Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Ark Data Centres Limited

Union Park
Bulls Bridge Industrial Estate
North Hyde Gardens
Hayes
UB3 4QQ

Permit number

EPR/ZP3527SS

Union Park
Permit number EPR/ZP3527SS

Introductory note

This introductory note does not form a part of the permit

The main features of the permit are as follows.

The site comprises a data centre which consists of an Environmental Permitting Regulations (EPR) 2016 Schedule 1 listed activity:

Section 1.1 Part A(1) (a) for the burning of any fuel in an appliance with a rated thermal input of 50 or more megawatts (MW).

The combustion plant comprises 12 x 8.01 MWth gas oil or equivalent fuelled standby generators (new Medium Combustion Plant (MCP)), with an aggregated total combustion capacity on-site of approximately 96.12 MWth. The gas oil or equivalent fuelled generators are solely used to provide standby electricity generation capacity to power the data centre in the event of a grid power failure. The data centre is operational 24 hours/day, 7 days/week and the electricity supply arrangements for the site include two diverse routes and associated infrastructure (e.g., transformers) providing a 2N level of resilience, where N is the power demand of the Installation.

The primary pollutants of concern to air quality from the combustion processes at the Installation are oxides of nitrogen (NOx), carbon monoxide (CO), particulates (PM10, PM2.5), sulphur dioxide (SO_2) and ammonia (NH_3) from the SCR abatement. The default generator specification as a minimum for new plant to minimise the impacts of emissions to air (NOx) is 2g-TA Luft or US EPA Tier 2 or an equivalent standard. The 12 generators to be used at the data centre are emissions optimised to meet the US EPA Tier 2 standard. The generators also include a Selective Catalytic Reduction (SCR) NOx abatement system within the design. The SCR NOx abatement system on the generators will be used to limit the NOx emissions to a maximum of 95 mg/Nm^3 per generator at 5% oxygen, which is below the Medium Combustion Plant Directive (MCPD) 2015 limit for new gas oil or equivalent fuelled engines.

The 12 generators will be located inside the Energy Centre building. During the normal operations of the site, the generators are only run for maintenance and testing, according to a specified testing schedule incorporated into table S1.2 of the permit. No electricity is exported from the Installation.

Gas oil or equivalent fuel will be stored at the site in day (belly) tanks. The day tanks are located underneath each generator set. The day tanks have been designed in line with current standards and are bunded (110% capacity) to meet The Control of Pollution (Oil Storage) (England) Regulations 2001. The independent day tanks are fed from two receiver tanks located inside the Energy Centre building.

The 12 day tanks store approximately 52,000 litres of fuel each, the 2 receiver tanks store approximately 2,500 litres of fuel each. The total capacity for gas oil or equivalent fuel storage on site is 629,000 litres.

Uncontaminated surface water from the site either drains to the River Crane or to the public foul sewer via oil/water interceptors before ultimately discharging into the River Thames. The site is covered in hardstanding to reduce the likelihood of potential leaks contaminating the underlying soils.

The Installation known as Union Park Data Centre and associated Energy Centre (EC3) is located in Hayes, an urban location, which is relatively industrial in the immediate vicinity with residential properties to the north and south at national grid reference TQ 10436 79275.

There are 3 protected European sites within 10 km and 12 local sites within 2 km of the Installation.

The data centre is situated in an Air Quality Management Area (AQMA) (Hillingdon AQMA) declared by the London Borough of Hillingdon in 2003 for exceedances of the UK Air Quality Standard (AQS) for annual mean concentrations of nitrogen dioxide (NO_2). The site is also located in close proximity to an Air Quality

Focus Area (AQFA), which is an area of known elevated concentrations of NO_2 and high levels of human exposure.

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

Status log of the permit		
Description	**Date**	**Comments**
Application EPR/ZP3527SS/A001	Duly made 18/12/24	Application for a combustion facility consisting of a data centre.
Further Information received, responses to Schedule 5 notice dated 15/05/25	26/06/25	Further information on raw material containment and drainage.
Permit determined EPR/ ZP3527SS	06/10/25	Permit issued to Ark Data Centres Limited.

End of introductory note

Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number

EPR/ZP3527SS

The Environment Agency hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2016

Ark Data Centres Limited ("the operator"),

whose registered office is

Spring Park Westwells Road
Hawthorn
Corsham
Wiltshire
SN13 9GB

company registration number 05656968

to operate an Installation at

Union Park
Bulls Bridge Industrial Estate
North Hyde Gardens
Hayes
UB3 4QQ

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

Name	Date
Eleanor Blackeby	**06/10/2025**

Authorised on behalf of the Environment Agency

Conditions

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

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

(b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.

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

1.2 Energy efficiency

1.2.1 The operator shall:

(a) take appropriate measures to ensure that energy is used efficiently in the activities;

(b) review and record at least every four 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.

1.3 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; and

(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 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.

2.3.3 For the following activities referenced in schedule 1, table S1.1: AR1. The activities shall not operate for more than 500 hours in emergency use per annum.

2.3.4 For the following activities referenced in schedule 1, table S1.1, AR1:

(a) the operator must keep periods of start-up and shut down of the combustion plant as short as possible.

(b) there shall be no persistent emission of 'dark smoke' as defined in section 3(1) of the Clean Air Act 1993.

2.3.5 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.

2.3.6 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.

2.3.7 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.

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

2.5 Pre-operational conditions

2.5.1 The activities shall not be brought into operation until the measures specified in schedule 1 table S1.4 have been completed.

3 Emissions and monitoring

3.1 Emissions to water, air or land

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1, S3.2 and S3.3.

3.1.2 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;

(b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

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

3.3.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;

(b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

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

3.4.2 The operator shall:

(a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;

(b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

(a) point source emissions specified in tables S3.1, S3.2 and S3.3;

(b) process monitoring specified in table S3.4;

3.5.2 The first monitoring measurements shall be carried out within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later.

3.5.3 Monitoring of MCP shall not take place during periods of start up or shut down.

3.5.4 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.

3.5.5 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by the Environment Agency.

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.

4.1.3 The operator shall maintain a record of the type and quantity of fuel used and the total annual operating hours for each MCP.

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 performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 of that schedule.

(c) where condition 2.3.3 applies, the hours of operation in any year.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

(a) in respect of the parameters and emission points specified in schedule 4 table S4.1;

(b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.3; and

(c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.3 Notifications

4.3.1 In the event:

(a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—

(i) inform the Environment Agency,

(ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and

(iii) take the measures necessary to prevent further possible incidents or accidents;

(b) of a breach of any permit condition the operator must immediately—

(i) inform the Environment Agency, and

(ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;

(c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 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:

(a) any change in the operator's name or address; and

(b) any steps taken with a view to the dissolution of the operator.

In any other case:

(a) the death of any of the named operators (where the operator consists of more than one named individual);

(b) any change in the operator's name(s) or address(es); and

(c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

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

(a) the Environment Agency shall be notified at least 14 days before making the change; and

(b) the notification shall contain a description of the proposed change in operation.

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

4.3.7 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.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

Table S1.1 activities			
Activity reference	**Activity listed in Schedule 1 of the EP Regulations**	**Description of specified activity**	**Limits of specified activity**
AR1	Section 1.1 Part A(1) (a) Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.	Operation of 12 emergency standby generators with a total thermal input of approximately 96.12 MWth. The generators will burn gas oil or equivalent substitute agreed in writing with the Environment Agency solely for the purpose of providing electricity to the Installation in the event of a failure of supply from the National Grid and during maintenance testing. Aggregated Back-up Generation (ABG) consisting of: 12 x 8.01 MWth (abated, New MCP)	From receipt of raw materials and generation of electricity to despatch of waste. Including selective catalytic reduction (SCR) systems. Electricity produced at the Installation cannot be exported to the National Grid. The emergency operational hours of the Installation shall not exceed the specifications set out in condition 2.3.3 of this permit.
	Directly Associated Activity		
AR2	Storage of raw materials	From receipt of raw materials to use within the facility.	
AR3	Surface water drainage	From the input to the site drainage system until discharge to campus surface water sewer (emission points SWMH1 and SWMH2) and campus foul sewer (emission point FWMH1). Drainage system covering fuel storage and refuelling bays drains via oil interceptors, then to campus surface water sewer (emission points SWMH1 and SWMH2) and campus foul sewer (emission point FWMH1).	

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/ZP3527SS/A001	Application Forms B2 and B3 and all referenced supporting information.	Duly Made 18/12/24
Application EPR/ZP3527SS/A001 Generators maintenance testing schedule	Generators maintenance testing schedule detailed in application documents: Air Quality Assessment ZP3527SS – Union Park Data Centre, Bulls Bridge Industrial Estate, North Hyde Gardens, Hayes, UB3 4DG, dated October 2024.	Duly Made 18/12/24

Table S1.2 Operating techniques		
Description	**Parts**	**Date Received**
Application EPR/ZP3527SS/A001 SCR Abatement	NOx abatement efficiency for the selective catalytic reduction systems (SCR) detailed in application documents: Air Quality Assessment ZP3527SS – Union Park Data Centre, Bulls Bridge Industrial Estate, North Hyde Gardens, Hayes, UB3 4DG, dated October 2024.	Duly Made 18/12/24
Response to Schedule 5 notice dated 15/05/25	Response detailing fuel storage, containment protection and drainage.	26/06/25

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC1	**Air Quality Management Plan (AQMP)** The operator shall produce an AQMP in conjunction with the Local Authority outlining response measures to be taken in the event of a grid failure. This should include but not be limited to the following considerations: • The response should be tailored to reflect the predicted potential impact indicated by the air dispersion modelling at individual receptors; • Preventative and reactive actions to be implemented to limit the duration of an outage event to less than 50 hours as far as possible; • Specific timescales for response measures; • How local conditions during a grid failure might influence the response required, for example meteorological conditions or time of day; • Contingency for how the response will be carried out in the event scenario i.e. loss of power; • Timescales for continued review of the management plan; and • Addition of indicative air quality monitoring stations around the site to inform on air quality during extended periods of standby generator running including prolonged grid outages. The agreed Air Quality Management Plan shall be submitted to the Environment Agency for approval.	Within 6 months from the date of issue of the permit EPR/ZP3527SS

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC2	**Monitoring plan - flue gas monitoring requirements** The operator shall submit a monitoring plan for approval by the Environment Agency detailing their proposal for the implementation of the flue gas monitoring requirements specified in table S3.1, in line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5). The plan shall include, but not necessarily be limited to: • When the generators are not fitted with sampling ports, a proposal to install them within the shortest practical timeline; • Details of any relevant safety, cost and operational constraints affecting the monitoring regime, in support of any proposed deviation from the testing regime specified in permit table S3.1.	Within 3 months from the date of issue of the permit EPR/ZP3527SS
IC3	**Performance of SCR systems** The operator shall submit a written report to the Environment Agency for assessment and written approval. The report must contain: • Detailed information on the specification of the suitability of the NOx sensors and urea solution dosing to the SCR systems. • Evidence of the initial calibration of the NOx sensors and verification of the levels of unabated and abated NOx emissions upstream and downstream of the SCR system according to a methodology consistent with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5). • Confirmation that the SCR systems achieve the NOx abatement performance stated in the application documents referred to in table S1.2, or a proposal for remedial actions when this is not achieved. • A plan to periodically calibrate the NOx sensors and verify the performance of the SCR systems, including the proposed frequencies. The operator must implement the proposals in the report in line with the timescales agreed within the Environment Agency's written approval.	Within 3 months from the date of issue of the permit EPR/ZP3527SS or as agreed in writing with the Environment Agency

Table S1.4 Pre-operational measures	
Reference	**Pre-operational measures**
PO1	**Commissioning** At least one month before operation the operator shall submit a commissioning plan to the Environment Agency for approval. The plan shall provide timescales for the commissioning of the generators and shall demonstrate that the commissioning of the generators is covered within the site's permitted regular testing regime, thereby minimising durations and impacts. When the commissioning is not covered within the site's permitted regular testing regime, the operator shall submit an environmental risk assessment for approval by the Environment Agency, demonstrating that the environmental risks during the commissioning are minimised and remain not significant. The commissioning of the engines shall not begin prior to receiving written approval to the plan and associated environmental risk assessment by the Environment Agency. The plan shall be implemented in accordance with the Environment Agency's written approval.

Schedule 2 – Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	**Specification**
Gas oil or equivalent substitute to be agreed in writing with the Environment Agency.	Sulphur content 0.001% (w/w) max

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (including unit)**	**Reference period**	**Monitoring frequency [Note 2]**	**Monitoring standard or method**
EP1-EP12 Emission points from generators as shown on site plan in schedule 7	Gas oil or equivalent fuelled generator exhausts (New MCP)	Oxides of Nitrogen (NO and NO_2 expressed as NO_2)	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first). [Note 1]	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5)
		Carbon monoxide	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first). [Note 1]	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 04 June 2024 (formerly known as TGN M5)
		Sulphur dioxide	No limit set	-	-	-
		Particulate Matter	No limit set	-	-	-
		Ammonia	No limit set	-	-	-
Vents associated with bulk gas oil or equivalent fuel storage tanks	Vents from 2x receiver fuel storage tanks	No parameters set	No limit set	-	-	-
Note 1: Unless otherwise agreed in writing with the Environment Agency as a result of approval of Improvement Condition IC2 of this permit. Note 2: In accordance with condition 3.5.2 of this permit.						

Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. unit)**	**Reference Period**	**Monitoring frequency**	**Monitoring standard or method**
SWMH1 Emission point as shown on site plan in schedule 7 [Note 1]	Clean and uncontaminated surface water via oil/ water interceptor	No parameter set	No limit set	-	-	-
SWMH2 Emission point as shown on site plan in schedule 7 [Note 1]	Clean and uncontaminated surface water via oil/ water interceptor	No parameter set	No limit set	-	-	-
Note 1: Emission to Campus Surface Water Sewer, ultimately discharging to the River Crane.						

Table S3.3 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	**Source**	**Parameter**	**Limit (incl. Unit)**	**Reference period**	**Monitoring frequency**	**Monitoring standard or method**
FWMH1 Emission point as shown on site plan in schedule 7 [Note 1]	Clean and uncontaminated surface water via oil/ water interceptor	No parameter set	No limit set	-	-	-
Note 1: Emission to Campus Foul Sewer, ultimately discharging to the River Thames via Thames Water public sewer and Beckton Sewage Treatment Works.						

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
EP1-EP12 Emission points from generators as shown on site plan in schedule 7	SCR abatement efficiency	Continuous	Continuous reading of NOx sensors fitted to SCR system to manufacturer's specification. Periodic validation according to the plan approved by the Environment Agency in response to	Minimum abatement of NOx, in accordance with operating techniques in application documents listed in table S1.2

Table S3.4 Process monitoring requirements				
Emission point reference or source or description of point of measurement	**Parameter**	**Monitoring frequency**	**Monitoring standard or method**	**Other specifications**
			Improvement Condition IC3	

Schedule 4 – Reporting

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

Table S4.1 Reporting of monitoring data			
Parameter	**Emission or monitoring point/reference**	**Reporting period**	**Period begins**
Point source emissions to air Parameters as required by condition 3.5.1	EP1-EP12	Every 1500 hours of operation or once every five years (whichever comes first).	Within 4 months of the issue date of the permit or the date when the engine is first put into operation, whichever is later. [Note 1]
Process monitoring Parameters as required by condition 3.5.1	EP1-EP12	Annually	January
Note 1: Unless otherwise agreed in writing with the Environment Agency as a result of approval of Improvement Condition IC2.			

Table S4.2 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
Usage of gas oil (or equivalent substitute agreed in writing with the Environment Agency)	Annually	Tonnes
Generator operation for testing and maintenance	Report to be submitted annually	- Total hours for the site (hours) - Total hours per generator (hours) - Total number of runs per generator (quantity and dates) - Number of minutes per run (minutes)
Generator operation during emergency scenario	Within 24 hours if operation commences	- Date and time of national grid failure - Number of generators operating immediately after the failure - Number of generators operating two hours after failure - Anticipated duration of the mains supply failure (hours)
Generator operation during emergency scenario	Annually	- Total number of runs (quantity) - Duration of runs (hours)
Operation of SCR systems	Annually	- Gas oil or equivalent fuel usage in each generator fitted with SCR - Readings of NOx sensors - NOx abatement efficiency - Evidence of periodic calibration with frequency specified according to Environment Agency's approval of pre-operational condition IC3

Table S4.2 Performance parameters		
Parameter	**Frequency of assessment**	**Units**
		- Urea solution usage (both concentration and quantity (tonnes or m^3))

Table S4.3 Reporting forms		
Parameter	**Reporting form**	**Form version number and date**
Air	Emissions to Air Reporting Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Performance Parameters	Performance Parameters Reporting Form 'Performance 1' or other form as agreed in writing by the Environment Agency	As agreed with the Environment Agency
Generator operation during emergency scenario	Generator Emergency Scenario Reporting Form 'Emergency Scenario' or other form as agreed in writing by the Environment Agency	As agreed with the Environment Agency
Process monitoring Parameters	Process Monitoring Form, or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021

Schedule 5 – Notification

These pages outline the information that the operator must provide.

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

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

Part A

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

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

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

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

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

(c) Notification requirements for the breach of permit conditions not related to limits	
To be notified within 24 hours of detection	
Condition breached	
Date, time and duration of breach	
Details of the permit breach i.e. what happened including impacts observed.	
Measures taken, or intended to be taken, to restore permit compliance.	

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

Part B – to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	

The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

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

“Application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“Authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“Compliance date” means 01/01/2025 for existing MCPs with net rated thermal input of greater than 5MW or 01/01/2030 for existing MCPs with a net rated thermal input of less than or equal to 5MW.

“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.

“Emissions to land” includes emissions to groundwater.

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

“Existing MCP” means an MCP first put into operation before 20/12/2018.

“Gas oil” includes diesel and is defined in Article 3(19) of the MCPD.

“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, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

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

“Medium Combustion Plant” or ”MCP” means a combustion plant with a rated thermal input equal to or greater than 1 MW but less than 50 MW.

“Medium Combustion Plant Directive” or “MCPD” means Directive 2015/2193/EU of the European Parliament and of the Council on the limitation of emissions of certain pollutants into the air from medium combustion plants, as read in accordance with Schedule 1A to the Environmental Permitting (England and Wales) Regulations 2016.

“New MCP” means an MCP first put into operation on or after 20/12/2018.

“Operating hours” means the time, expressed in hours, during which a combustion plant is operating and discharging emissions into the air, excluding start-up and shut-down periods.

“Shut-down” is any period where the plant is being returned to a non-operational state.

“Start-up” is any period where the plant has been non-operational, until fuel has been fed to the plant to initiate steady-state conditions.

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

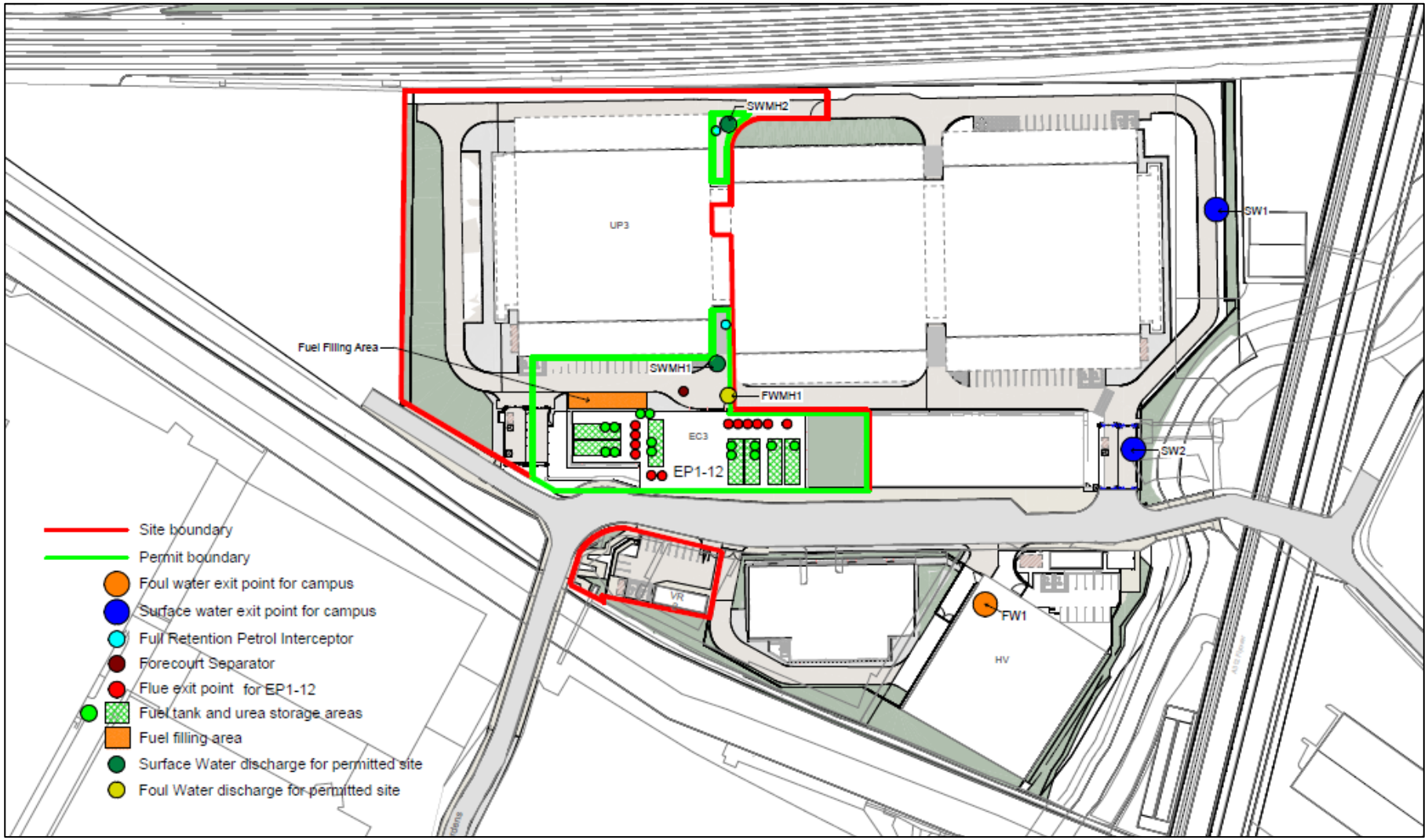
- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels other than gas engines or gas turbines, 6% dry for solid fuels; and/or

- in relation to emissions from gas engines or gas turbines, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 15% dry for liquid and gaseous fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

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.

“Year” means calendar year ending 31 December.

Schedule 7 – Site plan



END OF PERMIT

Reporting Forms

Emissions to Air Reporting Form

Permit number: *[EPR/AB1234CB]*

Operator: *[A Company Name Limited]*

Facility name: *[Unit A, Anytown]*

Emissions to Air Reporting Form: version 1, 08/03/2021

Reporting of emissions to air for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Emission point	Substance / parameter	Emission Limit Value	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]
[e.g. A1]	*[e.g. Oxides of nitrogen (NO and NO_2 expressed as NO_2)]*	*[e.g. 200 mg/m^3]*	*[e.g. daily average]*	*[e.g. BS EN 14181]*	*[State result]*	*[State relevant dates and time periods]*	*[State uncertainty if not 95% confidence interval]*

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.
[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.
[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.
[4] Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.

Performance parameters

Permit number: **Operator:**

Facility name: **Form Number:** Performance 1, DD/MM/YYYY

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Value		Units
Gas oil or equivalent fuel usage			Tonnes
Generator annual operation in emergency scenario			Number of runs
	Run	Duration of run	
	1		
	2		
Generator annual operation for testing and maintenance [Note 1]			Number of runs
	Run	Duration of run	
	1		
	2		

Note 1: Provide details of each testing and maintenance test in the following template:

Generator operation for testing and maintenance Repeat for each test	Date of test	DD/MM/YY
	Test type	Description such as: 'Off load / On load / Load Bank'
	Start / End time	XX:XX / XX:XX
	Generators testing sequence and duration	- Data Hall xxx – number of generators – 0.5 hours (time start xx:xx; time end xx:xx) Followed by - Data Hall xxx – number of generators – 0.5 hours (time start xx:xx; time end xx:xx)
	Comments / Additional information on the test	

Operator's comments:

Signed ……. Date……..

(Authorised to sign as representative of Operator)

Generator emergency scenario – to be provided within 24 hours of grid failure

Permit number: **Operator:**

Facility name: **Form Number: Emergency Scenario**, DD/MM/YYYY

Reporting of generator emergency scenario operation

Parameter	
Date of grid failure	DD/MM/YY
Time of grid failure	XX:XX
Number of generators operating immediately after the failure	
Number of generators operating 2 hours after failure	
Anticipated duration of the mains supply failure	(hours)

Operator's comments:

Signed ……. Date……..

(Authorised to sign as representative of Operator)

Process Monitoring Form

Permit number: *[EPR/AB1234CB]*

Operator: *[A Company Name Limited]*

Facility name: *[Unit A, Anytown]*

Process Monitoring Form: version 1, 08/03/2021

Reporting of process monitoring for the period from *[DD/MM/YY]* to *[DD/MM/YY]*

Monitoring point description or source	Parameter	Reference period	Test method [1]	Result [2]	Sample dates and times [3]	Uncertainty [4]
[e.g. Condenser V 2345]	*[e.g. cooling water outlet temperature]*	*[e.g. instantaneous]*	*[if applicable]*	*[State result]*	*[State relevant dates and time periods]*	*[if applicable]*

Operator's comments

Signed: *[Name]*

Date: *[DD/MM/YY]*

(Authorised to sign as representative of the operator)

Guidance for use: Use this form to report your monitoring results.
Example text is shown in bracketed grey italics. Replace the example text by entering your own site specific information. Complete columns 1 to 5 using the information from schedule 3 of your permit. Complete columns 6 to 8 with your monitoring data. Add additional rows as necessary.

[1] Where an internationally recognised standard test method is used, give the reference number. Where another method that has been formally agreed with the Environment Agency, give the appropriate identifier. In other cases state the principal technique, for example gas chromatography.

[2] Give the result as the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, give the result as the 'minimum to maximum' of the measured values.

[3] For non-continuous measurements give the date and time of the sample that produced the result. For continuous measurements give the percentage of the process operating time covered by the result.

Complete if the uncertainty associated with the result is not a 95% confidence interval. Leave blank for 95% confidence intervals.