

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Heathrow Airport Limited

Heathrow Boilers
Heathrow Airport Energy Centre
Sealand Road
Heathrow
Middlesex
TW6 3FD

Variation application number

EPR/BQ3789IK/V006

Permit number

EPR/BQ3789IK

Heathrow Boilers

Permit number EPR/BQ3789IK

Introductory note

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

The following notice gives notice of the variation and consolidation of an environmental permit.

This variation is to add the Heathrow Airport Energy Centre (EC) to the existing installation. The EC will provide heat and power to the airport terminals. It will eventually replace temporary gas oil boilers for terminal 2B and the heat link to building 523.

The EC will consist of two 11MW gas boilers and one 11.4MW biomass boiler. The biomass boiler will burn virgin timber wood chip to provide electricity and heat via an Organic Rankine Cycle engine. The gas boilers will provide heat.

The schedules specify the changes made to the permit.

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

Status Log of the permit		
Detail	Date	Comments
Application BQ3789IK (EPR/BQ3789IK/A001)	11/12/02	
Permit issued (EPR/BQ3789IK)	19/12/03	
Application GP3839LF (Consolidation of IPC Authorisation AA3506 and PPC Permit BQ3789IK)	Duly made 19/05/06	
Additional information (requested 07/08/06)	Received 07/09/06	
Additional information (Requested 07/08/06)	Received 14/11/06	
Additional information (Requested 13/02/07)	Received 28/02/07	
Permit determined GP3839LF	23/03/07	
Variation application BP3831UQ (EPR/BQ3789IK/V002)	31/07/07	
Additional information (Requested 02/08/07)	Received 03/08/07	
Variation determined BP3831UQ (EPR/BQ3789IK/V002)	02/11/07	
Variation application EPR/BQ3789IK/V003	Duly made 09/02/10	
Additional information (Requested 16/02/10)	Received 22/02/10	
Variation determined EPR/BQ3789IK/V003	21/04/10	
Variation application EPR/BQ3789IK/V004	Duly made 04/08/10	
Additional information (Requested 01/09/10)	Received 09/09/10	
Variation determined EPR/BQ3789IK/V004	03/11/10	
Variation application EPR/BQ3789IK/V005	Duly made 23/05/12	Move gas oil tanks and extend installation boundary associated with boiler house 448
Variation determined EPR/BQ3789IK/V005 determined	04/07/12	
Variation application EPR/BQ3789IK/V006	Duly made 05/07/12	To include Heathrow Energy centre
Variation EPR/BQ3789IK/V006 determined	04/09/12	

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/BQ3789IK

issued to
Heathrow Airport Limited ("the operator")

whose registered office is

The Compass Centre
Nelson Road
Hounslow
Middlesex
TW6 2GW

company registration number **01991017**

to operate a regulated facility at

Heathrow Boilers
Heathrow Airport Energy Centre
Sealand Road
Heathrow
Middlesex
TW6 3FD

to the extent set out in the schedules.

The notice shall take effect from 04/09/2012

Name

Date

Kelly Bailey

04/09/2012

Authorised on behalf of the Environment Agency

Schedule 1

The following conditions were varied as a result of the application made by the operator:

- Table S1.1 is amended to include the new energy centre
- Table S1.1 is amended to remove reference to use of gas oil for building 523 boiler, as previously agreed with the Environment Agency.
- Table S1.2 is amended to include new operating techniques
- Table S1.3 is amended to remove completed improvement conditions
- Table S1.4 was amended to remove the satisfied pre-operational condition
- The sites plans in schedule 2 are amended to show the new energy centre
- The reference to a limit prior to 2007 is removed from table S3.1
- Table S4.1 is amended to include new emission points to air to update emission point numbering, and to include limits for A8 that had been previously agreed with the Environment Agency in writing.
- Table S4.3 is amended to include new emission to sewer
- Table S5.1 is amended to include reporting of the new emissions
- Table S5.2 is amended to remove requirement to measure hot water, as previously agreed with the Environment Agency.
- Table S5.3 is amended to include reporting of emergency vent use
- Table S5.4 is amended to reflect the new air monitoring reporting forms
- Condition 2.8 is deleted to remove the requirement for the SPMP.

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number
EPR/BQ3789IK

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/BQ3789IK/V006 authorising,

Heathrow Airport Limited (“the operator”),
whose registered office is

The Compass Centre
Nelson Road
Hounslow
Middlesex
TW6 2GW

company registration number **01991017**

to operate an installation at

Heathrow Boilers
Heathrow Airport Energy Centre
Sealand Road
Heathrow
Middlesex
TW6 3FD

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

Name	Date
Kelly Bailey	04/09/2012

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The activities shall be managed and operated:

- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the operator as a result of complaints; and
- (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.

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 Accident management plan

1.2.1 The operator shall:

- (a) maintain and implement an accident management plan;
- (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
- (c) make any appropriate changes to the plan identified by a review.

1.3 Energy efficiency

1.3.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.4 Efficient use of raw materials

1.4.1 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 4 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 appropriate further measures identified by a review.

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

1.5.1. The operator shall:

- (a) take appropriate measures to ensure that waste produced by the activities is avoided or reduced, or where waste is produced it is recovered wherever practicable or otherwise disposed of in a manner which minimises its impact on the environment;
- (b) review and record at least every 4 years whether changes to those measures should be made; and
- (c) take any further appropriate measures identified by a review.

1.6 Site security

1.6.1. Site security measures shall prevent unauthorised access to the site, as far as practicable.

2. Operations

2.1 Permitted activities

2.1.1 The operator is 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 blue on the site plan at schedule 2 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 Agency.

2.3.2 Subject to condition 2.3.3 no raw materials or fuels listed in schedule 3 table S3.1 shall be used unless they comply with the specifications set out in that table.

2.3.3 Standby fuel (low sulphur gas oil as per table S3.1) may be used but for no more than 500 hours per year.

2.4 Off-site conditions

2.4.1 There are no off-site conditions under this section.

2.5 Improvement programme

2.5.1 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 Agency.

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

2.6 Pre-operational conditions

- 2.6.1 There are no pre-operational conditions in this permit.

2.7 Closure and decommissioning

- 2.7.1 The operator shall maintain and operate the activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.
- 2.7.2 The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid any pollution risk and return the site to a satisfactory state.
- 2.7.3 The operator shall carry out and record a review of the site closure plan at least every 4 years.
- 2.7.4 The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

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 4 tables S4.1, S4.2 and S4.3.
- 3.1.2 The limits given in schedule 4 shall not be exceeded.

3.2 Transfers off-site

- 3.2.1 Records of all the wastes sent off site from the activities, for either disposal or recovery, shall be maintained.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 All liquids, 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.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

- 3.5.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures, to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

- 3.6.1 The operator shall, unless otherwise agreed in writing by the Agency, undertake the monitoring specified in the following tables in schedule 4 to this permit:
- (a) point source emissions specified in tables S4.1, S4.2 and S4.3;
- 3.6.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme specified in condition 3.6.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing by the Agency.
- 3.6.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 4 tables S4.1, S4.2 and S4.3 unless otherwise specified in that schedule.

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 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) the site protection and monitoring programme.

4.1.2 Any records required to be made by this permit shall be supplied to the Agency within 14 days where the records have been requested in writing by the Agency.

4.1.3 All records required to be held by this permit shall be held on the on-site and shall be available for inspection by the Agency at any reasonable time.

4.2 Reporting

4.2.1 A report or reports on the performance of the activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the 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 this permit against the relevant assumptions, parameters and results in the assessment of the impact of the emissions submitted with the application;
- (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
- (c) the annual production /treatment data set out in schedule 5 table S5.2;
- (d) the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule; and
- (e) details of any contamination or decontamination of the site which has occurred.

4.2.2 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the 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 5 table S5.1;
- (b) for the reporting periods specified in schedule 5 table S5.1 and using the forms specified in schedule 5 table S5.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

- 4.2.3 The operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 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.
- 4.2.4 All reports and notifications required by the permit shall be sent to the Agency using the contact details supplied in writing by the Agency
- 4.2.5 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 28 days of the review or change.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 6 to this permit within the time period specified in that schedule.
- 4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the activities;
 - (b) cessation of operation of part or all of the activities for a period likely to exceed 1 year; and
 - (c) resumption of the operation of part or all of the activities after a cessation notified under (b) above.
- 4.3.4 The Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.
- 4.3.5 Where the 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 Agency when the relevant monitoring is to take place. The operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the operator's trading name, registered name or registered office address;
 - (b) any change to particulars of the operator's ultimate holding company (including details of an ultimate holding company where an operator has become a subsidiary); and
 - (c) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.
- 4.3.7 Where the operator has entered into a direct participant agreement in the emissions trading scheme which covers emissions relating to the energy consumption of the activities, the operator shall notify the Agency within one month of:

- (a) a decision by the operator to withdraw from or the Secretary of State to terminate that agreement.
- (b) a failure to comply with an annual target under that agreement at the end of the trading compliance period.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 activities		
Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
Section 1.1 A(1) (a): Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.	<p>Terminal 4 Boiler House: Burning of natural gas in three 5 MW_{th} boiler and two 0.6 MW_{th} boilers.</p> <p>Building 448 Boiler House: Burning of natural gas with gas oil as a standby in one 15 MW_{th} boiler, two 14.7 MW_{th} boilers and one 11 MW_{th} boiler.</p> <p>Terminal 5 Boiler House: Burning of natural gas with gas oil as a backup in one 10.3 MW_{th} boiler and two 22.5 MW_{th} boilers.</p> <p>Terminal 2B Phase 1 Boiler House: Burning of gas oil in one 3.3 MW_{th} boiler and one 0.93 MW_{th}.</p> <p>Building 523 Boiler House: Burning of natural gas in one 16 MW_{th} boiler. An additional 16 MW_{th} boiler operates on a stand-by basis.</p> <p>Heathrow Airport Energy Centre Burning of natural gas with gas oil as a backup in two 11MW_{th} boilers. Combustion of wood chip in one 11.4MW_{th} biomass boiler to generate hot oil.</p>	<p>From the receipt and storage of raw materials including natural gas or gas oil to despatch of hot water and steam, discharge of emissions to air and disposal of effluent and wastes arising.</p> <p>From receipt of wood chip to emission of combustion products and despatch of waste from site.</p>
Directly Associated Activity		
Directly associated activity	Water treatment to provide demineralised water to the boiler plant	From receipt and storage of raw materials to transfer of demineralised water to the boiler plant and disposal of effluent and wastes arising.
Directly associated activity	Surface water drainage	From collection of surface water from the roofs and external areas of the boiler houses to discharge to Heathrow airport's surface water treatment system.
Directly associated activity	Heat electricity generation using organic rankine cycle engine	From biomass hot oil boiler.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application	The response to section 2.1 and 2.2 in the Application.	23/03/06
Additional information received	The response to questions 1, 3-5 and 7-10 detailing gross thermal input of boilers, installation of low NOx systems, stack configurations, gas oil tank bunding, chemical storage and emissions monitoring systems.	07/09/06
Additional information received	The response to question 2 detailing water treatment.	28/02/07
Variation application BP3831UQ	Sections 3 and 4, response to questions C3.1 and C2.2	31/07/07
Variation application EPR/BQ3789IK/V003	Sections 3.3.1-3.3.6 of the supporting information to the variation application, submitted in response to question C1c and C2a, describing the operational controls for the new Terminal 2B Phase 1 boilers.	09/02/10
Variation application EPR/BQ3789IK/V003	Section 3.2.2 of the supporting information to the variation application describing operational changes that have been made during commissioning of the Terminal 5 boilers to reduce emissions of oxides of nitrogen.	09/02/10
Variation application EPR/BQ3789IK/V004	Sections 1, 2 and 3 of the Supporting Information to the variation application, in response to: <ul style="list-style-type: none"> - sections 3d and 6 Part C2 of the application form - sections 3, 4 and 6 Part C3 of the application form - H1 Risk Assessment 	09/09/10
Variation application EPR/BQ3789IK/V004	Revised site plan showing locations of boiler houses and all emission points.	29/10/10
Variation application EPR/BQ3789IK/V005	The response to application form C3 question 3. Document B448 oil storage risk assessment. Sections 2.2. and 2.3 of Document 12137-XX-EC-904-000030.	23/05/12
Variation application EPR/BQ3789IK/V006	The response to application form C3 question 3. Supporting information document, sections 3.1, 3.2, 3.3, 3.6.1 (a), 3.6.1 (b), 3.7.1.	05/07/12
	Not duly made response e-mail (dated 27/06/12), response to questions 1, 6, 8 and 9.	
	Not duly made response e-mail (dated 03/07/12), Q11 B3 and B4	

Table S1.3 Improvement programme requirements

Reference	Requirement	Date
-	-	-

Table S1.4 Pre-operational measures

Reference	Pre-operational measures
-	-

Permit Number
EPR/BQ3789IK

Boiler house 448



Location of
new tanks

Tanks to be removed

Schedule 3 - Waste types, raw materials and fuels

Table S3.1 Raw materials and fuels	
Raw materials and fuel description	Specification
Gas oil from 01/01/2008	Less than 0.1% w/w sulphur content

Schedule 4 – Emissions and monitoring

Table S4.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1.1, A1.2 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T4 Boiler House Boilers 1 (S5), and 2 (S6)	200 mg/m ³	Hourly average	Every 6 months	BS EN 14792
	Carbon monoxide		100 mg/m ³	Hourly average	Every 6 months	BS EN 15058
A1.3 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T4 Boiler House Boilers 3 (S7), 4 (S8) and 5 (S9)	200 mg/m ³ [2]	Hourly average	Every 6 months [2]	BS EN 14792
	Carbon monoxide		100 mg/m ³ [2]	Hourly average	Every 6 months [2]	BS EN 15058
A2.1, A2.2 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	448 Boiler House Boilers 3 (S1) and 4 (S2) (Natural gas operation)	200 mg/m ³	Hourly average	Every 6 months	BS EN 14792
	Carbon monoxide		100 mg/m ³	Hourly average	Every 6 months	BS EN 15058
A2.3 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	448 Boiler House Boilers 5 (S3) and 6 (S4) (Natural gas operation)	200 mg/m ³	Hourly average	Every 6 months	BS EN 14792
	Carbon monoxide		100 mg/m ³	Hourly average	Every 6 months	BS EN 15058
A2.1, A2.2 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	448 Boiler House Boilers 3 (S1) and 4 (S2) (Gas oil operation)	250 mg/m ³	Hourly average	Every 6 months	BS EN 14792
	Carbon monoxide		150 mg/m ³	Hourly average	Every 6 months	BS EN 15058
	Total particulate		30 mg/m ³	Hourly average	Every 6 months	BS EN 13284-1

Table S4.1 Point source emissions to air – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A2.3 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	448 Boiler House Boilers 3 (S1) and 4 (S2) (Gas oil operation)	250 mg/m ³	Hourly average	Every 6 months	BS EN 14792
	Carbon monoxide		150 mg/m ³	Hourly average	Every 6 months	BS EN 15058
	Total particulate		30 mg/m ³	Hourly average	Every 6 months	BS EN 13284-1
A5.1 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T5 Boiler House Boiler 1 (S10) (Natural gas operation)	150 mg/m ³	Daily mean	Continuous	BS EN 14792
	Carbon monoxide		100 mg/m ³	Daily mean	Continuous	BS EN 15058
A5.2, A5.3 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T5 Boiler House Boilers 2 (S11) and 3 (S12) (Natural gas operation)	150 mg/m ³	Hourly average	Annual	BS EN 14792
	Carbon monoxide		100 mg/m ³	Hourly average	Annual	BS EN 15058
A5.1 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T5 Boiler House Boiler 1 (S10) (Gas oil operation)	200 mg/m ³	Daily mean	Continuous	BS EN 14792
	Carbon monoxide		150 mg/m ³	Daily mean	Continuous	BS EN 15058
	Total particulate		15 mg/m ³	Daily mean	Continuous	BS EN 13284-2
A5.2, A5.3 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	T5 Boiler House Boilers 2 (S11) and 3 (S12) (Gas oil operation)	200 mg/m ³	Hourly average	Annual	BS EN 14792
	Carbon monoxide		150 mg/m ³	Hourly average	Annual	BS EN 15058
	Total particulate		15 mg/m ³	Hourly average	Annual	BS EN 13284-1
A6.1 (Shown on site plan in Schedule 2)	No parameters set	T2B Phase 1, Boiler 1 (S48) (Gas oil operation)	-	-	-	-

Table S4.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A6.2 (Shown on site plan in Schedule 2)	No parameters set	T2B Phase 1, Boiler 2 (S49) (Gas oil operation)	-	-	-	-
A8.1 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Building 523 Boiler House Boiler 2 (S44) (Natural gas operation) [1]	No Limit set	Hourly average	Annual	BS EN 14792
	Carbon monoxide		No Limit set	Hourly average	Annual	BS EN 15058
A8.2 (Shown on site plan in Schedule 2)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Building 523 Boiler House Boiler 3 (S45) (Natural gas operation) [1]	No Limit set	Hourly average	Annual	BS EN 14792
	Carbon monoxide		No Limit set	Hourly average	Annual	BS EN 15058
A9.1 (Point A9.1 on site plan in Schedule 2 of the permit)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Energy centre, Biomass boiler	300mg/m ³	Daily average	Continuous	BS EN 15267-3
	Particulate matter		20mg/m ³	Daily average	Continuous	BS EN 15267-3
	Carbon monoxide		100mg/m ³	Daily average	Continuous	BS EN 15267-3
A9.1a (Point A9.1a on site plan in Schedule 2 of the permit)	No parameters set	Energy centre, Biomass boiler emergency vent	No limits set	-	-	-
A9.2 (Point A9.2 on site plan in Schedule 2 of the permit)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Energy centre, Boiler S56 (natural gas operation)	150mg/m ³	Hourly average	Annual	BS EN 14792
	Carbon monoxide		50mg/m ³	Hourly average	Annual	BS EN 15058
A9.3 (Point A9.3 on site plan in Schedule 2 of the permit)	Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂)	Energy centre, Boiler S57 (natural gas operation)	150mg/m ³	Hourly average	Annual	BS EN 14792

Table S4.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
	Carbon monoxide		50mg/m ³	Hourly average	Annual	BS EN 15058
A9.2 (Point A9.2 on site plan in Schedule 2 of the permit)	No parameters set	Energy centre, Boiler S56 (gas oil operation)	No limits set	-	-	
A9.3 (Point A9.3 on site plan in Schedule 2 of the permit)	No parameters set	Energy centre, Boiler S57 (gas oil operation)	No limits set	-	-	-

[1] Only one boiler in Building 523 Boiler House is permitted to operate at any one time.

[2] Limit and monitoring apply only to boiler 3 (S7)

Table S4.2 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference period	Monitoring frequency	Monitoring standard or method
-						

Table S4.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site – emission limits and monitoring requirements

Emission point ref. & location	Parameter	Source	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
E1	No parameters set	T4 boiler house effluent and surface water	-	-	-	-
E2	No parameters set	Building 448 boiler house surface water	-	-	-	-
E5	No parameters set	T5 boiler house effluent and surface water	-	-	-	-
S1	No parameters set	Building 448 boiler house effluent	-	-	-	-
S2	No parameters set	Terminal 2B Phase 1 boiler house effluent and surface water	-	-	-	-
S3a	No parameters set	Building 523 Boiler House effluent and surface water	-	-	-	-
S3b	No parameters set	Building 523 Boiler House effluent and surface water	-	-	-	-
S4	No parameters set	Energy centre, condenser	-	-	-	-
S5 (labelled as storm drain on site plan in Schedule 2 of the permit)	No parameters set	Energy centre, surface water	-	-	-	-

Schedule 5 - Reporting

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

Table S5.1 Reporting of monitoring data

Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to Air	A1.1, A1.1, A1.3, A2.1,	Every 6 months	01/01/07
Parameters as required by condition 3.6.1.	A2.2, A2.3, A5.1, A5.2, A5.2,, A8.1, A8.2 A9.1, A9.2, A9.3		

Table S5.2: Annual production/treatment

Parameter	Units
-	-

Table S5.3 Performance parameters

Parameter	Frequency of assessment	Units
Mains Water usage	Annual	m ³
Gas usage	Annual	MWh
Gas Oil usage	Annual	MWh
Electricity from Public supply	Annual	MWh
Biomass boiler emergency vent (number of times and duration of operation)	6 monthly	Hours

Table S5.4 Reporting forms

Media/parameter	Reporting format	Starting Point	Agency recipient	Date of form
Air	Form Air 1 – Periodic monitoring or other form as agreed in writing by the Agency	Permit issue	Site Inspector	24/08/2012
Air	Form Air 1A – Continuous monitoring or other form as agreed in writing by the Agency	Permit issue	Site Inspector	24/08/2012
Water usage	Form Water Usage 1 or other form as agreed in writing by the Agency	Permit issue	Site Inspector	23/03/2007
Energy usage	Form Energy 1 or other form as agreed in writing by the Agency	Permit issue	Site Inspector	23/03/2007
Performance	Form Performance 1 or other form as agreed in writing by the Agency	Permit issue	Site Inspector	23/03/2007

Schedule 6 - 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 PPC Regulations.

Part A

Permit Number	EPR/BQ3789IK
Name of operator	Heathrow Airport Limited
Location of Installation	Heathrow Airport, Heathrow, Middlesex
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection

Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

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

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

Part B - to be submitted as soon as practicable

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

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Heathrow Airport Limited

Schedule 7 - Interpretation

"*accident*" means an accident that may result in pollution.

"*annually*" means once every year.

"*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 4 to the PPC Regulations.

"*authorised officer*" means any person authorised by the 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.

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

"*emissions to land*", includes emissions to groundwater.

"*fugitive emission*" means an emission to air, water or land from the activities which is not controlled by an emission limit.

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

"*land protection guidance*", means Agency guidance "H7 - Guidance on the protection of land under the PPC Regime: application site report and site protection monitoring programme".

"*MCERTS*" means the Environment Agency's Monitoring Certification Scheme.

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

"*ncv*" means net calorific value.

"*notify without delay*" / "*notified without delay*" means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

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

"*PPC Regulations*" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

"*quarter*" means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

"*reference conditions*" means:

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.

"*site protection and monitoring programme*" means a document which meets the requirements for site protection and monitoring programmes described in the Land Protection Guidance.

"*year*" means calendar year ending 31 December.

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

- (a) 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.

END OF PERMIT