01/01/16	National	31/12/15
Air	Form IED RTA1 –TNP quarterly emissions summary log for LCP 300, 301, 302 and 299	01/01/16	National	31/12/15
LCP	Form IED HR1 – operating hours	01/01/16	National	31/12/15
Air	Form IED CON 1 – continuous monitoring. LCP: 299	01/01/16	Area Office	31/12/15
Air	Form IED CON 2 – continuous monitoring LCP: 300, 301, 302	01/01/16	Area Office	31/12/15
CEMs	Form IED CEM – Invalidation Log Only for LCPs with CEMs	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 – resource efficiency annual report	01/01/16	National	31/12/15

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	QP3539LE
Name of operator	Saltend Cogeneration Limited
Location of Facility	Hedon Road, Hull, HU12 8GA
Time and date of the detection	

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

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

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“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.

“background concentration” means such concentration of that substance as is present in:

for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

“base load” means: (i) as a mode of operation, operating for >4000hrs pa; and (ii) as a load, the maximum load under ISO conditions that can be sustained continuously, i.e. maximum continuous rating.

“Black Start” means the procedure to recover from a total or partial shutdown of the UK Transmission System which has caused an extensive loss of supplies. This entails isolated power stations being started individually and gradually being reconnected to other power stations and substations in order to form an interconnected system again.

“Trip to House Load start” means the operating mode that, upon notification of a system-wide emergency (or similar) from the National grid, reducing either one or both of the operational LCP’s 300 and 301 to approximately 100MW electrical output to ensure the continuation of the supply of electricity to the Saltend Chemicals Park adjacent. The operating mode will then also be available to the National Grid for Black Start operation.

“breakdown” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

“calendar monthly mean” means the value across a calendar month of all validated hourly means.

“CEN” means Comité Européen de Normalisation.

“Combustion Technical Guidance Note” means IPPC Sector Guidance Note Combustion Activities, version 2.03 dated 27th July 2005 published by Environment Agency.

“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.

“DLN” means dry, low NO_x burners.

“Energy efficiency” the ISO base load net plant efficiency means the performance value established by acceptance testing following commissioning or performance testing following improvements made to the plant that could affect the efficiency.

“Energy efficiency” the annual net plant energy efficiency means the value calculated from the operational data collected over the year.

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

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

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

“hazardous property” has the meaning given in Schedule 3 of the Hazardous Waste (England and Wales) Regulations 2005 No.894 and the Hazardous Waste (Wales) Regulations 2005 No. 1806 (W.138).

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions.

“large combustion plant” or “LCP” is a combustion plant or group of combustion plants discharging waste gases through a common windshield or stack, where the total thermal input is 50 MW or more, based on net calorific value. The calculation of thermal input, excludes individual combustion plants with a rated thermal input below 15MW.

“malfunction” has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

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

“mcr” means maximum continuous rating.

“MSDL” means minimum shut-down load as defined in Implementing Decision 2012/249/EU.

“MSUL” means minimum start-up load as defined in Implementing Decision 2012/249/EU.

“Natural gas” means naturally occurring methane with no more than 20% by volume of inert or other constituents.

“ncv” means net calorific value.

“operational hours” are whole hours commencing from the first unit ending start up and ending when the last unit commences shut down.

“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.

“SI” means site inspector.

“TNP Register” means the register maintained by the Environment Agency in accordance with regulation 4 of the Large Combustion Plants (Transitional National Plan) Regulations 2015 SI2015 No.1973

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

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

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

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or

in relation to emissions from gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or

- 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.

“year” means calendar year ending 31 December.

Schedule 7 – Site plan

© Crown Copyright. All rights reserved. Environment Agency, 100026380, 2015.

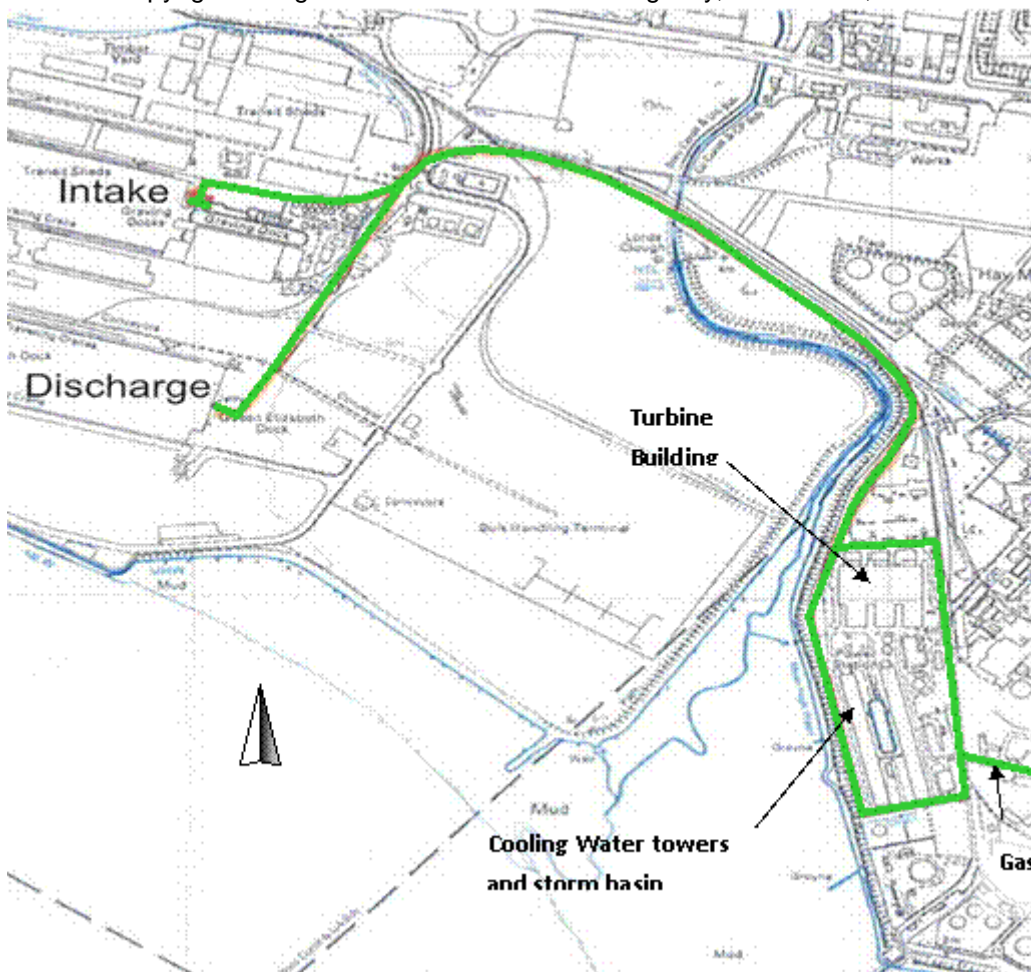


Fig 1.

Installation boundary looking north showing cooling water intake and discharge.

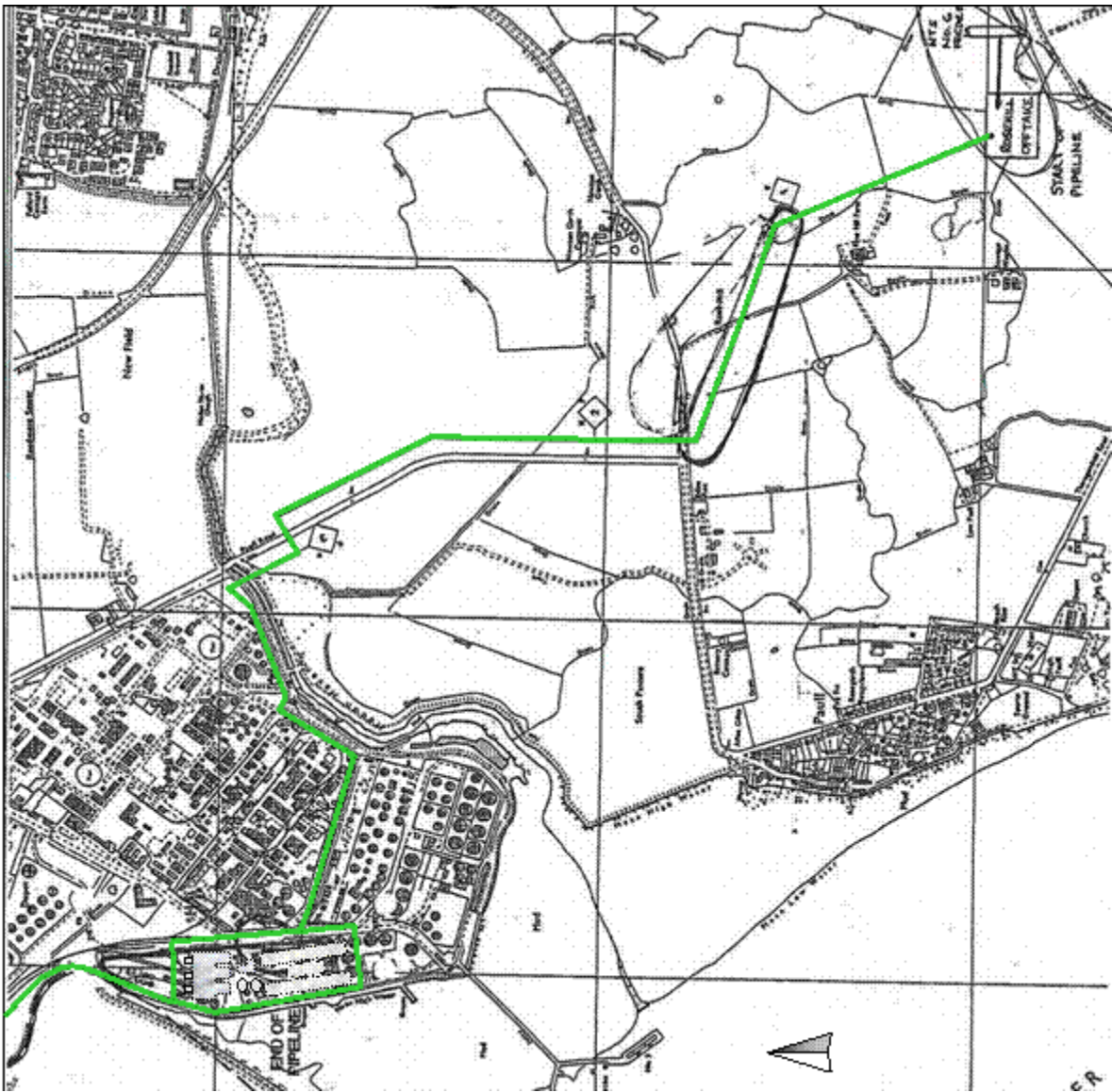


Fig 2.
Installation boundary looking east showing natural gas pipeline.

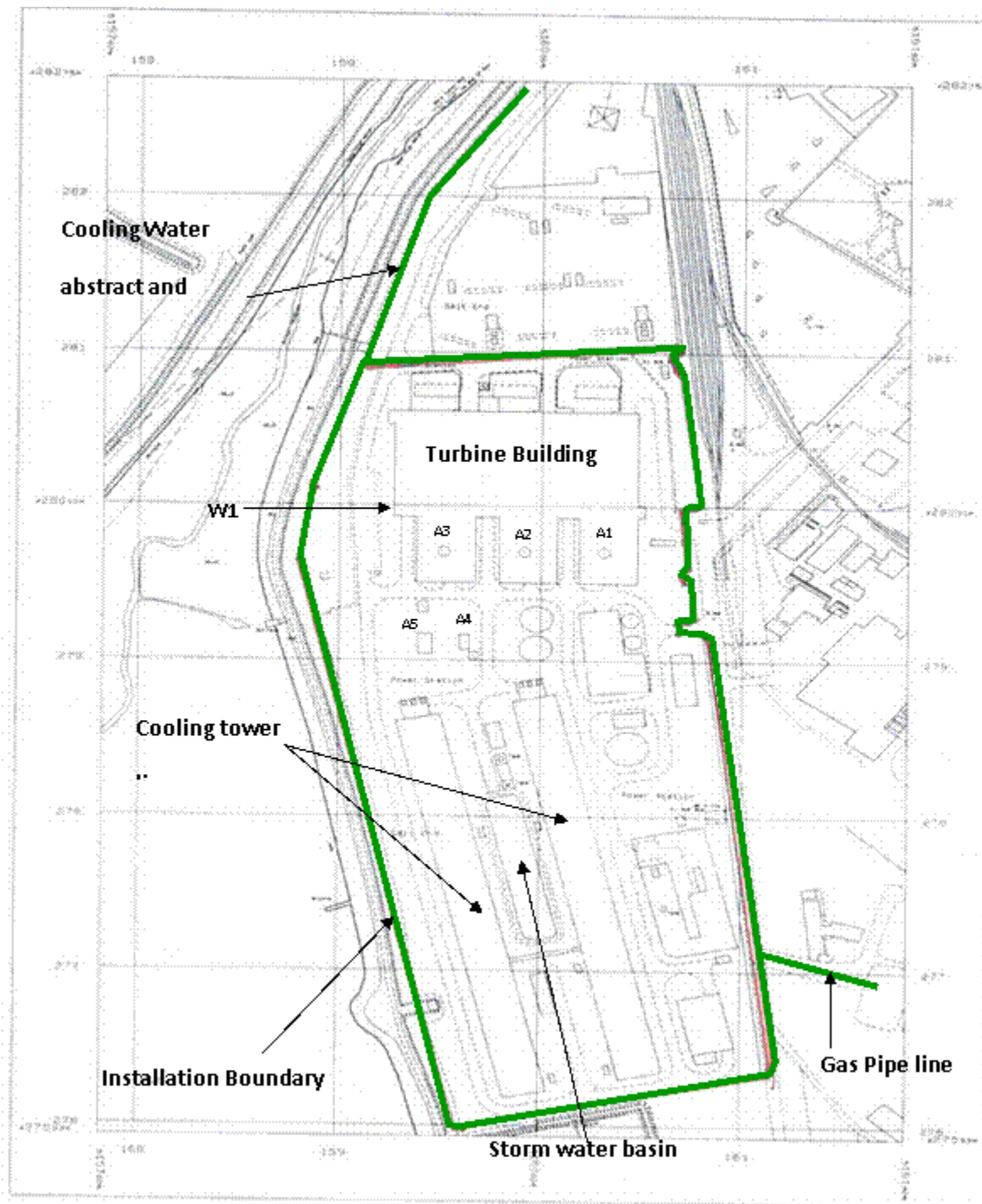


Fig 3.
Installation boundary showing details of turbine building, cooling tower location and storm water basin.

END OF PERMIT