

# Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

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KD 2 Limited  
KLON-06  
672 Galvin Road  
Slough  
Berkshire  
SL1 4AN

**Permit number**

EPR/JP3647JU

# KLON-06

## Permit number EPR/JP3647JU

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

The site is a data centre which consists of an Environmental Permitting Regulations (EPR) 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 permit authorises the operation of standby electricity generating plant at a data centre located within the Borough of Slough at national grid reference SU 96096 80630. The data centre will under normal operating conditions be powered by grid supplied electricity.

The contingency standby power solution comprises 6 x 6.49 MWth, and 7 x 8.58 MWth liquid fuelled generators with an aggregated thermal input of approximately 99 MWth. Six generators have been operational since 2009 and are classified as existing medium combustion plant (MCP). The remaining 7 generators, classified as new MCP, are emissions optimised 2g TA-luft and are fitted with NO<sub>x</sub> abatement technology in the form of Selective Catalytic Reduction (SCR). SCR will reduce NO<sub>x</sub> emissions from 2991 mg/Nm<sup>3</sup> at 100% load to 507 mg/Nm<sup>3</sup> per generator. The power solution is integrated within the data centre design providing on-site electrical generating capacity to be used in the event of power outages to the data centre.

The generators can operate on either gas oil or an agreed equivalent substitute. The operator has specified that Hydrogenated Vegetable Oil (HVO) will be used from permit issue.

The standby electricity generating plant is limited to operating less than 500 hours/year, including the testing regime. It is estimated that each existing MCP engine will be tested for approximately 24.5 hours/year and each new MCP engine will be tested for approximately 13.5 hours/year. It is essential that the standby system is routinely tested to ensure the engines function correctly in the event of them being required to operate.

Each generator will be tested individually every month using a load bank, allowing the load to be cycled up from 0 – 100% load. Existing generators will be tested for 2 hours each and new generators will be tested for 1 hour each.

A black building test will be conducted annually to check the response of the systems to utility failure during which all generators would synchronise and run for 30 minutes against the site load.

The 6 existing generators are fed fuel from individual day tanks (adjacent to each generator within the generator room) which are in turn fed from two larger bulk tanks (external to main data centre building). Both the day tanks and bulk tanks are double skinned to 110% capacity and a double skinned above-ground fuel feed pipework system is provided from the bulk tanks to the day tanks. The 7 new generators (3 of which are located within the main data centre building and 4 of which are located externally) will be fed fuel from dedicated belly tanks beneath each generator. The belly tanks are to be integrally banded to 110% and refuelled directly from a fuel tanker. All tanks are located above ground (either internally or externally) over good quality hardstanding, have high- and low-level alarms and overflow prevention valves to prevent over filling and are fitted with electronic gauges for physical and remote monitoring. The total fuel storage capacity is 313,500 litres.

Urea is to be used in the SCR abatement equipment. Each generator will have its own 2500 litre urea tank located adjacent to each generator, banded to contain a minimum 110% volume of the inner tank.

There will be no process effluent discharge from the installation. Uncontaminated surface run off from the roof and external yard/ generator area will drain to the surface water drainage system at emission points SW1 and SW2. Surface water drainage from the area of the site where four of the new generators and their associated belly tanks are located will pass via a hydrodynamic vortex separator prior to discharging to the local sewer network at emission point SW2. This will be fitted with an automatic shut off valve which will activate when fuel is detected. This valve can also be closed manually in the event of a fuel spillage or in order to contain fire water. The remaining areas of the site drain to emission point SW1 without passing through an interceptor.

Exhaust gases from each existing generator (1-6) will be discharged through an individual horizontal stack and through an individual vertical flue for the new generators (7-13), resulting in 13 emission points EP1 to EP13.

The installation is located within the south-eastern corner of Slough Trading Estate, bound to the north by Axel Avenue, beyond which land use is predominately commercial and light industrial. Residential receptors are adjacent to the west and south of the site. To the north-east and west of the site are other data centres. There is one Local Nature Reserve, but no Sites of Special Scientific Interest, within 2km of the Site. There are three protected European sites within 10km, however no significant environmental impact from the installation is expected at these. Slough Borough Council has declared an Air Quality Management Area (AQMA) located 200m to the east of the site for exceeding the annual mean NO<sub>2</sub> objective.

There is an Environmental Management System (EMS) in place accredited to the ISO 14001 standard.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/JP3647JU/A001	Duly made 15/11/2023	Application to operate 13 liquid fuelled generators in the event of National Grid failure and for testing and maintenance activities.
Request for information sent 19/09/2023	03/10/2023	Revised Noise Impact Assessment (NIA), revised BAT assessment (including urea storage details and further details of generator testing regime) air dispersion modelling files.
Request for information sent 19/10/2023	01/11/2023	NIA modelling files, confirmation of reference conditions for emissions sources, habitats assessment for ammonia slip from SCR.
Request for information sent 19/10/2023	15/11/2023	Air dispersion modelling files for habitats.
Request for information sent 19/10/2023	19/12/2024	Justification of air dispersion modelling approach for horizontal stacks and statistical analysis methodology and confirmation of proposed fuel (HVO).
Additional Information Received	06/03/2024	Revised Air Quality Assessment to reflect individual (not grouped) testing of generators and to include assessment of NO.
Schedule 5 notice sent 12/03/2024	02/08/2024	Revised Site Condition Report and Factual Investigation Report containing additional groundwater monitoring and analysis.
Additional information received	09/10/2024	Clarification of drainage, fuel storage, revised BAT Assessment (V3) and Site Plan.
Permit determined EPR/JP3647JU	22/01/2025	Permit issued to KD 2 LIMITED.

End of introductory note

# Permit

## The Environmental Permitting (England and Wales) Regulations 2016

### Permit number

**EPR/JP3647JU**

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

**KD 2 LIMITED** (“the operator”),

whose registered office is

**Kao Data Campus**

**London Road**

**Harlow**

**Essex**

**CM17 9NA**

company registration number 12966887

to operate an installation at

**KLON-06**

**672 Galvin Road**

**Slough**

**Berkshire**

**SL1 4AN**

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

<b>Name</b>	<b>Date</b>
<b>Beccy Brough</b>	<b>22/01/2025</b>

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 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.5 The 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.
- 2.3.6 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 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 first monitoring measurements shall be carried out:

- (a) within four months of the issue date of the permit or the date when the MCP is first put into operation, whichever is later; and
- (b) at any time for existing MCPs, but no later than the relevant compliance date.

3.5.3 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.

3.5.4 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.

## **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 performance parameters set out in schedule 4 table S4.2 using the forms specified in table S4.3 of that schedule;
- (c) where conditions 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 S4.4; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

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

## 4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
  - (i) inform the Environment Agency,
  - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
  - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately—
  - (i) inform the Environment Agency, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 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

<b>Table S1.1 activities</b>			
<b>Activity reference</b>	<b>Activity listed in Schedule 1 of the EP Regulations</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
AR1	Section 1.1 Part A1(a) Burning any fuel in an appliance with a rated thermal input of 50 or more megawatts	Operation of 13 emergency standby generators with a total thermal input of approximately 99 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. 6 x 6.49 MWth (Existing MCP) 7 x 8.58 MWth (New MCP)	From receipt of raw materials and generation of electricity to despatch of waste.  Including selective catalytic reduction (SCR) systems fitted to emission points A7-A13 (EP7 to EP13).  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.
<b>Directly Associated Activity</b>			
AR2	Storage of raw materials	From receipt of raw materials to use within the facility.	
AR3	Surface water drainage	From input to site drainage system until discharge to surface water sewer (emission points SW1 to SW2), via interceptor for emission point SW1 only.	

<b>Table S1.2 Operating techniques</b>		
<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application EPR/JP3647JU/A001	Sections 1.2, 1.4, 1.6 and 1.8 of the application document provided in response to section 3a – technical standards, Part B3 of the application form.	Duly Made 15/11/2023
Application EPR/JP3647JU/A001 Generators maintenance testing schedule	Generators maintenance testing schedule detailed in application document 'BAT Assessment V3' with the exception of the routine monthly test. Routine monthly test as reference in 'Air Quality Permit Assessment V3 March 2004'.	09/10/2024
Application EPR/JP3647JU/A001 SCR abatement	NO <sub>x</sub> abatement efficiency for the selective catalytic reduction systems (SCR) fitted to emission points EP7 to EP13 detailed in application document 'Air Quality Permit Assessment V3'.	06/03/2024

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
IC1	<p><b>Air Quality Management Plan (AQMP)</b></p> <p>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 must include, but not be limited to, the following considerations:</p> <ul style="list-style-type: none"> <li>• The response should be tailored to reflect the predicted potential impact indicated by the air dispersion modelling at individual receptors;</li> <li>• Preventative and reactive actions to be implemented to limit the duration of an outage event to less than 50 hours as far as possible;</li> <li>• Specific timescales for response measures;</li> <li>• How local conditions during a grid failure might influence the response required, for example meteorological conditions or time of day;</li> <li>• Contingency for how the response will be carried out in the event scenario i.e. loss of power;</li> <li>• Timescales for continued review of the management plan; and</li> <li>• 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.</li> </ul> <p>The agreed Air Quality Management Plan shall be submitted to the Environment Agency for approval.</p>	<p>Within 6 months from the date of issue of the permit EPR/JP3647JU</p>
IC2	<p><b>Monitoring plan - flue gas monitoring requirements</b></p> <p>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 20 March 2024 (formerly known as TGN M5). The plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>• When the generators are not fitted with sampling ports, a proposal to install them within the shortest practical timeline;</li> <li>• 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.</li> </ul>	<p>Within 3 months from the date of issue of the permit EPR/JP3647JU</p>
IC3	<p><b>Performance of SCR systems</b></p> <p>The operator shall submit a written report to the Environment Agency for assessment and written approval. The report must contain:</p> <ul style="list-style-type: none"> <li>• Detailed information on the specification of the suitability of the NOx sensors and urea solution dosing to the SCR systems</li> <li>• 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 20 March 2024 (formerly known as TGN M5)</li> <li>• 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</li> </ul>	<p>Submit the written report within 4 months of undertaking monitoring agreed under IC2</p>

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<ul style="list-style-type: none"> <li>A plan to periodically calibrate the NOx sensors and verify the performance of the SCR systems, including the proposed frequencies.</li> </ul> <p>The operator must implement the proposals in the report in line with the timescales agreed within the Environment Agency's written approval.</p>	
IC4	<p><b>Drainage and containment</b></p> <p>The operator shall submit a revised drainage plan covering the entire site to the Environment Agency for approval.</p> <p>The site drainage plan shall</p> <ul style="list-style-type: none"> <li>be drawn to scale</li> <li>outlines and differentiates the exact locations of all subsurface drainage routes (surface water and foul sewer),</li> <li>be annotated with all emission points for aqueous discharges off-site and on-site oil interceptors.</li> </ul> <p>In the event the drainage plan indicates there are surface water discharges from the facility which do not pass through an oil interceptor prior to discharge. The operator shall submit to the Environment Agency proposals and timescale for directing drainage to an oil interceptor prior to discharge off-site.</p> <p>The proposals shall be implemented by the operator in line with timescales agreed by the Environment Agency.</p>	<p>Within 6 months from the date of issue of the permit EPR/JP3647JU</p>
IC5	<p><b>Short-term nitrogen oxides concentrations</b></p> <p>The operator shall submit a plan to reduce the predicted short term nitrogen dioxide (NO<sub>x</sub>) emissions impacts during the maintenance, testing and emergency operations of the standby generators. This shall include but is not limited to:</p> <ul style="list-style-type: none"> <li>A feasibility study including cost benefit analysis for upgrades or other changes to infrastructure or operational regimes on site that could reduce emissions of NO<sub>x</sub> and increase dispersion;</li> <li>Use of the above information to propose appropriate changes, including but not limited to, an assessment of the following options: <ul style="list-style-type: none"> <li>changes to stack configuration to enhance dispersion (e.g. vertical emission points and increased stack heights);</li> <li>amending the testing schedule to reduce the daily emissions from the testing operations;</li> <li>upgrading the standby engines to reduce emissions or installing newer ones with lower emissions of NO<sub>x</sub>;</li> <li>installing NO<sub>x</sub> abatement.</li> </ul> </li> </ul> <p>If changes in the height of the stacks are demonstrated to be effective, but are not deemed feasible due to local planning restrictions, the Operator shall provide evidence of the</p>	<p>Within 12 months from the date of issue of the permit EPR/JP3647JU/A001</p>

<b>Table S1.3 Improvement programme requirements</b>		
<b>Reference</b>	<b>Requirement</b>	<b>Date</b>
	<p>engagement carried out with the Local Authority planning department, in support of this conclusion, and propose other emission reduction options.</p> <ul style="list-style-type: none"> <li>• The Operator shall submit an updated air dispersion modelling study demonstrating how the proposed option(s), selected among those assessed, result in reduced levels of NO<sub>x</sub> at the sensitive receptors, including the non-statutory ecological sites in proximity of the installation.</li> <li>• Proposal of the shortest practical timescale for the implementation of the selected improvements.</li> </ul> <p>The review and timescale for improvement shall be submitted to the Environment Agency in writing for approval.</p>	

## Schedule 2 – Waste types, raw materials and fuels

<b>Table S2.1 Raw materials and fuels</b>	
<b>Raw materials and fuel description</b>	<b>Specification</b>
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
A1-A6 Shown as generators EP1 – EP6 on site plant in Schedule 7	Gas oil generator exhausts  (existing medium combustion plant)	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first) from date of acceptance of first monitoring measurements under condition 3.5.2 Note 1	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 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 20 March 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first) from date of acceptance of first monitoring measurements under condition 3.5.2 Note 1	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 2024 (formerly known as TGN M5)
		Sulphur dioxide	No limit set	-	-	-
		Particulates	No limit set	-	-	-

<b>Table S3.1 Point source emissions to air – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (including unit)</b>	<b>Reference period</b>	<b>Monitoring frequency</b> <small>Note 2</small>	<b>Monitoring standard or method</b>
A7-A13 Shown as generators EP7 – EP13 on site plan in Schedule 7	Gas oil generator exhausts  (new medium combustion plant)	Oxides of nitrogen (NO and NO <sub>2</sub> expressed as NO <sub>2</sub> )	No limit set	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first) <small>Note 1</small>	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 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 20 March 2024 (formerly known as TGN M5)	Every 1500 hours of operation or once every five years (whichever comes first) <small>Note 1</small>	In line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 20 March 2024 (formerly known as TGN M5)
		Sulphur dioxide	No limit set	-	-	-
		Particulates	No limit set	-	-	-
		Ammonia	No limit set	-	-	-
Vents associated with bulk gas oil storage tanks	Vents from fuel storage tanks for engines EP1 to EP13	No parameters set	No limit set	-	-	-
<p>Note 1: Unless otherwise agreed in writing with the Environment Agency as a result of approval of Improvement Condition IC2 of this permit.</p> <p>Note 2: In accordance with condition 3.5.2 of this permit.</p>						

<b>Table S3.2 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements</b>						
<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. unit)</b>	<b>Reference Period</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
SW1 and SW2 as shown in Schedule 7	Uncontaminated surface water. SW2 only discharged via oil/ water interceptor	Oil	None visible	Spot sample	Weekly	Visual check

<b>Table S3.8 Process monitoring requirements</b>				
<b>Emission point reference or source or description of point of measurement</b>	<b>Parameter</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>	<b>Other specifications</b>
A7-A13 from generators EP7 – EP13 as shown in Schedule 7	SCR abatement efficiency	Continuous	<p>Continuous reading of NOx sensors fitted to SCR system to manufacturer's specification.</p> <p>Periodic validation according to the plan approved by the Environment Agency in response to Improvement Condition IC3</p>	Minimum abatement of NOx, in accordance with operating techniques in application documents listed in table S1.2

## Schedule 4 – Reporting

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

<b>Table S4.1 Reporting of monitoring data</b>			
<b>Parameter</b>	<b>Emission or monitoring point/reference</b>	<b>Reporting period</b>	<b>Period begins</b>
Emissions to air Parameters as required by condition 3.5.1.	A1-A6	Every 1500 hours of operation once or every five years (whichever comes first)	From date of acceptance of first monitoring measurements under condition 3.5.2 <small>Note 1</small>
Emissions to air Parameters as required by condition 3.5.1.	A7-A13	Every 1500 hours of operation once or every five years (whichever comes first).	Within four months of the issue date of the permit or the date when the engine is first put into operation, whichever is later. <small>Note 1</small>
Process monitoring Parameters as required by condition 3.5.1	A7-A13	Annually	January
Note 1: Unless otherwise agreed in writing with the Environment Agency as a result of approval of Improvement Condition IC2.			

<b>Table S4.2 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
Gas oil (or equivalent substitute agreed in writing with the Environment Agency) usage	Annually	Tonnes
Generator operation for testing and maintenance	Report to be submitted annually	<ul style="list-style-type: none"> <li>- Total hours for the site (hours),</li> <li>- Total hours per generator (hours), Total number of runs per generator (quantity and dates)</li> <li>- Number of minutes per run (minutes)</li> </ul>
Generator operation during emergency scenario	Within 24 hours if operation commences	<ul style="list-style-type: none"> <li>- Date and time of grid failure,</li> <li>- Number of generators operating immediately after the failure,</li> <li>- Number of generators operating two hours after failure,</li> <li>- Anticipated duration of the mains supply failure (hours)</li> </ul>
Generator operation during emergency scenario	Annually	Total number of runs (quantity), duration of runs (hours)
Operation of SCR systems	Annually	<ul style="list-style-type: none"> <li>- Gas oil usage in each generator fitted with SCR</li> </ul>

<b>Table S4.2 Performance parameters</b>		
<b>Parameter</b>	<b>Frequency of assessment</b>	<b>Units</b>
		<ul style="list-style-type: none"> <li>- Readings of NOx sensors</li> <li>- NOx abatement efficiency</li> <li>- Evidence of periodic calibration with frequency specified according to Environment Agency's approval of improvement condition IC5</li> </ul>

<b>Table S4.3 Reporting forms</b>		
<b>Parameter</b>	<b>Reporting form</b>	<b>Form version number and date</b>
Air	Emissions to Air Reporting Form or other form as agreed in writing by the Environment Agency	Version 1, 08/03/2021
Other performance indicators	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	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	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	

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

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

<b>Time periods for notification following detection of a breach of a limit</b>	
<b>Parameter</b>	<b>Notification period</b>

<b>(c) Notification requirements for the breach of permit conditions not related to limits</b>	
<b>To be notified within 24 hours of detection</b>	
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.	

<b>(d) Notification requirements for the detection of any significant adverse environmental effect</b>	
<b>To be notified within 24 hours of detection</b>	
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.

“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.

“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.

“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.

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.

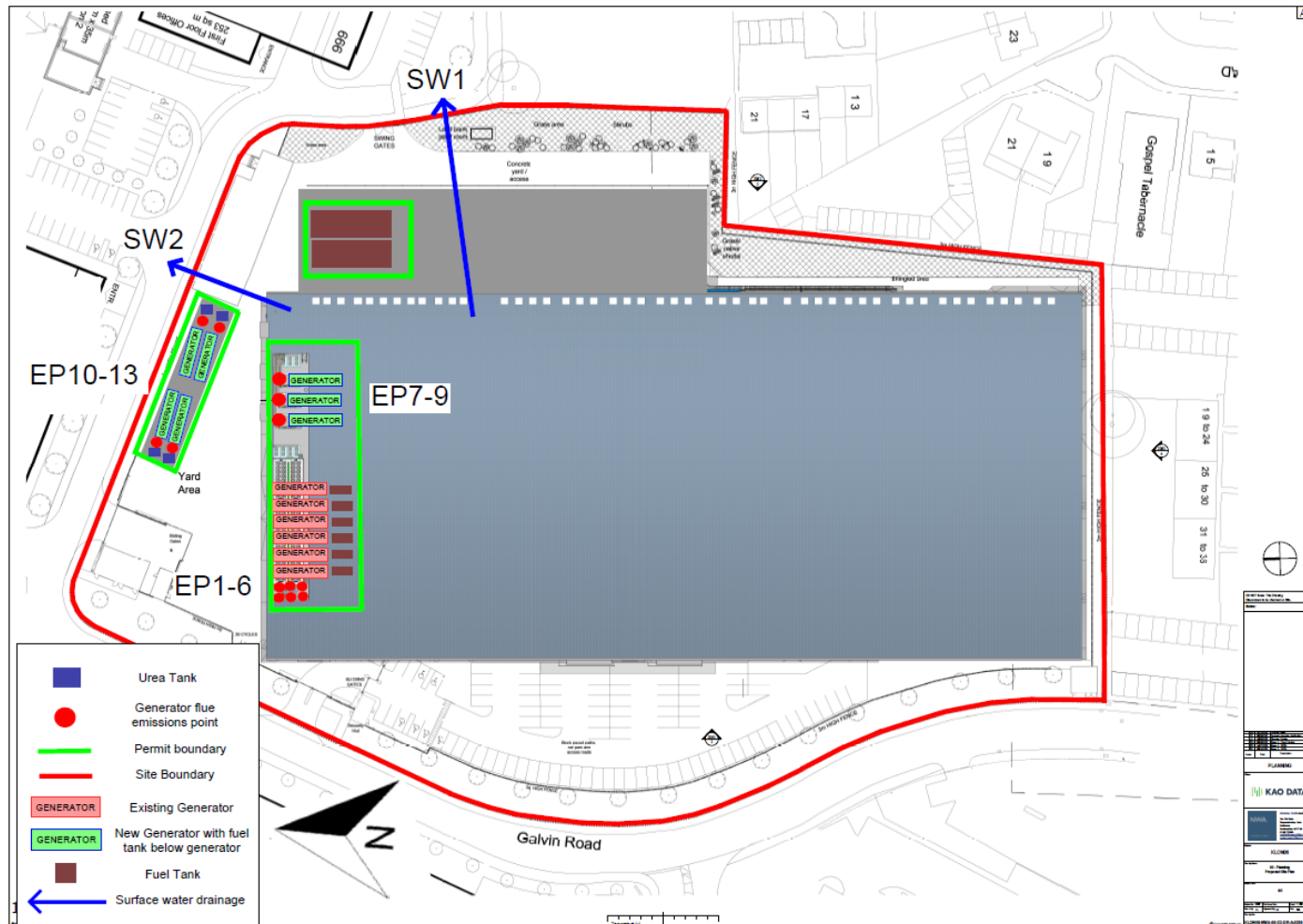
Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- 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 other than gas engines or gas turbines, 6% dry for solid 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.

“year” means calendar year ending 31 December.

# Schedule 7 – Site plan



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END OF PERMIT