

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Centrica Brigg Limited
Glanford Brigg Generating Station
Scawby Brook
Brigg
North Lincolnshire
DN20 9LT

Variation application number

EPR/ZP3133LM/V008

Permit number

EPR/ZP3133LM

Glanford Brigg Generating Station

Permit number EPR/ZP3133LM

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 that all the conditions of the permit 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 under the 500 hour compliance route.

The net thermal input of the LCPs is as follows: LCP44, 45, 46 & 47 are each 122MWth OCGT's. LCP 403 and LCP 404 are each proposed 139MWth OCGT's.

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 108 is changed to LCP 44; and
- LCP 109 is changed to LCP 45; and
- LCP 110 is changed to LCP 46; and
- LCP 112 is changed to LCP 47; and
- LCP 403 is a new number for GT3A turbine; and
- LCP 404 is a new number for GT3B turbine.

This variation also removes reference to the cooling water and discharge, as from 1/1/16 there will be no CCGT operation, and so no cooling water requirement.

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

Located on the south-western outskirts of Brigg at Scawby Brook in North Lincolnshire with a national grid reference SE 499850 40610. The installation covers an area of approximately seven hectares and is relatively flat. Land surrounding the site is predominantly farmland. To the south are fields and a local railway track. The New River Anchlome is immediately to the east of the site and beyond this farmland. To the north-east is Island Carr Farm and directly beyond this is mill View Caravan site. To the north of the site are settling ponds, beyond this are some residential properties, a sports ground and leisure centre. To the west of the site is the main site access road which passes through open farmland where it meets Scawby Road.

The installation was commissioned in 1993 to supply electricity to the National grid. Although originally constructed as a Combined Cycle Gas Turbine (CCGT) power station with a baseload electrical output of 240 MW, the four existing LCPs now operate only as Open Cycle Gas Turbines (OCGTs) with a theoretical maximum electrical output of 140 MW if all four gas turbines are operated at one time. In recent years it has not been economic to operate in combined cycle mode due to the market conditions and the station has only remained operational by switching to open cycle mode via the new bypass stacks and emergency operation.

The two new combustion units listed in the environmental permit are also OCGTs. There is no CCGT operation planned for the site in future and the site can be considered to be OCGT operation only from 1/1/2016.

The permit has been varied seven times including variations issued on 18/12/12 and on 23/05/14 which covered the ability to operate in open cycle mode for up to 500 hours per year and the use of 4 bypass stacks. A further variation on 31/10/14 permitted new Open Cycle Gas Turbines (two units) which have yet to be installed. The installation of the new turbines includes a linked project to fit NOx abatement equipment to the existing gas turbines.

All the OCGTs at Centrica Brigg Ltd – both the existing four units and the two new proposed units will operate under the 500 hour emergency operation criteria set out in Article 30(2) Annex V part 1. The IED states that emission limit values compliance is not required for such operation and hence no ELVs are proposed (or required).

The installation has the potential to generate noise. However, noise levels are within guidelines and there is no history of public complaint. There is little waste produced due to the type of installation. Mainly resulting from a variety of activities including maintenance programmes, cleaning operations and water treatment.

There are no European sites within 15km of the installation. There is a SSSI within 2km of the site, Castlethorpe Tufas, which has been screened with emissions having no significant impact.

The Operator operates an environmental management system with certification 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 ZP3133LM (EPR/ZP3133LM/A001)	Received 20/03/2006	
Additional information received	12/07/2007	
Permit Determined (EPR/ZP3133LM)	10/08/2007	
First Variation ZP3538XH (EPR/ZP3133LM/V002)	Determined 01/08/2008	Minor variation
Second Variation (EPR/ZP3133LM/V003) (WP3239KN)	Determined 15/06/09	Minor variation
Variation Application (EPR/ZP3133LM/V004)	Duly made 02/12/11	Normal variation for open cycle operation and by-pass stack
Schedule 5 notice response	04/07/2012	
Additional information	16/10/2012	Response to draft variation notice
Additional information	02/11/2012	Information regarding emergency use
Draft variation	02/12/2012	Response to draft variation notice
Variation issued	18/12/2012	
Variation determined EPR/ZP3133LM/V005 (MP3833ZW)	11/03/2013	Environment Agency Initiated Variation, to incorporate Eel Regulations improvement condition.

Status log of the permit		
Description	Date	Comments
Variation Application (EPR/ZP3133LM/V006)	Duly made 21/01/14	Normal variation to include four fixed by-pass stacks for open cycle operation. This incorporates three new by-pass stacks and an extension to the existing by-pass stack.
Additional information	22/04/14	Clarification on sections of plant that will be isolated whilst operating in Open Cycle
Schedule 5 notice response	06/05/14	Additional details of assessment at habitats sites that include nutrient nitrogen, acid deposition and emission concentrations that were not covered in the submitted application
Variation determined EPR/ZP3133LM/V006	23/05/14	Varied permit issued to Centrica Brigg Limited
Variation Application EPR/ZP3133LM/V007	Duly made 13/06/14	Variation to add two gas turbines to run on Open Cycle mode.
Schedule 5 notice response	20/07/14	Detail of NO _x emission concentration selection.
Additional information received EPR/ZP3133LM/V007	22/08/14	Further details on proposed NO _x abatement techniques and operating mode.
Variation determined EPR/ZP3133LM/V007 (PAS Billing reference: FP3037VP)	31/10/14	Varied permit issued to Centrica Brigg Limited
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 and update the permit to modern conditions.
Regulation 60 Notice response	31/03/15	Response received from the Operator.
Additional information received	24/11/15	Response to request for further information dated 20/10/15
Variation determined EPR/ZP3133LM/V008(PAS Billing ref: LP3434AF)	21/12/15	Varied and consolidated permit issued in modern condition format. 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/ZP3133LM

Issued to

Centrica Brigg Limited (“the operator”)

whose registered office is

**Millstream
Maidenhead Road
Windsor
Berkshire
SL4 5GD**

company registration number 02352390

to operate an installation at

**Glanford Brigg Generating Station
Scawby Brook
Brigg
North Lincolnshire
DN20 9LT**

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
J Linton	21/12/2015

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/ZP3133LM

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/ZP3133LM/V008 authorising,

Centrica Brigg Limited (“the operator”),

whose registered office is

**Millstream
Maidenhead Road
Windsor
Berkshire**

SL4 5GD

company registration number 02352390

to operate an installation at

**Glanford Brigg Generating Station
Scawby Brook
Brigg
North Lincolnshire
DN20 9LT**

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

Name	Date
J Linton	21/12/2015

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 For the following activities referenced in schedule 1, table S1.1 (LCP 44, LCP 45, LCP 46, LCP 47, LCP 403 and LCP 404). 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 The following activities referenced in schedule 1, table S1.1 (LCP 44, LCP 45, LCP46, LCP 47, LCP 403 and LCP 404) 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 44, LCP 45, LCP46, LCP 47, LCP 403 and LCP 404) 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 S1.5
- 2.3.7 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.8 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 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, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 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 and S3.2
- 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 and S3.3 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 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.

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;
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.
- (d) where condition 2.3.5 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.

4.3 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 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	Production of electricity from a maximum of six gas turbines in open cycle mode, four exhausting via four 30m by-pass stacks GT1A(LCP44), GT1B(LCP45), GT2A(LCP46) and GT2B(LCP47) and two exhausting via a 30m stack or stacks GT3A (LCP403)and/or GT3B(LCP404).	The Operation of a gas fired power station (including gas turbines, , electrical generators, oil lubrication systems, water abstraction, air compressors, and high voltage switchgear.) From receipt, handling and on-site storage of raw materials to despatch of products and waste. Gas turbine open cycle operation using natural gas only.
Directly Associated Activity			
A2	Directly associated activity	Water treatment	From receipt of raw materials to dispatch of treated effluent, process cooling waters and dirty water system to final discharge via bulking reservoir to the New River Ancholme.
A3	Directly associated activity	Surface water drainage	Handling and storage of site drainage via the site surface water system to the bulking reservoir until final discharge to the New River Ancholme.
A4	Directly associated activity	Miscellaneous utility systems (including diesel starters, 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.	20/03/06
Receipt of additional information to the application	Responses to section 2 of application detailing Sump/Bund Inspections, Thermal Input of the Gas Heaters, Cooling Water Pipe-work Flows Underground, Annual Total of Raw Materials Used, Gas Oil Burnt on Site, List of all Vents to Air and Thermal Input of the Auxiliary Boiler.	12/07/07
Variation application EPR/ZP3133LM/V004	<ul style="list-style-type: none"> • Response to question 3 of application form C3; • Overview of application document section 4 	02/12/11
Response to schedule 5 notice for Variation application EPR/ZP3133LM/V004	Paragraph 2 of response to question 5	04/07/12
Variation application EPR/ZP3133LM/V006	Response to questions in application form C2 and C3 and details of plant operation in Doc.Ref.1	27/08/13
Additional information EPR/ZP3133LM/V006	Email response for clarification on sections of plant that will be isolated whilst operating in Open Cycle	22/04/14
Variation application EPR/ZP3133LM/V007	Response to questions in application form C2 and C3 and referenced supporting documentation.	13/06/14
Additional information EPR/ZP3133LM/V007	Email outlining further details on proposed NOx abatement techniques and operating modes.	22/08/14
Response to Regulation 60(1) Notice-request for information dated 31/10/14	Compliance route and operating techniques identified in response to questions 2 (chosen compliance route), 4 (LCP configuration), 5 (Net rated thermal Input), 6 (start up and shut down), 9ii (ELV Limits), 11 (monitoring requirements).	Received 31/03/15
Receipt of additional information to the regulation 60(1) notice requested 20/10/15	Further information provided on net rated thermal input and start up and shut down thresholds.	Received 24/11/15

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 1	The Operator shall confirm completion of the Reverse Osmosis (RO) installation. If the installation is not completed at permit issue the Operator shall submit in writing a date for completion of all work. On completion of all work the Operator shall inform Agency.	Completed
IC 2	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	Completed
IC 3	A written plan shall be submitted to the Agency for approval detailing the results of an assessment of the the primary, secondary and tertiary containment arrangements against the requirements of section 2.2.9 of the Technical Guidance Note V2.03 IPPC Sector Guidance Note for Combustion Activities” 27/7/05. A written report summarising the findings, together with a timetable for any improvements identified will be submitted to the Environment Agency. The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the report. The plan shall be implemented by the operator from the date of approval by the Agency.	Completed
IC 4	The Operator shall undertake a review of the Best Available Techniques listed within the Combustion Sector Technical Guidance Note (TGN) IPPC S1.01 Section 2 for Oxides of Nitrogen which will enable them to achieve the Emission Limit Values given within the TGN for the release to air from gas turbines No. 1A & 1B and No. 2A & 2B (emission points A1 – A4) burning natural gas, gas oil and biofuel. The review shall include, but not be limited to, all of the relevant techniques listed within the TGN, the reduction in the level of pollutants (for each option) and the costs of achieving the reduction (for each option). The report shall include a timetable to implement any proposed changes as appropriate. The Operator shall implement the proposals as agreed in writing with the Environment Agency.	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 5	<p>It is not considered to be BAT to operate a CCGT in OCGT mode other than exceptional circumstances</p> <p>The operator should provide a justification of the circumstances under which it may be BAT to operate a CCGT in open cycle mode in the balancing market or other operating regimes. Parameters to consider should include:</p> <ul style="list-style-type: none"> ▪ Emissions to air and impact on human health ▪ Energy efficiency <p>The Environment Agency will use this information along with information from other industry and National Grid to determine generic BAT conditions for the open cycle operation of CCGTs in competition with closed cycle plants.</p> <p>The operator should have regard to the requirements of the balancing market (eg. start up time requirements) and define a maximum run time beyond which the service should be provided by high efficiency plant.</p>	Completed
IC 6	<p>The Operator shall submit a report on the feasibility of carrying out emissions monitoring during open cycle operation. The report shall include results from any monitoring that has been carried out during open cycle operation and how the results would relate to possible emission limit values.</p>	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC 7	<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>	Completed
IC 8	<p>The Operator shall undertake a study to assess the emissions of NO_x from gas turbines GT1A, GT1B, GT2A and GT2B following the retrofitting of the NO_x abatement systems. A report detailing the findings of the study with reference to the predicted emission level of 50 mg/m³ shall be submitted to the Environment Agency in writing for approval.</p>	Complete

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC9	<p>The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input for LCP403 & LCP404. 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>	6 months after completion of commissioning
IC10	<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 each unit within the LCP 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. 	3 months after completion of commissioning

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC11	'For LCPD LCP 108, LCP 109, LCP110 and LCP112 (now LCP 44, LCP45, LCP46 and LCP47 under IED). Annual emissions of dust, sulphur dioxide and oxides of nitrogen including energy usage for the year 01/01/2015 to 31/12/2015 shall be submitted to the Environment Agency using form AAE1 via the NERP Registry. If the LCPD LCP was a NERP plant the final quarter submissions shall be provided on the RTA 1 form to the NERP Registry.'	28/01/16

Table S1.4 Pre-operational measures for future development		
Reference	Operation	Pre-operational measures
1	Installation of gas turbine(s) GT3A and/or GT3B	<p>The operator shall submit a report to the Environment Agency providing detailed design(s) for the new gas turbine(s) including drainage systems, proposed abatement and a finalised location plan. The operator shall undertake a review of the final detailed design/ plans for the new unit(s) prior to construction to ensure that:</p> <ol style="list-style-type: none"> 1) the final design will meet the requirements of BAT; 2) the application still accurately reflects the final operating proposals; and 3) the environmental impact assessment still accurately reflects the predicted impacts from the proposal. <p>The operator shall submit a written report to the Environment Agency for approval, 6 months prior to construction, detailing the findings of this review.</p>

Table S1.5 Start-up and Shut-down thresholds		
Emission Point and Unit Reference	“Minimum start up load” Load in MW and as percent of rated power output (%)	“Minimum shut-down load” Load in MW and as percent of rated power output (%)
A1a (LCP44)	23 MWe; 55%	15 MWe; 36%
A2a (LCP45)	23 MWe; 55%	15 MWe; 36%
A4a (LCP46)	23 MWe; 55%	15 MWe; 36%
A3a (LCP47)	23 MWe; 55%	15 MWe; 36%
A32 (LCP403)	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC10	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC10
A33 (LCP404)	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC10	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC10

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Natural gas	-
Water treatment plant chemicals	Discharges of mercury and cadmium, as a result of the impurities of raw materials used in the water treatment plant, shall be controlled by ensuring that impurity levels are the minimum available in the commercial product.

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air from Gas Turbines >100MWth						
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
A1a By-pass stack (SE 9903 0599)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas TurbineGT1A (LCP44) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A1a By-pass stack (SE 9903 0599)	Sulphur Dioxide	Gas TurbineGT1A (LCP44) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A1a By-pass stack (SE 9903 0599)	Carbon Monoxide	Gas TurbineGT1A (LCP44) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A2a By-pass stack (SE 9966 0599)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas TurbineGT1B (LCP45) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A2a By-pass stack (SE 9966 0599)	Sulphur Dioxide	Gas TurbineGT1B (LCP45) fired on natural gas during open cycle operation	-	-	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 >100MWth						
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
A2a By-pass stack (SE 9966 0599)	Carbon Monoxide	Gas TurbineGT1B (LCP45) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A3a By-pass stack (SE 9915 0601)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas TurbineGT2B (LCP47) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A3a By-pass stack (SE 9915 0601)	Sulphur Dioxide	Gas TurbineGT2B (LCP47) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A3a By-pass stack (SE 9915 0601)	Carbon Monoxide	Gas TurbineGT2B (LCP47) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A4a By-pass stack (SE 9918 0601)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas TurbineGT2A (LCP46) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A4a By-pass stack (SE 9918 0601)	Sulphur Dioxide	Gas TurbineGT2A (LCP46) fired on natural gas during open cycle operation	-	-	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 >100MWth						
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
A4a By-pass stack (SE 9918 0601)	Carbon Monoxide	Gas TurbineGT2A (LCP110) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A8-A11	-	Diesel starter exhausts (turbine hall)	-	-	-	-
A12 (SE 9931 0603)	-	Gas Vent to station	-	-	-	-
A13-A14	-	Storage of gas oil (oil tank)	-	-	-	-
A15-A19	-	Chemical tank vents	-	-	-	-
A20	-	Degasser vent	-	-	-	-
A21	-	Chemical tank vents	-	-	-	-
A22	-	Diesel pump fire exhaust	-	-	-	-
A23-A28	-	Chemical tank vents	-	-	-	-
A29	-	Welding bay vent	-	-	-	-
A30-A31	-	Oil mist eliminator vents	-	-	-	-
A32 Stack (SE 9909 0599) [†]	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine GT3A(LCP403) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A32 Stack (SE 9909 0599) [†]	Sulphur Dioxide	Gas turbine GT3A(LCP403) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency

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
A32 Stack (SE 9909 0599) ^a	Carbon Monoxide	Gas turbine GT3A(LCP403) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A33 Stack (SE 9912 0600) ^a	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Gas turbine GT3B(LCP404) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A33 Stack (SE 9912 0600) ^a	Sulphur Dioxide	Gas turbine GT3B(LCP404) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency
A33 Stack (SE 9912 0600) ^a	Carbon Monoxide	Gas turbine GT3B(LCP404) fired on natural gas during open cycle operation	-	-	Concentration by calculation every 4380 operational hours or 2 years, whichever is sooner.	Agreed in writing with the Environment Agency

^a-number of turbines and final location to be finalised through pre-operational condition 1.

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on site plan in Schedule	Bulking reservoir discharge including:	Total daily volume	6800m ³	24 hour period beginning 00.01	Continuous	Permanent sampling access not required

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

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
7 emission to new River Ancholme (SE9934 0661)	cooling water purge, treated sewage effluent. Surface water run off from National Grid Gas compound, fuel unloading area, fuel oil storage compound fuel forwarding pump house, southern side of the site, Turbine hall, GIS building and Fire pump house drainage. Oil interceptor from car park.	Maximum flow	460m ³ /hr	Average over 24 hour period beginning 00.01	Continuous	Permanent sampling access not required
		Total oxidant (as chlorine)	0.2mg/L	Average over 24 hour period beginning 00.01	Continuous	SCA blue book 51 ISBN 0117516260
		Temperature	25°C	-	Daily	BS EN13500
		pH	6-9	Hourly average	Continuous	BS6068-2.50
		Oil or grease	No visible emission	24 hour flow proportional sample	Fortnightly	Permanent sampling access not required

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
Oxides of nitrogen	A1a, A2a, A3a, A4a, A32, A33	Every 2 years	01/01/16
Carbon Monoxide	A1a, A2a, A3a, A4a, A32, A33	Every 2 years	01/01/16
Sulphur dioxide	A1a, A2a, A3a, A4a, A32, A33	Every 2 years	01/01/16
Emissions to Water Parameters as required by condition 3.5.1	W1	Every 12 months	1 January,

Table S4.2: Resource Efficiency Metrics	
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
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
LCP	Form IED HR1 – operating hours	01/01/16	National	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
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	Area Office	01/09/07

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(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.

“Air Quality Risk Assessment” has the meaning given in Annex D of IED Compliance Protocol for Utility Boilers and Gas Turbines.

“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 surface water, the surface water quality up-gradient of the site; or

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.

“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.

“dynamic emission limit value” (DELV) means an emission limit that varies in accordance with Article 40 of the Industrial Emissions Directive.

“emissions to land” includes emissions to groundwater.

“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 or background concentration limit.

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

“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.

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

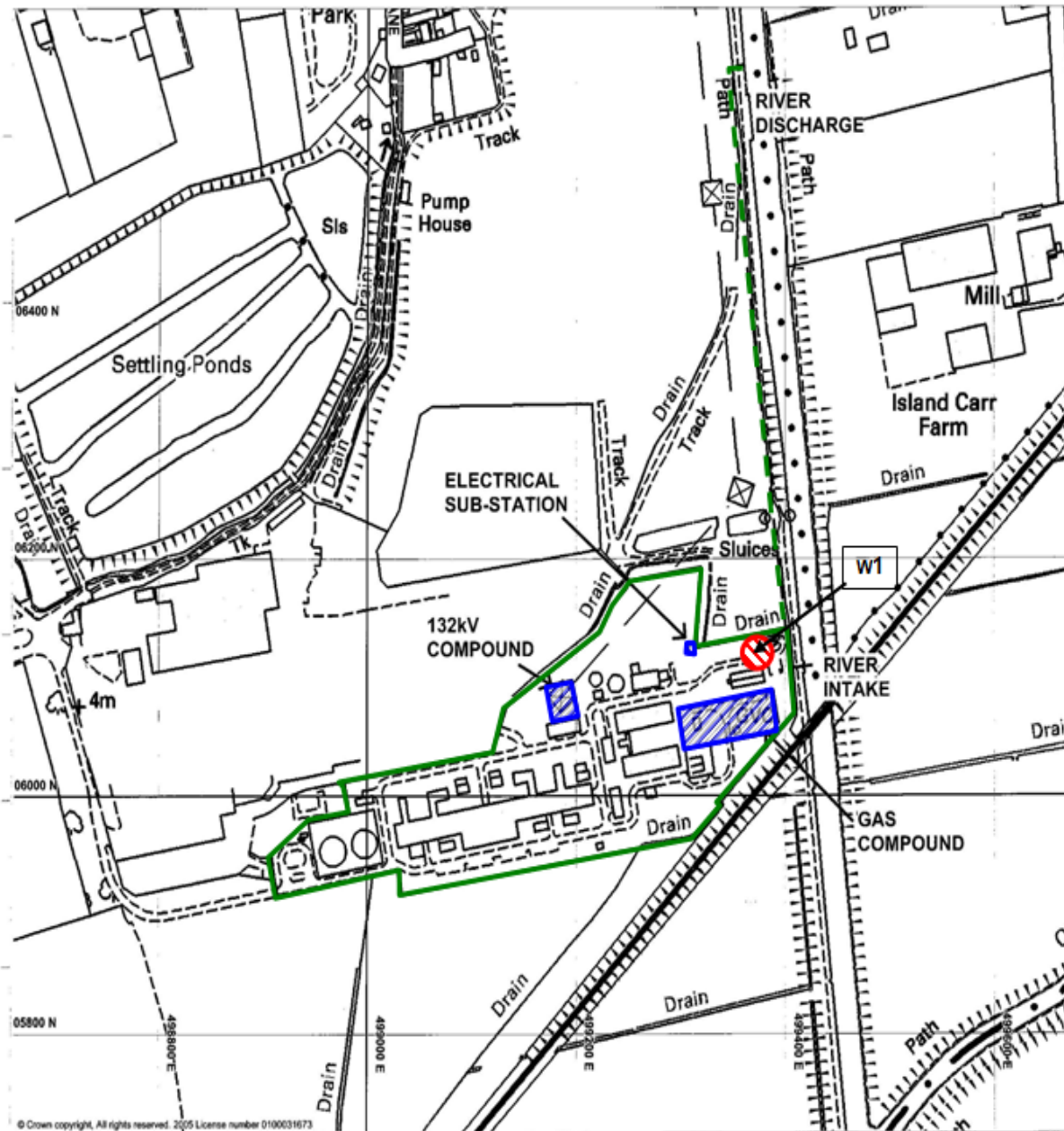
in relation to emissions from gas turbine or compression ignition engine combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or

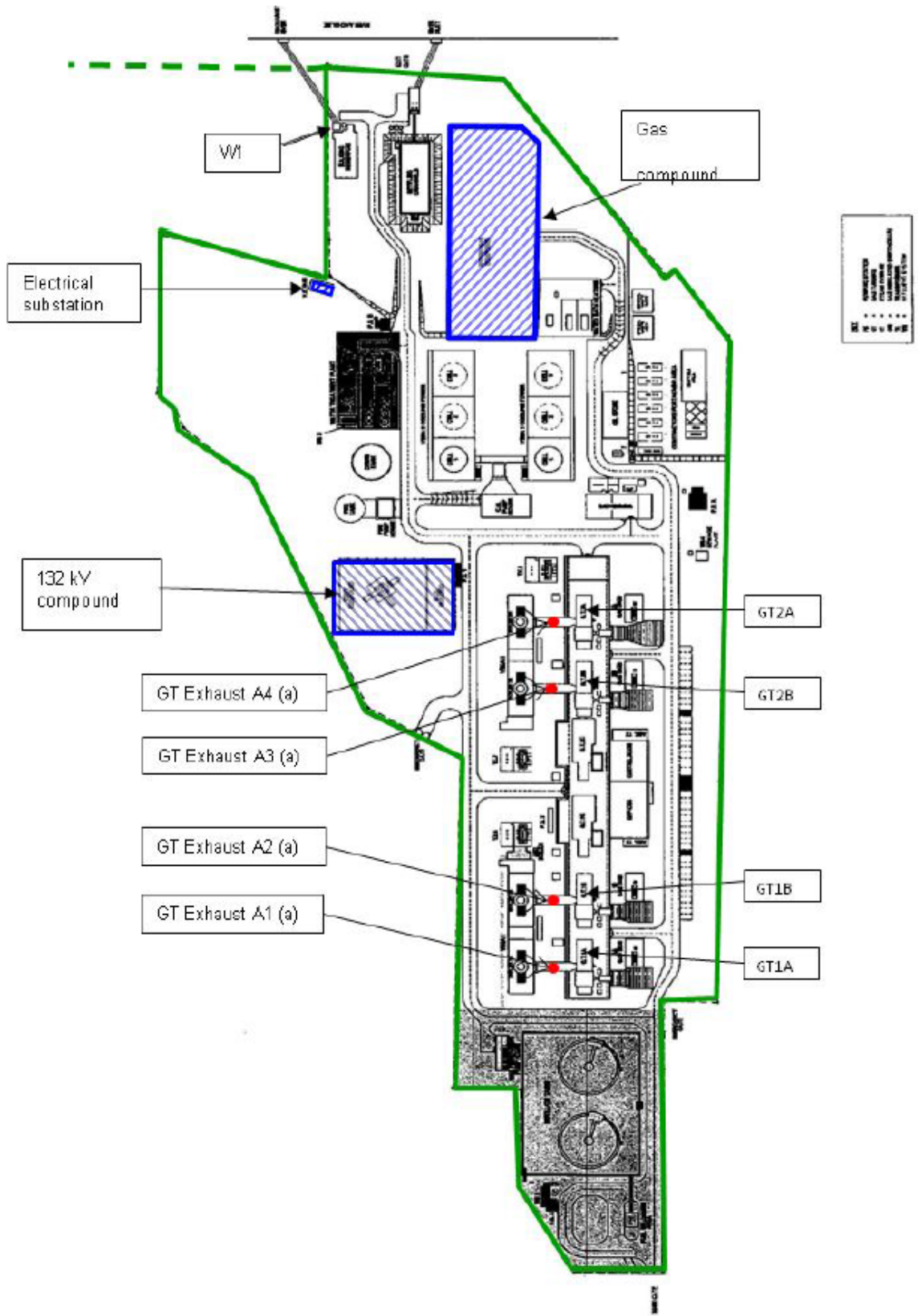
in relation to emissions from combustion processes comprising a gas turbine with a waste heat boiler, the concentration in dry air at a temperature of 273K, at a pressure of 101.3kPa and with an oxygen content of 15% dry, unless the waste heat boiler is operating alone, in which case, with an oxygen content of 3% 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





- Installation Boundary
- Gas compound, 132kV compound and electrical substation excluded from Installation Boundary
- By-pass stacks

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

END OF PERMIT