Permitting decisions – Bespoke Permit

We have decided to grant the permit for Colt-Hayes operated by Colt-Hayes Centre Services UK Limited.

The permit number is EPR/GP3721SQ.

This permit was granted on 30/07/2025

The application is for is described as a Schedule 1 activity undertaken at the Installation under Section 1.1 Part A(1)(a). The site has 44 generators with a combined thermal input of approximately 283MWth.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It summarises the decision-making process to show how the main relevant factors have been taken into account.

This decision document provides a record of the decision-making process. It:

- highlights key issues in the determination
- shows how we have considered the consultation responses

Unless the decision document specifies otherwise, we have accepted the applicant's proposals.

Read the permitting decisions in conjunction with the environmental permit.

Key issues of the decision

In reaching our decision to grant the permit we took into consideration the following matters:

Overview of the installation

The permit application is classified as a Schedule 1 activity under Section 1.1 Part A(1)(a). Emergency Standby Generators (ESGs) will provide power during grid failures, classified as Medium Combustion Plant (MCP) due to their total thermal input capacity exceeding 50MWth, as per the Environmental Permitting (England and Wales) Regulations 2016. The ESGs will operate on Gas oil or Hydrogenated Vegetable Oil (HVO) and will be equipped with Selective Catalytic Reduction (SCR) to reduce NOx emissions. The facility will house 44 ESGs, including 17 Rolls Royce MTU DS3100 generators and 27 Rolls Royce MTU DS3600 generators, with a combined thermal input of approximately 283MWth.

These ESGs are designed for limited operation, for maintenance, testing, and emergencies. Building 1 will include a life safety generator below 1MWth (160kW). Building 2 will house a similar life safety generator. Normally, electricity will be supplied by the National Grid, but ESGs will operate during outages, which have a failure rate of less than 1% annually.

The facility is located at the Brook Industrial Estate in Hayes, London, identified by the national grid reference TQ 11533 80192.

Fuel storage is divided between bulk tanks, day tanks, and dump tanks, with each building having its own storage. Building 1 has 10 bulk tanks with a 70,000-litre capacity each, supplying 22-day tanks holding 2,000 litres each, providing full load for 2 hours, repeated in Building 2. Each building has a 3,000-litre fuel dump tank. The site will have 6 bulk tanks with a 70,000-litre capacity each. All fuel tanks are double skinned with secondary containment adhering to the 110% volume requirement.

BAT assessment

The BAT assessment should include but is not limited to the following key points:

Assessment against BAT

BAT is for new plant to minimise the impacts of emissions to air of NOx is 2g TA-Luft (or equivalent standard) or an equivalent NOx emission concentration of 2000 mg/m^3 at 5% reference oxygen and normal conditions.

The generators at this installation are emissions optimised and achieve the Tier II US EPA standard we are satisfied this is BAT. SCR abatement will also be used to minimise emissions well below the BAT standard.

Choice of Fuel

We have specified the fuel to burned in the engines to consist of gas oil or equivalent substitute to be agreed in writing with the Environment Agency with a sulphur concentration of 0.001% w/w. We are in the process of developing our position on the use gas oil substitute fuels such as hydrotreated vegetable oil (HVO), therefore we have required that if any of these fuels are proposed, written agreement is sought by the operator from the Environment Agency's regulatory officer.

Liquid fuel storage

Fuel will be stored in above ground bulk and day tanks. The tanks will be bunded to 110% of capacity and fitted with leak detection and a minimum of 4 level sensors to indicate fuel levels and prevent overfilling. Surrounding area covered in good quality hardstanding. Dedicated drainage interceptors to be installed acting as a tertiary containment to prevent spill fuel entering surface waters.

All fuel pipework will be pipe-in-pipe, with vacuum leak detection provided. No pipework fittings shall be located outside of bunded areas.

Selective Catalytic Reduction (SCR)

All generators will be fitted with SCR to minimise emissions of oxides of nitrogen.

Emissions to air

The primary pollutants of concern to air quality from the combustion processes at the installation are nitrogen dioxide (NO2), carbon monoxide (CO), particulates (PM10) and sulphur dioxide (SO2) resulting from the combustion process on site. We don't consider SO_2 emissions to be a risk from the operation of the installation as we have included a condition in the permit restricting the fuel to ultra-low sulphur gas oil, resulting in negligible emissions of sulphur.

The applicant's testing and maintenance schedule shows that each generator will be tested for up to 20 hours per year. Our view is that is BAT as it is less than 50 hours.

Emission limits

As the plant is limited to less than 500 hours of emergency operation by permit condition 2.3.3 and less than 50 hours for maintenance and testing in permit table S1.2, air emission limits have not been set.

Monitoring requirements

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. In particular:

We have specified monitoring of emissions of carbon monoxide from emission points A1 to A44, with a minimum frequency of once every 1,500 hours of operation or every five years (whichever comes first). This monitoring has been included in the permit in order to comply with the requirements of Medium Combustion Plant Directive (MCPD), which specifies the minimum requirements for monitoring of carbon monoxide emissions, regardless of the reduced operating hours of the plant.

We have also specified monitoring of emissions of nitrogen oxides (NOx) from emission points A1 to A44, with the same frequency specified for the monitoring of carbon monoxide emissions. In setting out this requirement, we have applied our regulatory discretion, as we consider that this limited monitoring, to happen in concurrence with the carbon monoxide monitoring, is proportionate to the risk associated with the emissions of NOx from the installation.

Taking into account the limited hours of operation of the engines operating at the installation, and the fact that we are not setting emission limits for NOx and carbon monoxide, we consider this monitoring can be carried out in line with web guide 'Monitoring stack emissions: low risk MCPs and specified generators' Published 2nd June 2024 (formerly known as TGN M5).

We have set an improvement condition (IC02) requesting the operator to submit a monitoring plan for approval by the Environment Agency detailing the operator's proposal for the implementation of the flue gas monitoring requirements specified in the permit.

For new MCP, we have set a requirement for the first monitoring to happen within 4 months of the issue date of the permit or the date when each new medium combustion plant is first put into operation, whichever is later (permit condition 3.5.2) unless otherwise agreed under Improvement Condition 4.

We have also specified continuous process monitoring of levels of nitrogen oxides (NOx) from emission points A1 to A44 because these generators are fitted with SCR, hence we consider this monitoring necessary to ensure the effective operations of the abatement system, to prevent excessive ammonia slip and to dose the right amount of urea solution. Because this monitoring is not specified to assess compliance with emission limits, we are satisfied that it will not require certification to MCERTS standards.

Operational hours

We set operational hour limits for data centres at 500 hours as they are permitted for emergency use only. The limit on the emergency use of 500 hours is for the installation as a whole i.e. as soon as one generator starts operating the hours count towards the 500 hours.

The operational hours on the site will be monitored and reported as follows:

Emergency operation limited to 500 hours for the installation via permit condition 2.3.3.

Maintenance and testing regime limited to <50 hours per stack, linked to operating techniques table S1.2.

Noise

The applicant provided a noise impact assessment using BS 4142. We audited the assessment and agree that there will not be a significant impact from noise. Note: Our audit only includes impacts from the generators. Chiller units are not part of the permitted activities and so not regulated by the Environment Agency.

Air quality assessment

Operating Scenarios

The site has two recognised generator running scenarios:

Scenario 1 :

Part 1 Black Building Tests, all generators running at 100% loading for up to 1 hour each month.

Part 2: Each generator to run independently for up to 2 hours once every three months.

Overall, each of the generators will run for a total of 20 hours a year for testing and maintenance.

Scenario 2: (with Grid Failure): 72-hour ‘Grid Failure’/ power outage emergency inclusive of the testing and maintenance run times above (i.e. totalling 92 hours of operation in a year).

Human health

The site is located in the London Borough of Hillingdon (LBH), which has an Air Quality Management Area due to high nitrogen dioxide levels. The surrounding area is industrial and commercial, with some residential areas and two schools nearby.

We audited the applicant's modelling and our conclusions are summarised below:

- Testing and emergency operations are unlikely to make a significant contribution to or cause an exceedance of an environmental standard at human health receptors.
- Testing scenarios are unlikely to make a significant contribution to or cause an exceedance of critical loads and levels at any ecological receptor.
- We cannot rule out exceedances of both the daily NO_X critical level of 75 µg/m^3 and the alternative daily NO_X critical level of 200 µg/m^3 at three local wildlife sites for the 72-hour emergency scenario. The likelihood of emergency operations taking place is considered low, as this represents a national emergency ('black start') event.

Ecological receptors

The following habitat sites are within 10 km of the installation:

- Richmond Park (SAC)
- South West London Waterbodies (SPA, Ramsar)

There are no SSSIs within 2km

The following ‘other conservation sites’ are within 2 km:

- Yeading Brook, Minet Country Park and Hitherbroom Park
- Yeading Brook Meadows
- Willowtree Park
- St. Mary’s Wood End
- Havelock Cemetery
- Hortus Cemetery
- Avenue Road Hedge
- Southall Railsides
- Crane Corridor
- London Canals
- Southall Park Nature Conservation Area
- Cranleigh Park Rough
- Lady Margaret Road
- Whittle Road Park

- Testing scenarios are unlikely to make a significant contribution to or cause an exceedance of critical loads and levels at any ecological receptor.

- We cannot rule out exceedances of both the daily NO_X critical level of 75 µg/m^3 and the alternative daily NO_X critical level of 200 µg/m^3 at three local wildlife sites for the 72-hour emergency scenario. The likelihood of emergency operations taking place is considered low, as this represents a national emergency (‘black start’) event.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

We consulted the UKHSA and local authority. The application was publicised on the GOV.UK website.

Applicant

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal applicant for environmental permits.

The regulated facility

The regulated facility comprises the application is for is described as a Schedule 1 activity undertaken at the Installation under Section 1.1 Part A(1)(a). The site has 44 generators with a combined thermal input of approximately 283MWth.

The applicant has provided the grid reference for the emission points from the medium combustion plant.

The permitted combustion plant includes new MCP.

The site

The applicant has provided a plan which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge points.

The plan is included in the permit.

Site condition report

The applicant has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken following our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

Nature conservation, landscape, heritage and protected species and habitat designations

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England but then them an HRA stage 1 for information.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the applicant 's assessment of the environmental risk from the facility.

The applicant’s risk assessment is satisfactory.

The assessment shows that applying the conservative criteria in our guidance on environmental risk assessment or similar methodology supplied by the applicant and reviewed by ourselves, all emissions may be categorised as environmentally not significant.

General Operating techniques

We have reviewed the techniques used by the applicant and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

We have specified the operating techniques, and the applicant must use the operating techniques specified in table S1.2 of the permit.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions.

The applicant must provide a written report to the Environment Agency local office before the plant goes into full operation.

Table S1.4 pre-operational measures	
Reference	Pre-operational measure
PO1	**Commissioning** At least one month before operation (or other date as agreed with the Environment Agency) the operator shall submit a commissioning plan to the Environment Agency for approval. The plan shall provide timescales for the commissioning of the diesel generators and shall demonstrate that the commissioning of the diesel 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.

Improvement programme

Based on the information in the application, we consider that we need to include an improvement programme.

We have included an improvement programme to ensure that the level of compliance is as high as possible. All of the improvement conditions are in line with the usual data centre MCP generators using SCR.

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
IC01	**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 must include, but not be limited to, the following considerations:	Within 6 months from the date of issue of the permit EPR/GP3721SQ

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• 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.	
IC02	**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/GP3721SQ
IC03	**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	Within 3 months from the date of issue of the permit EPR/GP3721SQ or as agreed in writing with the Environment Agency

Table S1.3 Improvement programme requirements		
Reference	**Requirement**	**Date**
	• 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.	

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Reporting

We have specified reporting in the permit on emissions monitoring and for key process monitoring requirements.

Management System

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation.”

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations, our notice on GOV.UK and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section:

Response received from Hillingdon Council

Brief summary of issues raised

Concern over impacts from air handling units and recommended setting a noise emission limit.

Summary of actions taken

Air handling units serve the data centre are not part of the permit. The permitted activity is a combustion activity for the emergency generators. We audited the applicant's noise impact assessment and are satisfied that there will not be a significant impact and that a noise limit is not appropriate.

Response received from UKHSA

Brief summary of issues raised

The UKHSA recommended the following:

i. The Environment Agency should ensure the hourly NO_2 process contribution will not cause the air quality standard to be exceeded.
ii. The operator should have an air quality management plan.
iii. Additional mitigation measures to ensure air quality standards are not exceeded such as boundary monitoring, and ensuring routine testing of the backup generators is only carried out in favourable weather conditions.
iv. The Environment Agency should ensure all receptors are accurately described and considered.
v. The updated benzene EAL of 30 $\mu g/m^3$ as a 24 hour average should be used.
vi. The assessment of power outage impacts should consider SO_2, benzene, and CO.

Summary of actions taken

i. We are satisfied that standards will not be exceeded, see key issues section for more details
ii. Improvement condition IC01 requires the operator to produce a plan.
iii. Based on our audit no further controls are required.
iv. Receptors were included in the modelling report, grid references were provided. We are satisfied that appropriate receptor locations were considered.

v. The applicant used benzene to assess emissions of total VOCs. Our view is that VOC emissions from operation of limited hours emergency generators are not significant.
vi. Short term impacts were presented in appendix E of the modelling report.