

# Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

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Perenco UK Limited

Central Bacton Gas Terminal Paston Road Bacton Norfolk NR12 0JF

#### Variation application number

EPR/PP3633LM/V007

#### **Permit number**

EPR/PP3633LM

# Central Bacton Gas Terminal Permit number EPR/PP3633LM

# 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 ELV compliance route.

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

LCP 434 is changed to LCP 42 (emission point 17)

The net thermal input of the LCP is as follows: LCP 42 - one 75MWth OCGT.

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

The installation receives and processes natural gas (primarily methane) and Natural Gas Liquids (NGL) from several fields in the Southern North Sea which are pumped to site via three gas pipelines. This natural gas is then supplied to adjacent operators for transmission to the national distribution network and exported to mainland Europe. The installation consists of a listed activity for refining gas (Section 1.2 Part A(1)(a)) Supporting the gas refining are a number of directly associated activities including effluent treatment and drainage, fuel and power gas systems, instrument and plant air system, electricity generation, diesel storage, hydraulic system, firewater system and vapour recovery systems. The two gas refining lines run in tandem and are both served by combustion activities for heating, compression etc. There is also a large combustion plant (LCP) on site (LCP 42: net rated thermal input 75MWth) for the provision of mechanical energy to drive the compressors. There is a 1.1MW standby diesel generator used for electricity generation in the event of a power outage of the main electrical supply. Effluent is collected, via the site drainage system, into an interceptor pit where insoluble hydrocarbons are separated using a weir system.

The main emissions to air from the site are oxides of nitrogen and carbon monoxide from combustion activities, and natural gas (as methane) from venting and fugitive sources. The LCP stack is 20 metres tall and air pollutants are abated by means of a catalytic converter. Effluent comes from collected surface waters from the process areas within the installation and from the glycol reboilers. This effluent is treated by physical separation in a weir system before being directed to a common sea outfall. The main emissions to water are residual monoethylene glycol (MEG) and hydrocarbon oils resulting in a chemical oxygen demand (COD) that is higher than benchmark limits.

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 PP3633LM received (EPR/PP3633LM/A001)	15/08/06	Duly made			
Additional information received (further process clarification)	11/12/07				
Permit PP3633LM determined (EPR/PP3633LM)	27/06/07				
Application for variation UP3039XY received (EPR/PP3633LM/V002)	26/11/07				
Variation UP3039XY determined (EPR/PP3633LM/V002)	07/01/08				
Variation and consolidation (with EPR/JP3838FX) notice determined EPR/PP3633LM/V003	Determined 11/08/11 Effective 16/08/11	Variation and consolidation following partial transfer from ENI Hewett Limited (EPR/VP3637SB) to Perenco UK Limited (EPR/JP3838FX)			
Agency variation determined EPR/PP3633LM/V004	30/05/13	Agency variation to implement the changes introduced by IED			
Application EPR/PP3633LM/V005	Returned 06/11/14	Variation returned as it did not qualify as a minor variation			
Application EPR/PP3633LM/V006	Duly made 18/02/2015	Variation to amend and correct emission points to air and associated permit limits			
Agency variation determined EPR/PP3633LM/V006 (PAS billing ref: TP3337WY)	24/03/2015	Varied permit issued			
Regulation 60 Notice sent to the Operator	31/10/2014 and 27/01/2015	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	30/03/2015	Response received from the Operator			
Additional information received	29/05/2015	Response to request for further information (RFI) dated 13/05/15			
Additional information received	20/11/2015	Response to request for further information (RFI) dated 13/05/15			
Agency variation determined EPR/PP3633LM/V007	18/12/15	Varied and consolidated permit issued in modern condition format.			
(PAS billing ref: HP3534AT)		Variation effective from 01/01/16			

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/PP3633LM

#### Issued to

Perenco UK Limited ("the operator")

whose registered office is

Anchor House 15-19 Britten Street London SW3 3TY

company registration number 04653066

to operate a regulated facility at

Central Bacton Gas Terminal Paston Road Bacton Norfolk NR12 0JF

to the extent set out in the schedules.

The notice shall take effect from 01/01/2016

Name	Date
J Linton	18/12/2015

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/PP3633LM

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/PP3633LM/V007 authorising,

Perenco UK Limited ("the operator"),

whose registered office is

Anchor House 15-19 Britten Street London SW3 3TY

company registration number 04653066

to operate an installation at

Central Bacton Gas Terminal Paston Road Bacton Norfolk NR12 0JF

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

Name	Date
J Linton	18/12/2015

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:
  - 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;
  - 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 42. Without prejudice to condition 2.3.1, the activities shall be operated in accordance with the "Electricity Supply Industry IED Compliance Protocol for Utility Boilers and Gas Turbines" revision 1 dated February 2015 or any later version unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.4 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 For the following activities referenced in schedule 1, table S1.1: LCP 42. The end of the start up period and the start of the shutdown period shall conform to the specifications set out in Schedule 1, tables S1.2 and S1.4.
- 2.3.6 For the following activities referenced in schedule 1, table S1.1: LCP 42. The following conditions apply where there is a malfunction or breakdown of any abatement equipment:

Unless otherwise agreed in writing by the Environment Agency:

- if a return to normal operations is not achieved within 24 hours, the operator shall reduce or close down operations, or shall operate the activities using low polluting fuels;
- (ii) the cumulative duration of breakdown in any 12-month period shall not exceed 120 hours;
- (iii) the cumulative duration of malfunction in any 12-month period shall not exceed 120 hours.
- 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.

# 3 Emissions and monitoring

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

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 The emission values from emission point A17 listed in schedule 3 table S3.1, measured during periods of abatement equipment malfunction and breakdown shall be disregarded for the purposes of compliance with Table S3.1 emission limit values.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

# 3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
  - (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

#### 3.3 Odour

3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.

#### 3.3.2 The operator shall:

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

#### 3.4 Noise and vibration

3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

#### 3.4.2 The operator shall:

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

## 3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
  - (a) point source emissions specified in tables S3.1 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 and S3.2 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 LCP 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 2.3.6 applies, the cumulative duration of breakdown and cumulative duration of malfunction in any 12 month period.
- 4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
  - (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
  - (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4; and
  - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 10 days of the notification of abatement equipment malfunction or breakdown (condition 2.3.6) the operator shall submit an Air Quality Risk Assessment as outlined in the IED Compliance Protocol (condition 2.3.2).

#### 4.3 Notifications

#### 4.3.1 In the event:

- that the operation of the activities gives rise to an incident or accident which significantly affects
  or may significantly affect the environment, the operator must immediately—
  - (i) inform 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.
- (d) of any malfunction or breakdown of abatement equipment relating to condition 2.3.6, the operator shall notify the Environment Agency within 48 hours unless notification has already been made under (a) to (c) above.
- 4.3.2 Any information provided under condition 4.3.1 (a)(i), 4.3.1 (b)(i) where the information relates to the breach of a condition specified in the permit or 4.3.1 (d) where the information relates to malfunction or breakdown of abatement equipment 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 Where the operator has entered into a climate change agreement with the Government, the Environment Agency shall be notified within one month of:
  - (a) a decision by the Secretary of State not to re-certify the agreement;
  - (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
  - (c) any subsequent decision by the Secretary of State to re-certify such an agreement.
- 4.3.8 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 a	ctivities		
Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	Section 1.2 A(1)(a): Refining gas where this is likely to involve the use of 1000 tonnes or more of gas in any period of 12 months.	Refining of natural gas from the following gas fields:-  • Leman, • Inde, • Trent and Tyne, • Hewett, • Thames, and • Lancelot Area Pipeline (LAPS).	From receipt of natural gas, natural gas liquids and raw materials to despatch of treated gas, condensate and waste.
A2	Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more.	LCP 42: 75MWth Natural gas-fired turbine for the provision of mechanical energy to drive the gas compressors.  Standby diesel generator: 1.1MWth for electricity generation in the event of power outage of the main electrical supply.	From receipt of natural gas and compression to export pressure in natural gas fired gas turbine compressors (the LAPS compressors).
	Directly Associated Activity		1
A3	Directly associated activity	The recovery of mono ethylene glycol (MEG) by distillation for reinjection in to gas refining systems.	The receipt of MEG within the Installation to its re-use within the Installation.
A4	Directly associated activity	Utility systems including hot water circuit, hot oil circuits, fuel gas system, instrument air system, electricity generation, diesel storage, hydraulic system firewater system, flash gas and vapour recovery system.	From receipt of raw materials to dispatch for use and transfer of wastes off-site.
A5	Directly associated activity	Surface water, effluent and domestic drainage and treatment.	Handling and storage of site drainage until discharge to the site surface water system.

Table S1.2 Operating techniques					
Description Parts Date Received					
Application	The response to section 2.1 and 2.2 in the Application	15/08/2006			
Receipt of additional information to the application	Entire response	11/12/2006			

Table S1.2 Operating ted	Table S1.2 Operating techniques				
Description	Parts	Date Received			
Part Transfer Application of Environmental Permit EPR/VP3637SB	<ul> <li>All. Including:         <ul> <li>"Part transfer application of Environmental Permit VP3637SB" June 2011 (ref:933988(3)).</li> <li>"Applicability of the LCPD in permitting the LAPS Compressor" (EMS/2/7/21)</li> </ul> </li> </ul>	02/08/2011			
Variation Application (EPR/PP3633LM/V006)	Application documents and all associated supporting information.	07/01/15			
Variation Application (EPR/PP3633LM/V006)	Further information and site plan with emission points to air (SN-BX-XX-DW-AG-000002)	12/02/15 & 23/02/15			
Response to regulation 60(1) Notice – request for information dated 31/10/14	Compliance routes and operating techniques identified in response to questions 1 (LCP details), 2 (compliance route), 4 (LCP configuration), 5 (net rated thermal input) and 6 (start up and shut down).	30/03/15			
Receipt of additional information to the regulation 60(1) Notice. requested by letter dated 13/05/15	Compliance routes and operating techniques identified in response to questions 5 (net rated thermal input), 6 (start up and shut down) and 9 (monitoring).	Received 30/05/15 & 20/11/15			

Table S1.3 Improvement programme requirements Reference Requirement Date IC1 A written procedure shall be submitted to the Agency for approval. The Complete procedure shall contain list of parameters and methodologies used for six monthly comprehensive monitoring of the final wastewater at discharge point W1. The Operator shall implement the proposals as agreed in writing with the Environment Agency. The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report. A written report shall be submitted to the Agency for approval. The report IC2 Complete shall contain the methodologies, results and any statistical relationships in the levels of TOC and BOD in effluent samples collected from the final wastewater discharged from monitoring point W1. The report shall also contain any relationships between this study and the findings of improvement condition 8.1.8 in authorisation BZ0572 The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report. IC3 A written report shall be submitted to the Agency for approval. The report Complete shall contain a review of VOC emissions to air (both fugitive and point source) from the installation. The report shall also contain the results, detailing mass emissions to air and identifying the main sources of loss, and proposals for any improvements, taking into consideration BAT requirements as described in 2.1.4 and 2.2.4 of the Gasification,

Reference	Requirement	Date
	Liquefaction and Refining sector guidance note S1.02.	
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	
	The improvements identified in the report shall be implemented by the	
	operator from the date of approval in writing by the Agency.	
IC4	A written report shall be submitted to the Agency for approval. The report shall contain a BAT review of the options for reduction of NOx and CO from release points A4 and A5, having regard for the benchmark emission limit values as given within the Gasification, Liquefaction and Refining sector guidance note S1.02. The report shall also include a plan with dates for the implementation of the improvements identified as necessary.	Complete
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	
	The improvements identified in the report shall be implemented by the operator from the date of approval in writing by the Agency.	
IC5	A written report shall be submitted to the Agency for approval. This report should include a detailed BAT review of the energy efficiency of process equipment and related plant. The report shall have regard for Sector Guidance Note S1.02 and shall contain proposals to operate the site using equipment that has the lowest environmental impact.	Complete
	The operator shall implement the proposals as agreed in writing with the environment agency	
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report	
IC6	A written report shall be submitted to the Agency for approval. The report shall contain a review of the on site measures for treating water against the BAT listed within the Gasification, Liquefaction and Refining Sector SGN IPPC S1.02 Section 2 for control of point source emissions to water, with proposed improvements to reduce emissions from these release points, having regard for the ELVs given within the SGN for releases to water from W1. The report shall also include, but not be limited to, all of the relevant techniques listed within the SGN, the reduction in the level of pollutants (for each option) and the costs of achieving the reduction (for each option).	Complete
	The Operator shall implement the proposals as agreed in writing with the Environment Agency.	
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	
IC7	A written report shall be submitted to the Agency for approval. The report shall evaluate the potential for impact and/or harm to the aquatic environment of the releases to controlled waters from Release Point W1, having regard for the Agency Guidance Note 'The Use of Direct Toxicity	Complete

Reference	Requirement	Date
	Assessment in PPC Impact Assessments'. A report on the results, with interpretation, conclusions and proposed actions to prevent any acute toxic effects in the receiving waters, with timescales for implementation, shall be supplied to the Agency.	
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	
	The improvements identified in the report shall be implemented by the operator from the date of approval in writing by the Agency.	
IC8	The operator shall develop a written site closure plan with regard to the requirements of sect 2.11 of Agency Guidance note IPPC S1.02 Upon completion of the plan a summary of the document shall be submitted in writing to the Agency.	Complete
	The notification requirements of 2.4.2 shall be deemed to have been complied with on submission of the plan	
IC9	A written report shall be submitted to the Environment Agency for approval. The report shall contain a review of the Site Protection and Monitoring Programme (as covered by condition 2.8.2 of this permit) considering the amendments made by this variation and consolidation notice.	Complete
	The report shall identify any necessary measures for implementation by the operator from the date of approval in writing by the Agency.	
	The notification requirements of condition 2.4.2 shall be deemed to have been complied with on submission of the report.	
IC10	The Operator shall provide a written report to the Environment Agency fully detailing the integrated site accident management plan having regards to all relevant Environment Agency guidance.	Complete
IC11	'For LCPD LCP 434 (now LCP 42 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 LPCD 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 Start-up and Shut-down thresholds					
Point and Unit Reference Load in MW and as percent of rated power output (%) and/or when two of the criteria listed		"Minimum Shut-Down Load"  Load in MW and as percent of rated power output (%)  and/or when two of the criteria listed below for the LCP or unit have been met.			
A17 LCP 42	5.9MW; 23.2% Start mode completed once main flame detected; Power turbine speed >3080rpm; Fuel gas flow >28MJ/sec.	4MW; 15.7% Fuel valves ramped to closed position; Shut off valves to gas manifolds closed; Remaining gas is vented.			

# Schedule 2 – Waste types, raw materials and fuels

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

# **Schedule 3 – Emissions and monitoring**

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply	Reference period note 3	Monitoring frequency	Monitoring standard or method
			during start up or shut down.			
A1	Oxides of Nitrogen note 1	Plant A1 Refrigeration compressor K101	10,000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A1	Carbon Monoxide	Plant A1 Refrigeration compressor K101	600 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A2	Oxides of Nitrogen note 1	Plant A1 Refrigeration compressor K201	10,000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A2	Carbon Monoxide	Plant A1 Refrigeration compressor K201	600 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A3	Oxides of Nitrogen note 1	Plant A1 Refrigeration compressor K301	10,000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A3	Carbon Monoxide	Plant A1 Refrigeration compressor K301	600 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A6	Oxides of Nitrogen note 1	Recycle Gas Compressor K801A	6000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A6	Carbon Monoxide	Recycle Gas Compressor K801A	7000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A7	Oxides of Nitrogen note 1	Recycle Gas Compressor K801B	6000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A7	Carbon Monoxide	Recycle Gas Compressor K801B	7000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A8	Oxides of Nitrogen note 1	Vapour Recovery Compressor C300	5000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period note 3	Monitoring frequency	Monitoring standard or method
A8	Carbon Monoxide	Vapour Recovery Compressor C300	750 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A9E	Oxides of Nitrogen note1	Natco 3 MEG Reboiler F2201	150 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A9E	Carbon Monoxide	Natco 3 MEG Reboiler F2201	1000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A9W	Oxides of Nitrogen note 1	Natco 3 MEG Reboiler F2201	150 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A9W	Carbon Monoxide	Natco 3 MEG Reboiler F2201	1000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A10E	Oxides of Nitrogen note 1	Natco 4 MEG Reboiler F2212	150 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A10E	Carbon Monoxide	Natco 4 MEG Reboiler F2212	1000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A10W	Oxides of Nitrogen note 1	Natco 4 MEG Reboiler F2212	150 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A10W	Carbon Monoxide	Natco 4 MEG Reboiler F2212	1000 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058
A11	Oxides of Nitrogen note 1	Inde/Leman Stabilisation Reboiler F7001	250 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 14792
A11	Carbon Monoxide	Inde/Leman Stabilisation Reboiler F7001	500 mg/m <sup>3</sup>	Hourly mean	3 monthly	BS EN 15058

Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period note 3	Monitoring frequency	Monitoring standard or method
A12	Methane and non-methane hydrocarbons	Inde/Leman Stabilisation Reboiler V7001 & Tower C7001	-	-	-	-
A13	Methane and non-methane hydrocarbons	Propane Vent Header S901	-	-	-	-
A14	Methane and non-methane hydrocarbons	Operational Venting	-	-	-	-
A15	Oxides of Nitrogen note 1	Standby Generator	-	-	-	-
A15	Carbon Monoxide	Standby Generator	-	-	-	-
A16	Oxides of Nitrogen note1	Firewater Pump	-	-	-	-
A16	Carbon Monoxide	Firewater Pump	-	-	-	-
A17	Oxides of Nitrogen note 1	ABB LAPS gas compressor 12. LCP No.42	82.5 mg/m <sup>3</sup>	-	At least every 6 months	BS EN 14792
A17	Carbon Monoxide	ABB LAPS gas compressor 12. LCP No.42	75 mg/m <sup>3</sup>	-	At least every 6 months	BS EN 15058
A17	Sulphur dioxide	ABB LAPS gas compressor 12. LCP No.42	-	-	At least every 6 months	Concentration by calculation, as agreed in writing with the Environment Agency
A17	Stack gas temperature	ABB LAPS gas compressor 12. LCP No.42	-	-	At least every 6 months	Traceable to national standards

Table S3.1 P	oint source emis	ssions to air				
Emission point ref. & location	Parameter	Source	Limit (including unit)-these limits do not apply during start up or shut down.	Reference period note 3	Monitoring frequency	Monitoring standard or method
A17	Stack gas pressure	ABB LAPS gas compressor 12. LCP No.42	-	-	At least every 6 months	Traceable to national standards
A17	Oxygen	ABB LAPS gas compressor 12. LCP No.42	-	-	Periodic As appropriate to reference	BS EN 14789
A17	Water Vapour	ABB LAPS gas compressor 12. LCP No.42	-	-	Periodic As appropriate to reference	BS EN 14790
A17	As required by the Method Implementation Document for BS EN 15259	ABB LAPS gas compressor 12. LCP No.42	-	-	Pre- operation and when there is a significant operational change	BS EN 15259
Pressure relief valves	Methane and non-methane hydrocarbons	Gas treatment system	-	-	-	-
Vacuum pressure safety valves	Methane and non-methane hydrocarbons	Condensate storage tanks	-	-		-
Vacuum pressure safety valves	Methane and non-methane hydrocarbons	Glycol recovery system	-	-	-	-

Note 1: NO and NO<sub>2</sub> expressed as NO<sub>2</sub>.

Note 2: These limits apply both when the load is >70% throughout the reference period and when the load varies between MSUL/MSDL and base load during the daily reference period. MSUL and MSDL are defined in Table S1.4.

Note 3: Monitoring is to be representative of the operation of plant.

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
W1 on figure 6 in the permit application – sea outfall	Drainage and effluent treatment system	Total organic carbon (TOC)	600 mg/ml	24-hour flow proportional sample	Weekly	BS EN 1484
		рН	5 - 9			Permanent
		Oil or grease	No visible emission			sampling access not required
W2 (point W1 on figure 6 in permit application EPR/VP3637SB) – sea outfall	Drainage and effluent treatment system	Chemical oxygen demand (COD)	2500 mg/l (5000 mg/l max)	24-hour flow proportional sample	Weekly	BS ISO 15705:2002
		рН	>5 pH <9			Permanent
		Oil or grease	No visible emission			sampling access not required

# Schedule 4 – Reporting

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

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Oxides of nitrogen	A1, A2, A3, A6, A7, A8, A9E, A9W, A10E, A10W, A11	Every 3 months	1 January, 1 April, 1 July, 1 October
	A17	Every 6 months	1 January, 1 July
Carbon Monoxide	A1, A2, A3, A6, A7, A8, A9E, A9W, A10E, A10W, A11	Every 3 months	1 January, 1 April, 1 July, 1 October
	A17	Every 6 months	1 January, 1 July
Sulphur dioxide	A17	Every 6 months	1 January, 1 July
Emissions to Water Parameters as required by condition 3.5.1	W1, W2	Every 6 months	1 January, 1 July
Total organic carbon Note a	W2	Every 3 months	1 January, 1 April, 1 July, 1 October
Chemical oxygen demand Note a	W2	Every 3 months	1 January, 1 April, 1 July, 1 October
pH <sup>Note a</sup>	W1, W2	Every 3 months	1 January, 1 April, 1 July, 1 October
Comprehensive analysis suite Note b	W1, W2	Every 12 months	1 July

Note a Parameters as required by condition 3.5.1.

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	

Note b Parameters as required by condition 2.4.

Table S4.2: Resource Efficiency Metrics		
Parameter	Units	
Water Abstracted from Fresh Water Source	m <sup>3</sup>	
Water Abstracted from Borehole Source	m <sup>3</sup>	
Water Abstracted from Estuarine Water Source	m <sup>3</sup>	
Water Abstracted from Sea Water Source	m <sup>3</sup>	
Water Abstracted from Mains Water Source	m <sup>3</sup>	
Gross Total Water Used	m <sup>3</sup>	
Net Water Used	m <sup>3</sup>	
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 and other Performance parameters			
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 <sub>x</sub> for each LCP	Annually	t	
Total Emissions to Air of SO <sub>2</sub> for each LCP	Annually	t	
Total Emissions to Air of Dust for each LCP	Annually	t	
Operating Hours for each LCP (Load Factor)	Annually	hr	
Gas exported	Annually	MSCM	

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air 1	Form Air 1 or other form as agreed in writing by the Agency	Permit issue	Area Office	01/06/07
Air & Energy	Form IED AR1 – SO <sub>2</sub> , NO <sub>x</sub> and dust mass emission and energy	01/01/16	National & Area Office	31/12/15
LCP	Form IED HR1 – operating hours	01/01/16	National & Area Office	31/12/15
LCP	Form IED BD1 - Cumulative annual rolling malfunction and breakdown hours	01/01/16	Area Office	31/12/15

Table S4.4 Reporting forms				
Media/ parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air	Form IED MF1 – pollutant concentrations when during any day with malfunction or breakdown of abatement plant	01/01/16	Area Office	31/12/15
Air	Form IED PM1 - discontinuous monitoring and load.	01/01/16	Area Office	31/12/15
Resource Efficiency	Form REM1 – resource efficiency annual report	01/01/16	National & Area Office	31/12/15
Water	Form water 1 or other form as agreed in writing by the Environment Agency	01/01/16	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	EPR/PP3633LM
Name of operator	Perenco UK Limited
Location of Facility	Central Bacton Gas Terminal
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			

Parameter	Notification period
(c) Notification requirements for the detection of any significant	cant 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 p	racticable
Part B – to be submitted as soon as put Any more accurate information on the matters for	racticable
Part B – to be submitted as soon as property of the submitted as soon as property of	racticable
Part B – to be submitted as soon as property of the following property	racticable
Part B – to be submitted as soon as property of the submitted as soon as property of	racticable
Part B – to be submitted as soon as property of the formation 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	racticable
Part B – to be submitted as soon as property of the formation 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	racticable
Part B – to be submitted as soon as property of the formation 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	racticable
Part B – to be submitted as soon as property of the facility in the preceding 24 months.  Part B – to be submitted as soon as property of the submitted as soon as property of the submitted as soon as property of 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.	racticable
Part B – to be submitted as soon as property of the formation 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.	racticable

Time periods for notification following detection of a breach of a limit

<sup>\*</sup> authorised to sign on behalf of the operator

# Part C Malfunction or Breakdown of LCP abatement equipment

Permit Number	EPR/PP3633LM
Name of operator	Perenco UK Limited
Location of Facility	Central Bacton Gas Terminal
LCP Number	42
Malfunction or breakdown	
Date of malfunction or breakdown	

(a) Notification requirements for any malfunction and breakdown of abatement equipment as defined by the Industrial Emission Directive*.		
To be notified within 48 hours of abatement equipment malfunction and breakdown		
Time at which malfunction or breakdown commenced		
Time at which malfunction or breakdown ceased		
Duration of the breakdown event in hours and minutes		
Reasons for malfunction or breakdown		
Where the abatement plant has failed, give the hourly average concentration of all measured pollutants.		
Cumulative breakdown operation in current year (at end of present event)		
Cumulative malfunction operation in current year (at end of present event)		
Name**		
Post		
Signature **		
Date		

<sup>\*</sup> See section 3.6 and Appendix E of ESI Compliance Protocol for guidance

<sup>\*\*</sup> 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 Commité 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<sub>x</sub> 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.

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

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

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

"low polluting fuels" means biomass or coal with an average as-received sulphur content of less than 0.4% by mass as described in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines.

"malfunction" has the meaning given in the ESI IED Compliance Protocol for Utility Boilers and Gas Turbines "Mid-merit" means combustion plant operating between 1,500 and 4,000 hrs/yr.

"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.

"MSCM" means million standard cubic metres

"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.

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

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

Site plan subject to National Security

END OF PERMIT