



Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

RWE KL Limited

King's Lynn Power Station A
Willows Business Park
King's Lynn
Norfolk
PE34 3RD

Variation application number

EPR/BP3239LA/V007

Permit number

EPR/BP3239LA

King's Lynn Power Station A

Permit number EPR/BP3239LA

Introductory note

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

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

Schedule 2 of the notice comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

Article 21(3) of the Industrial Emissions Directive (IED) requires the Environment Agency to review conditions in permits that it has issued and to ensure that the permit delivers compliance with relevant standards, within four years of the publication of updated decisions on Best Available Techniques (BAT) Conclusions. We have reviewed the permit for this installation against the revised BAT Conclusions for the large combustion plant sector published on 17th August 2017. Only activities covered by this BAT Reference Document have been reviewed and assessed.

This variation makes the below changes following the review under Article 21(3) of the IED and the consolidation of the Environmental Permitting Regulations that came into force on the 4 January 2017:

- Revised emission limits and monitoring requirements for emissions to air applicable from 17 August 2021 in table S3.1a; and
- Inclusion of process monitoring for energy efficiency in table S3.5.
- Operator change from Centrica KL Ltd to RWE KL Ltd keeping same company number.

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

King's Lynn Power Station is located on the southern outskirts of King's Lynn centred on NGR 560800 317100. It occupies a site on relatively flat land on the eastern bank of the River Great Ouse. The land surrounding the power station is mixed usage, with a council road maintenance depot to the north and an industrial estate to the north east, fields and scattered houses to the south and east, and the River Great Ouse to the west.

The net thermal input of LCP48 – one 646 MWth Combined Cycle Gas Turbine (CCGT) fuelled by natural gas with a baseload electrical output of circa 365 MWe. The main plant on site consists of one gas turbine, one heat recovery steam generator and one steam turbine. The exhaust gases from the gas turbine are used to produce steam in the heat recovery steam generator to drive the steam turbine in CCGT mode. The installation uses dry air-cooled condensers (ACC) to dispose of waste heat from the spent steam from the steam turbine, thus eliminating the requirement for large quantities of cooling water. There is no direct discharge of process water to controlled waters.

Cooling water on site is supplied from a separate closed cooling water system which utilise a mixture of water and glycol. Cooling water is supplied to the generator, common oil system and numerous pumps. It is cooled in the Auxiliary Cooling system using multiple fans mounted directly above a bank of finned horizontal radiator tubes.

The only water discharged to controlled water is surface water run-off, which passes through interceptors before discharge via the Willows Business Park surface water drainage network to surface water. During normal operation, all process wastewater is normally discharged to the site water tanks for re use. There is a facility to discharge process wastewater to the sewer if required. All water treatment plant effluent is treated in a neutralising tank before being discharged to sewer.

The Operator operates a management system, which is externally certified to ISO14001.

There is a SSSI within 2km and Natura 2000 sites within 10km of the installation which have been assessed for potential impacts.

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

Status log of the permit		
Description	Date	Comments
Application EPR/BP3239LA/A001	Duly made 19/04/06	Application for 335MW power station.
Request for extension to determination period	16/08/06	
Permit determined EPR/BP3239LA	20/10/06	Permit issued to Centrica KL Limited.
Variation application EPR/BP3239LA/V002	Duly made 11/07/2011	
Additional information received	22/08/2011	Revision to AQ data required.
Additional information received	30/08/11	Schedule 5 Notice.
Operator requested extension to determination period	08/11/2011	Agreed to 30/03/2012.
Additional information received	15/12/2011	Second Schedule 5 notice.
Additional information received	08/03/2012	On minor vents and site plan.
Permit variation determined	13/07/2012	Variation and consolidation EPR/BP3239LA/V002.
Variation determined EPR/BP3239LA/V003	11/03/13	Environment Agency initiated variation to incorporate Eel Regulations improvement condition.
Application EPR/BP3239LA/V004	Duly made 09/08/13	Application to reflect plant equipment changes.
Variation determined EPR/BP3239LA	23/09/2013	Varied permit issued.
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.

Status log of the permit		
Description	Date	Comments
Variation determined EPR/BP3239LA/V005 (PAS Billing ref: XP3434AQ)	18/12/15	Varied and consolidated permit issued in modern condition format.
Application EPR/BP3239LA/V007 (part transfer of permit EPR/BP3239LA) Billing reference: XP3434AQ	Duly made 15/05/18	Application to transfer King's Lynn Site B to EP UK Power Development Limited.
Additional information received	12/11/18	Submission of a revised site emissions plan.
Transfer determined EPR/BP3239LA/T006 Billing reference: XP3030QQ	13/12/18	Transfer of King's Lynn Site B complete.
Regulation 61 Notice sent to the Operator	01/05/18	Issue of a Notice under Regulation 61(1) of the EPR. Environment Agency initiated review and variation to vary the permit under IED to implement Chapter II following the publication of the revised Best Available Techniques (BAT) Reference Document for large combustion plant.
Regulation 61 Notice response.	12/11/18	Response received from the Operator.
Variation and name change determined EPR/BP3239LA/V007 (Billing ref: WP3106PK)	10/03/20	Varied and consolidated permit issued to RWE KL Ltd. Effective from 10/03/20

End of introductory note

The Environmental Permitting (England and Wales) Regulations 2016

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2016 varies

Permit number

EPR/BP3239LA

Issued to

RWE KL Limited (“the operator”)

whose registered office is

Windmill Hill Business Park

Whitehill Way

Swindon

Wiltshire

England

SN5 6PB

company registration number 04262243

to operate a regulated facility at

King's Lynn Power Station A

Willows Business Park

King's Lynn

Norfolk

PE34 3RD

to the extent set out in the schedules.

The notice shall take effect from 10/03/2020

Name	Date
David Griffiths	10/03/2020

Authorised on behalf of the Environment Agency

Schedule 1

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

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/BP3239LA

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BP3239LA/V007 authorising,

RWE KL Limited (“the operator”),

whose registered office is

Windmill Hill Business Park

Whitehill Way

Swindon

Wiltshire

England

SN5 6PB

company registration number 04262243

to operate a regulated facility at

King's Lynn Power Station

A Willows Business Park

King's Lynn

Norfolk

PE34 3RD

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

Name	Date
David Griffiths	10/03/2020

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: LCP48. The activities shall be operated in accordance with the “Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines” dated December 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
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP48. 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 on completion of IC12.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP48. The effective Dry Low Nox threshold shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.5 on completion of IC13.
- 2.3.7 The emission limit values from emission point AR1, listed in tables S3.1 and S3.1a of Schedule 3 following the issue of a Black Start Instruction by the National Grid shall be disregarded for the purposes of compliance whilst that instruction remains effective and in accordance with the report submitted in response to improvement condition IC14.
- 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, S3.1a, S3.2 and S3.3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 The emission limit values measured during periods of abatement equipment malfunction and breakdown shall be disregarded for compliance purposes.
- 3.1.4 Total annual emissions from point A1 set out in schedule 3 table S3.1, of a substance listed in schedule 3 table S3.4 shall not exceed the relevant limit in table S3.4
- 3.1.5 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 S3.1a;
 - (b) surface water or groundwater specified in table S3.2; and
 - (c) process monitoring specified in table S3.5.
- 3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and 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, S3.1a, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

3.6 Monitoring for Large Combustion Plant

- 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 and the Large Combustion Plant Best Available Techniques Conclusions.
- 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(s) S3.1 and S3.1a; the Continuous Emission Monitors shall be used such that:

(a) for the continuous measurement systems fitted to the LCP release points defined in table(s) S3.1 and S3.1a the validated hourly, monthly, yearly and daily averages shall be determined from the measured valid hourly average values after having subtracted the value of the 95% confidence interval;

(b) the 95% confidence interval for nitrogen oxides and sulphur dioxide of a single measured result shall be taken to be 20%;

(c) the 95% confidence interval for dust releases of a single measured result shall be taken to be 30%;

(d) the 95% confidence interval for carbon monoxide releases of a single measured result shall be taken to be 10%;

(e) 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

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

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 the following activities referenced in schedule 1, table S1.1: LCP48 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 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.

In any other case:

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

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

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

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

4.3.7 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
AR1	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 in one combined cycle gas turbine (CCGT) operating on natural gas LCP 48, 646 MWth input Miscellaneous utility systems (including auxiliary boiler, emergency diesel generator/fire pump, lubrication systems, control systems)	From receipt of raw materials and fuels to discharge of combustion gases from the exhausts or despatch of products and waste
Directly Associated Activity			
AR2	Directly associated activity	Surface water drainage via Willows Business Park surface water drainage network to IDB Drain Flood relief Channel	Handling and storage of site drainage from external areas of the site, until discharge to the site surface water system
AR3	Directly associated activity	Heat recovery steam generator (HRSG) operation and operation of steam turbines	From input of steam to despatch of products and waste
AR4	Directly associated activity	Filtration, ion exchange water treatment	From receipt of raw materials to despatch to chemical effluent and dirty water system
AR6	Directly associated activity	Storage and handling of wastes generated by the activities	From generation of waste to despatch from site

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application EPR/BP3239LA/A001	The response to sections 2.1 and 2.2 in the application.	30/03/06
Application EPR/BP3239LA/V002	The submission n sections C2 2.1 to 2.3.10 and C3 3.1 to 3.9.32 in the application	11/07/11 (duly made date)

Table S1.2 Operating techniques		
Description	Parts	Date Received
Application for variation EPR/BP3239LA/V004	The response to sections C2 2 and C3 4 in the application.	31/07/13
Response to regulation 60(1) Notice – request for information dated 31/10/14	The 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 /shut-down loads), 9ii (ELV's), 11 (monitoring requirements).	Received 31/03/15
Response to Schedule 5 issued 31/10/18	Response to request for information of a revised site emissions plan.	Received 12/11/18
Response to regulation 61(1) Notice – request for information dated 01/05/18	Compliance and operating techniques identified in response to the BAT Conclusions for large combustion plant published on 17 th August 2017.	14/11/18
Additional information supplied 21/08/19	Updated site emission plan provided.	21/08/19

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC1	The Operator shall introduce and implement a documented training programme for spill response procedures, spill kit use and subsequent waste disposal.	Completed
IC2	<p>The operator shall undertake an assessment of the primary, secondary and tertiary containment arrangements against the requirements of section 2.2.9 of the Combustion Technical Guidance Note to identify and address any deficiencies. The review shall include, but not be limited to:</p> <ul style="list-style-type: none"> • Release of wash water and run-off from the Air Condenser Cooler • Oil transfer pipework • Containment kerbs • Bunding and fill points for chemical tanks. <p>A written report of the assessment, including corrective actions and timescales shall be submitted to the Agency.</p> <p>The corrective actions shall be implemented from the date of approval by the Agency.</p>	Completed
IC3	<p>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.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the procedure.</p> <p>The procedure shall be implemented by the operator from the date of approval in writing by the Agency.</p>	Completed

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC4	<p>A water efficiency audit shall be submitted to the Agency in accordance with section 2.4.3 of the Combustion Technical Guidance Note. The audit shall contain dates for the implementation of individual improvement measures.</p> <p>The audit shall include, but not be limited to:</p> <ul style="list-style-type: none"> • An investigation into a replacement for solvent based turbine wash <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the audit.</p>	Completed
IC5	<p>A waste minimisation audit shall be submitted to the Agency in accordance with section 2.4.2 of the Combustion Technical Guidance Note. The audit shall contain dates for the implementation of individual improvement measures.</p> <p>The notification requirements of condition 2.5.2 shall be deemed to have been complied with on submission of the audit.</p>	Completed
IC10	<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

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC11	<p>The operator shall provide a report in writing to the Environment Agency for acceptance which provides the net rated thermal input for LCP48. 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). Demonstration that the efficiency of the plant meets the required Associated Energy Efficiency Levels shall also be provided. Evidence to support these figures, 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
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 each unit within LCP48 as required by the Implementing Decision 2012/249/EU in terms of:</p> <p>The output load (i.e. electricity, heat or power generated) (MW); and This output load as a percentage of the rated thermal output of the combustion plant (%).</p> <p>And / Or</p> <p>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.</p>	3 months after completion of commissioning
IC13	<p>The Operator shall submit a report in writing to the Environment Agency for approval. The report shall define an output load or operational parameters and provide a written justification for when the dry low NOx operation is effective. The report shall also include the NOx profile through effective dry low NOx to 70% and then to full load.</p>	Within 6 months of the completion of commissioning

Table S1.3 Improvement programme requirements		
Reference	Requirement	Date
IC14	<p>A written report shall be submitted to the Environment Agency for approval. The report shall contain an impact assessment demonstrating that there is no significant environmental risk associated with black start operations and propose a methodology for minimisation of environmental impact during such a period of operation and for reporting instances of black start operation.</p> <p>The plant can be operated as set out in condition 2.3.7 of the permit once the report has been approved by the Environment Agency.</p> <p>The methodology for operation and reporting set out in the report shall be implemented by the Operator from the date of approval by the Environment Agency.</p>	12 months from variation issue
IC15 Seen note ¹	The Operator shall propose achievable emission limit values (ELV) for NO _x and CO expressed as a daily mean of validated hourly averages from Minimum start-up load (MSUL) to baseload. This must be supported by a summary of emissions data. Justification shall be submitted to the Environment Agency for approval in the form of a written report.	Within 6 months of the completion of commissioning

Note ¹ This ELV applies when the load varies between MSUL/MSDL and baseload during the daily reference period. MSUL/MSDL are defined in Table S1.5.

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 power output (%) and/or discrete processes	“Minimum shut-down load” Load in MW and as percent of rated power output (%) and/or discrete processes
A1 LCP48	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC12	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC12

Table S1.5 Dry Low NOx effective definition	
Emission Point and Unit Reference	Dry Low NOx effective definition Load in MW and as percent of rated power output (%) or when two of the criteria listed below for the LCP or unit have been met, whichever is soonest
A1 LCP48	To be agreed in writing by the Environment Agency, following the outcome of improvement condition IC13

Schedule 2 – 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 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.
Water treatment plant chemicals	Discharges of 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 - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	50 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	50 mg/m ³ 70% to base load ¹ MSUL/MSD L to base load Note 2 To be confirmed following completion of IC15	Daily mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	100 mg/m ³ 70% to base load ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m ³ 70% to base load ¹	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
000402" received 12/11/2018]			MSUL/MSD L to base load Note 2 To be confirmed following completion of IC15			
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	200 mg/m ³ 70% to base load ¹	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Sulphur dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Flow	-	-	Continuous	EN ISO 16911
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Water Vapour	-	-	Continuous As appropriate to reference	BS EN 14181

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021

Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLNБ-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan labelled "KLNБ-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan labelled "KLNБ-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan labelled "KLNБ-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	Emergency diesel generator	No parameters set	-	-	-	Permanent sampling access not required
A4 [Point A4 on site plan labelled "KLNБ-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	HCl tank vent scrubber	No parameters set	-	-	-	Permanent sampling access not required
Natural gas vents	On site distribution system	-	-	-	-	-
Hydrogen vents	Steam turbine generator cooling	-	-	-	-	-
Emergency pressure relief vents	Pressure vessels	-	-	-	-	-
Storage tank Vents	Liquid chemicals and oils storage tank	-	-	-	-	-

Table S3.1 Point source emissions to air - emission limits and monitoring requirements shall apply until 16 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
Diesel Engine exhausts	Diesel engine exhausts Emergency generator and fire pumps	-	-	-	-	-
HSRG Safety relief valves	From steam heat recovery systems	-	-	-	-	-
Air ejectors on ACC	From air cooled condensers (ACC)	-	-	-	-	-
<p>Note 1: This ELV applies when the load is >70% throughout the reference period.</p> <p>Note 2: This ELV applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in Table S1.4 o completion of IC15</p>						

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	50 mg/m ³ When DLN is effective ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	50 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			MSUL/MSDL to base load Note 2 To be confirmed following completion of IC15			

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	100 mg/m ³ When DLN is effective ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	40 mg/m ³ When DLN is effective ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m ³ When DLN is effective ³	Monthly mean of validated hourly averages	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	50 mg/m ³ 70% to base load ¹	Daily mean of validated hourly averages	Continuous	BS EN 14181
			MSUL/MSD L to base load Note 2 To be confirmed following completion of IC15			
A1 [Point A1 on site plan labelled "KLNB-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	200 mg/m ³ When DLN is effective ³	95% of validated hourly averages within a calendar year	Continuous	BS EN 14181

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Carbon Monoxide	30 mg/m ³ When DLN is effective ³	Yearly average	Continuous	BS EN 14181
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Sulphur dioxide	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Flow	-	-	Continuous	EN ISO 16911
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Oxygen	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Water vapour	-	-	Continuous As appropriate to reference	BS EN 14181
A1 [Point A1 on site plan labelled "KLN-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Stack gas temperature	-	-	Continuous As appropriate to reference	Traceable to national standards

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 [Point A1 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	Stack gas pressure	-	-	Continuous As appropriate to reference	Traceable to national standards
A1 [Point A1 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	LCP No. 48 Gas turbine fired on natural gas	As required by the Method Implementation Document for BS EN 15259	-	-	Pre-operation and when there is a significant operational change	BS EN 15259
A3 [Point A3 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	Emergency diesel generator	No parameters set	-	-	-	Permanent sampling access not required
A4 [Point A4 on site plan labelled "KLNb-ACM-XX-XX-SK-PL-000402" received 12/11/2018]	HCl tank vent scrubber	No parameters set	-	-	-	Permanent sampling access not required
Natural gas vents	On site distribution system	-	-	-	-	-
Hydrogen vents	Steam turbine generator cooling	-	-	-	-	-
Emergency pressure relief vents	Pressure vessels	-	-	-	-	-
Storage tank Vents	Liquid chemicals and oils storage tank	-	-	-	-	-
Diesel Engine exhausts	Diesel engine exhausts Emergency generator and fire pumps	-	-	-	-	-

Table S3.1a Point source emissions to air - emission limits and monitoring requirements shall apply from 17 August 2021						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
HSRG Safety relief valves	From steam heat recovery systems	-	-	-	-	-
Air ejectors on ACC	From air cooled condensers (ACC)	-	-	-	-	-

Note 1: This ELV applies when the load is >70% throughout the reference period.

Note 2: This ELV applies when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL will be defined in Table S1.4.on completion of IC12

Note 3: This ELV applies between the effective dry low NO_x threshold and baseload once IC13 has been completed. Effective dry low NO_x thresholds are defined in Table S1.5, until IC13 has been completed compliance with ELVs will be based on 70% to baseload.

Table S3.2 Point source emissions to water (other than sewer) – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
W1 on site plan in schedule 7 emission to IDB Drain Flood Relief Channel via Willows Business Park surface water drainage network	Surface water	Oil and grease	No visible emission	Spot samples	Monthly	Visual Inspection

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
S1 on site plan in schedule 7 emission to Anglian Water foul sewer	-	-	-	-	-	-

Table S3.4 Annual limits (excluding start up and shut down except where otherwise stated).				
Substance	Medium	Limit (including unit)		Emission Points
Oxides of nitrogen	Air	Assessment year	LCP TNP Limit	LCP 48 (Emission point A1)
		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	
		01/06/20-30/06/20		

Table S3.5 Process monitoring requirements				
Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
LCP 48	Net electrical efficiency	After each modification that could significantly affect these parameters	EN Standards or equivalent	-

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	AR1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is an annual average	1 January
Carbon Monoxide	AR1	Every 3 months for continuous monitoring	1 January, 1 April, 1 July, 1 October
		Every year where there is an annual average	1 January
Sulphur dioxide	AR1	Every 6 months for periodic monitoring	1 January, 1 July
Surface water monitoring Parameters as required by condition 3.5.1	W1	Every 3 months	1 January, 1 April, 1 July, 1 October

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

Parameter	Units
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

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
Operating Hours as a five yearly rolling average for LCP 48	Annually	hr

Media/ parameter	Reporting format	Agency recipient	Date of form
Air & Energy	Form IED AR1 – SO ₂ , NO _x and dust mass emission and energy	National and Area Office	01/01/17
Air	Form IED RTA1 – TNP quarterly emissions summary log	National and Area Office	31/12/15
LCP	Form IED HR1 – operating hours	National and Area Office	31/12/15
Air	Form IED CON 2 – continuous monitoring	Area Office	31/12/15
CEMs	Form IED CEM – Invalidation Log	Area Office	31/12/15

Media/ parameter	Reporting format	Agency recipient	Date of form
Resource Efficiency	Form REM1 – resource efficiency annual report Only for ESI installations	National and Area Office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	Area Office	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	
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	

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

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

Part B – to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“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.

“average over the sampling period” means the average value of three consecutive measurements of at least 30 minutes each [or as agreed in writing with the Environment Agency].

“average of samples obtained during one year” means the average of the values obtained during one year of the periodic measurements taken with the monitoring frequency set for each parameter.

“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

“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.

“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.

“commissioning” means testing of the installation that involves any operation of a Large Combustion Plant referenced in schedule 1, table S1.1 [or as agreed with the Environment Agency].

“daily average” means the average over a period of 24 hours of validated hourly averages obtained by continuous measurements.

“DLN” means dry, low NO_x burners.

“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.

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

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

“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.

“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.

“Net electrical efficiency” means the ratio between the net electrical output (electricity produced minus the imported energy) and the fuel/feedstock energy input (as the fuel/feedstock lower heating value) at the combustion unit boundary over a given period of time.

“Net mechanical energy efficiency” means the ratio between the mechanical power at load coupling and the thermal power supplied by the fuel.

“Net total fuel utilisation” means the ratio between the net produced energy minus the imported electrical and/or thermal energy and the fuel energy input at the combustion unit boundary over a given period of time.

“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.

“Standby fuel” means alternative liquid fuels that are used in emergency situations when the gas fuel which is normally used, is not available.

“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

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.

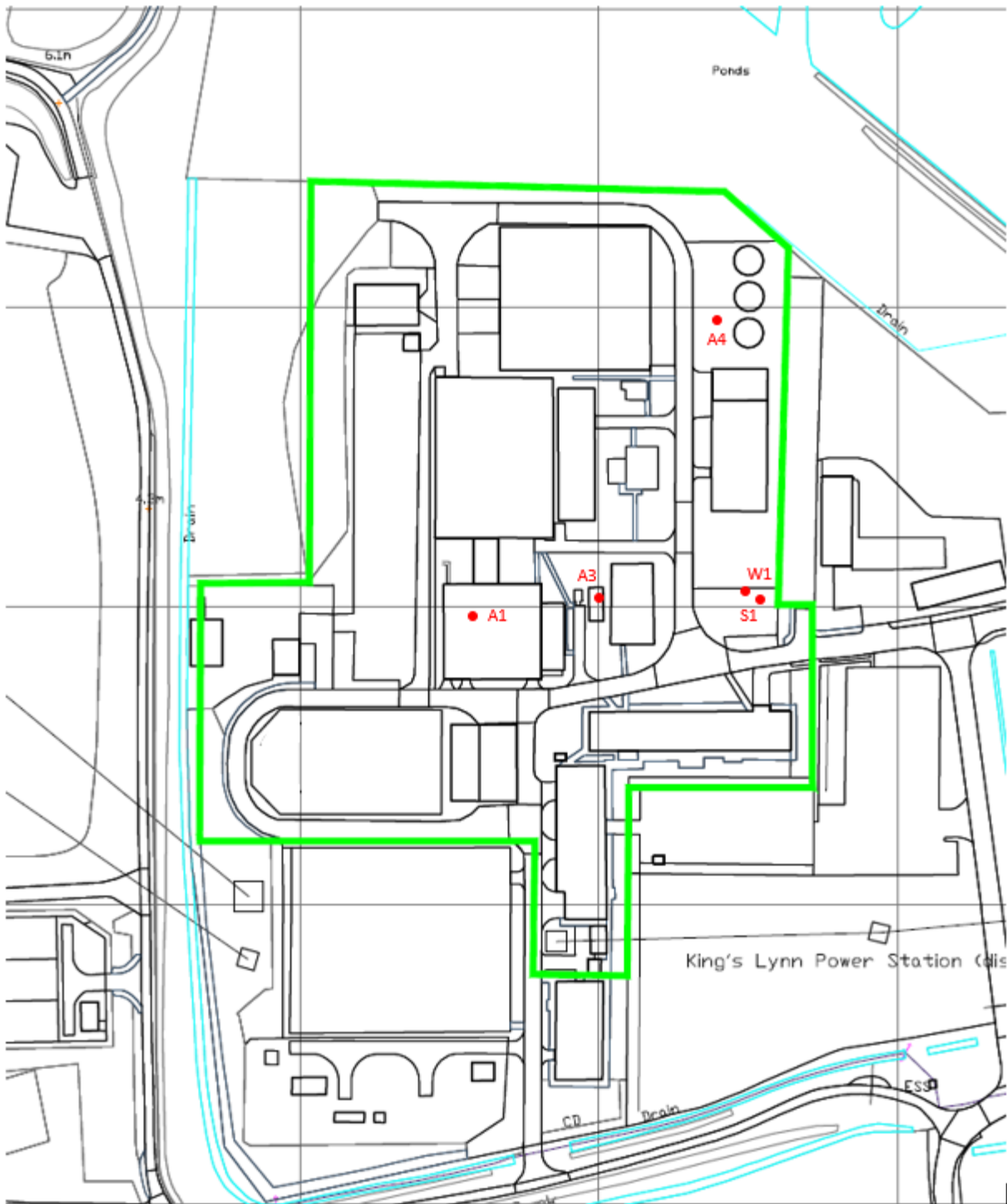
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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.

“yearly average” means the average over a period of one year of validated hourly averages obtained by continuous measurements.

Schedule 7 – Site plan



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END OF PERMIT

Variation and consolidation
application number
EPR/BP3239LA/V007

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