



Environmental Risk Assessment – WE4588AB

Kao Harlow Campus

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CONTENTS**Page No.**

1.0	INTRODUCTION	4
1.1	Background	4
2.0	METHODOLOGY	5
2.1	Approach	5
2.2	Risk scoring	5
3.0	SITE CONTEXT	6
3.1	Site location	6
3.2	Site activities	6
3.3	Site history	6
3.4	Site sensitivity	6
3.5	Sensitive receptors	7
4.0	RISKS IDENTIFIED.....	9
5.0	ENVIRONMENTAL RISK ASSESSMENT.....	10
5.1	Controlled releases to air.....	10
5.2	Accidents	12
5.3	Odour.....	15
5.4	Noise and Vibration	16
5.5	Fugitive Emissions (from uncontrolled sources)	18
5.6	Visible emissions	19
5.7	Global warming potential	20
5.8	Waste.....	21
6.0	CONCLUSION	22

1.0 INTRODUCTION

This Environmental Risk Assessment (ERA) has been prepared by HDR Consulting Limited (HDR) on behalf of the operator Kao Data Limited (Kao), in support of the application for a variation to existing Environmental Permit (EP), WE4588AB, for the following installation:

Permit Ref: EPR / WE4588AB
Issue date: 21/06/2022
Operator name: Harlow Operations Ltd
Site name: Kao Data Campus
Address: London Road, Harlow, CM17 9NA
Grid reference: TL 471099

This ERA aims to identify potentially significant environmental risks associated with the installation's activities, the applicable source pathway receptors, and the control measures in place to help mitigate the identified risks.

This ERA has been produced in accordance with Environment Agency (EA) guidance – “Risk assessments for your environmental permit”¹.

Please refer to the following reports for detailed risk assessments that have been submitted as part of the application for a permit:

- Air Quality assessment
- Noise assessment
- Site condition report / Site Baseline assessment

The requirement to complete a Climate Change Risk Assessment (CCRA) as part of the application for a new bespoke Installation EP was withdrawn in August 2022². As it is now required, this will be integrated into the sites management system.

Kao holds an existing Environmental Permit for a Slough based Datacentre, KLON06 (permit ref: JP3647JU) and thus is aware and fully committed to operating in accordance with the relevant permit conditions and demonstrating best practice within the data centre sector.

1.1 Background

The Harlow Campus ('the site') is shown in Appendix A and currently has x2 operational Data Centres, KLON-01 and KLON-02. Construction has begun on a third datacentre, KLON-03, with plans in place for a fourth building, KLON-04 at a point in the future.

Each Data Centre uses Emergency Standby Generators or 'ESGs' to provide emergency power in the event of a grid electrical failure. The ESGs are located externally to the Data Centre they serve.

The current permit (ref: WE4588AB) covers x8. ESGs with x5 at KLON-01 and x3. at KLON-02. This variation is to add an additional 17 ESGs across the following buildings:

- x2 ESGs at KLON-01
- x4 ESGs at KLON-02
- x11 ESGs at KLON-03.

Once fully operational, there will be x25 ESGs total across the 3 Data Centres. At this stage designs for KLON-04 are still unknown and therefore this has not been included as part of this permit variation.

¹ <https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit>

² <https://www.gov.uk/guidance/adapting-to-climate-change-risk-assessment-for-your-environmental-permit>

2.0 METHODOLOGY

2.1 Approach

This ERA has been prepared in accordance with EA guidance. This guidance recommends that the following steps are undertaken in preparing a risk assessment:

1. Identify and consider risks for your site, and the sources of the risks.
2. Identify the receptors (people, animals, property, and anything else that could be affected by the hazard) at risk from your site.
3. Identify the possible pathways from the sources of the risks to the receptors.
4. Assess risks relevant to your specific activity and check they are acceptable and can be screened out.
5. State what you will do to control risks if they are too high.
6. Submit your risk assessment as part of your permit application.

2.2 Risk scoring

This ERA has been completed using the scoring matrix shown in Table 2.1 – Risk Matrix with definitions for each score as follows:

Probability of exposure:

- High – exposure highly likely to occur
- Medium – considered to be likely
- Low – considered to be unlikely
- Very Low – considered to be highly unlikely / very rare event / mitigation in place

Consequence:

- High – potential for significant impact requiring mitigation / remediation
- Medium – potential for moderate impact which may require mitigation / remediation
- Low – negligible impact that may require mitigated
- Very Low – no significant / perceivable impact to receptor

Table 2.1 – Risk Matrix

	Probability of exposure / Likelihood			
Consequence	High	Medium	Low	Very Low
High	High	High	Medium	Low
Medium	High	Medium	Medium	Low
Low	Medium	Medium	Low	Very low
Very low	Low	Low	Very low	Very low

3.0 SITE CONTEXT

This section contains a high-level site summary. Please refer to the Non-technical Summary (NTS) document submitted with the application for a permit for further details.

3.1 Site location

The site is located in an urban area of Harlow to the East of the city centre between Mark Hall South and Church Langley. The A414 runs north to south along the western boundary of the site, with London Road running along the eastern boundary. The site is approximately 3 miles from Junction 7 and 2.5 miles of 7a of the M11. The site is currently accessed by two entrance points from London Road. The site was formerly the London Road Campus, and the land-use largely comprises buildings and car-parking.

The surrounding area has supported various office and light industrial buildings as part of a business park. associated with the historic use of the site as a telecommunication centre for research and development.

There are multiple Habitats and statutory and non-statutory sites in the local area as noted in the EA Enhanced conservation screening report.

3.2 Site activities

The site has been operating as a data centre (DC) since 2018 with both KLON01 and KLON02 operational at the time of writing.

Under normal circumstances, electricity to the site is provided by the National Grid. Grid reliability is critical to a DC and as such the sites uses ESGs to provide standby power in the event of an outage / failure in the grid supply. The ESGs are on site solely to support the campus in times of grid failure.

Expansion works in 2024/25 and beyond will see x17 additional ESGs installed over several years with the first x4 ESGs for KLON02 likely to be commissioned in Q2 of 2025.

The ESGs, are all over 1MWth and are therefore classed as 'Medium Combustion Plant' (MCP). These ESGs are 'limited hour MCPs' as they are purely standby plant that will operate less than 500 hours per year and there is no capacity agreement in place. Details of the existing and new MCPs can be found in the Thermal Schedule and Non-technical Summary submitted with the application.

The ESGs are to operate on Hydrogenated Vegetable Oil (HVO) or diesel with associated fuel storage to allow for operation in an emergency.

The x4 new ESGs at KLON-02 and x11 new ESGs at KLON-03 are also to be fitted with Selective Catalytic Reduction (SCR) which doses the exhaust gasses with urea to reduce NOx emissions to 195mg/Nm³ at 15% O₂ or 500mg/Nm³ at 5% O₂.

The Directly Associated Activities (DAA) include the fuel and storage tanks, Urea storage tanks, associated pipework, and the drainage network.

The location of the generators, fuel tanks and emissions points (flues/stacks) and surface water connections are shown in the Site Plan and Emission Points presented in Appendix A. The installation boundary encompasses the listed activities only.

3.3 Site history

The historical land use has been detailed in the Site Condition Report (SCR) submitted with the application for a permit. Prior to the 1960s, the site was relatively undeveloped. At this time, the Mark Hall Sports Ground was established to the north of the site, whilst laboratories, smaller buildings and a car park occupied the south. The laboratories and associated buildings have since been demolished and the KAO Data Centre constructed.

3.4 Site sensitivity

The site is in the administrative boundaries of Harlow council. Please see Appendix B for an overview of the site and surrounding area.

The installation is not located within an Air Quality Management Area (AQMA) for NO₂.

Please refer to the site condition / baseline report for a description of the following:

- Geology
- Hydrogeology
- Hydrology
- Ecology & heritage

3.5 Sensitive receptors

Identified sensitive receptors are either discrete or ecological receptors that could potentially be affected by the permitted activities. The sensitive receptors identified as part of this ERA are presented in the tables below. Please refer to Appendix C for the EA Nature and Heritage Conservation Screening report.

Table 3.1 Discrete Receptors

Location / description	Type	Distance (km)
Adjacent Resident	Residential	0.2
Adjacent Resident	Residential	0.2
Adjacent Resident	Residential	0.2
Adjacent Resident	Residential	0.2
Church Langley	School, Playfields, Fishery	0.2
Brenthall/Barnsley Wood	Local Wildlife Site	0.7
Perry Spring	Local Wildlife Site	0.4
Harlow Common	Local Wildlife Site	1.4
Markhall Wood	Local Wildlife Site	0.3
Latton Common	Local Wildlife Site	1.8
Netteswell Plantation	Local Wildlife Site	2.0
Rye Meads Gravel Pit	Local Wildlife Site	8.4
Gravelpit Spring, New Hall	Local Wildlife Site	0.5
New Hall Reedbeds	Local Wildlife Site	1.0
Newpond Spring	Local Wildlife Site	0.8
Gravelpit Springs, Latton Farm	Local Wildlife Site	0.7
Kingsdon Ponds	Local Wildlife Site	0.9
Brays Grove	Local Wildlife Site	1.5
The Moors	Local Wildlife Site	53.3
Vicarage Wood	Local Wildlife Site	1.2
St. Andrew's, Netteswellbury	Local Wildlife Site	1.3
Harlow Park	Local Wildlife Site	2.0

Location / description	Type	Distance (km)
Fletimores Meadows	Local Wildlife Site	2.6
Marshgate Spring	Local Wildlife Site	2.2
Foster Street Burial Ground	Local Wildlife Site	2.2
Mill Street Green	Local Wildlife Site	2.0
Epping Forest	Special Protection Area	9.9

Table 3.2 Ecological Receptors

Location / description	Type	Designation
Amwell Quarry	SSSI	9.0
Epping Forest	SSSI	5.6
Epping Forest	SAC	9.3
Harlow Woods	SSSI	3.6
Hatfield Forest	SSSI	9.0
Hunsdon Mead	SSSI	4.7
Lee Valley	Special Protection Area	7.7
Little Hallingbury Marsh	SSSI	7.4
Rye Meads	SSSI	7.7
Sawbridgeworth Marsh	SSSI	6.1
Thorley Flood Pound	SSSI	7.8

4.0 RISKS IDENTIFIED

Using the guidance and approach outlined above, the following have been deemed to be identified as potential environmental risks which having potential to cause harm to the environment and / or human receptors:

- Controlled releases to air
- Accidents
- Odour
- Noise and Vibration
- Fugitive Emissions (from uncontrolled sources)
- Visible emissions
- Global warming potential
- Waste
- Water discharges

Section 5.0 presents the risk assessment for each of the above including identification of the potential hazard, receptors, pathway, risk management practices, probability of exposure, consequence of exposure and overall risk.

The methodology outlined in Section 2.0 has been employed to score potentially significant environmental risks associated with the installation's activities.

5.0 ENVIRONMENTAL RISK ASSESSMENT

5.1 Controlled releases to air

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Point source emissions to air- NO _x , CO, SO ₂ , PM ₁₀ emissions from generator stacks	<p>Employees, residents, and adjacent premises / pedestrians / road users immediately surrounding the installation.</p> <p>Any future developments within the area are potential receptors.</p>	Airborne	<p>An Air Quality Impact Assessment & Dispersion Model has been completed and submitted in support of this permit application ("Air Quality Assessment"). This report concluded that <i>"This dispersion modelling analysis indicates that maximum ambient air concentrations of NO₂, PM₁₀, PM_{2.5}, SO₂, and CO at publicly accessible receptor locations will not result in an exceedance of the applicable AQS. Moreover, the analysis indicates that peak NO₂ air concentrations and nitrogen deposition rates in ecologically sensitive areas are insignificant and within acceptable levels.</i></p> <p><i>An emergency power outage scenario was also modelled, assuming all engines would operate continuously for 72 hours. Although the model results for this scenario indicate a potential peak 1-hour concentration for NO₂ that is greater than the allowable threshold, a statistical analysis was prepared to indicate how improbable such occurrence is, considering the very low probability that a power outage incident will coincide with least dispersive meteorological conditions for the Harlow area and Kao Data Center campus location."</i></p> <p>The ESGs are designed to provide power in the event of grid failure, and during operation are a point source of emissions to air. The National Grid report for 2022-2023 stated the overall reliability of grid supply was 99.999997% for substations above 132kV supplies. Reliability in 2021-2022 was 99.999936%, and in 2020-2021 was 99.99966%.</p> <p>The existing x5 ESGs at KLON-01 and x3 ESGs at KLON-02 have x2. flues per generator which currently terminate horizontally at a height of approximately 5.5m. The intention is to combine both flues into one and raise the height to 15.5m, approximately 1m above the building parapets. The flues will also be orientated vertically and be unimpeded by flaps or cowls. The x17 new ESGs will all terminate at 1m above the building parapets or approximately 15.5m. They will be orientated vertically and be unimpeded by flaps or cowls.</p> <p>The x15 new ESGs (x4 on KLON-02 and x11 on KLON-03) will be fitted with Selective Catalytic Reduction (SCR) to reduce NO_x to 195mg/Nm³ at 15% O₂ or 500mg/Nm³ at 5% O₂</p>	<p>Low – maintenance and testing</p> <p>Very low – grid failure</p>	<p>Emissions to air can have an adverse impact to human health and ecological receptors in surrounding areas.</p>	<p>Low – maintenance and testing</p> <p>Low – grid failure</p>

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
			<p>The most significant impact to local air quality is likely to be from operation of the ESGs is during a mains failure scenario. Mains failures are extremely unlikely events, regardless, the control measure is to develop an Air Quality Management Plan (AQMP) for the site on the basis of the air quality dispersion model. The aim of the AQMP is to seek to reduce AQ impacts during prolonged grid failure events and associated generator operation. The AQMP is based on air dispersion model findings and seeks to determine likely AQ impacts through observations of current weather conditions, time of day, cumulative impacts, and anticipated outage durations. Actions include limiting the operation of the generators as far as possible and notifying sensitive receptors / the EA in the event of a prolonged grid outage.</p> <p>Operation of the ESGs will be limited to testing and maintenance. A testing and maintenance schedule is already in place for existing plant, which seeks to minimise the frequency of generator runs and to stagger tests where possible to avoid simultaneous operation of multiple generators.</p> <p>Where possible, and practicable efforts will be made to avoid testing during peak NO_x periods, such as during rush hour to mitigate impacts to nearby sensitive receptors. The intention is for new plant to fall within this same scheduling process.</p> <p>In the event a complaint is raised against the operation of the generators, the site complaints procedure should be followed.</p>			

5.2 Accidents

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Accidents relating to fuel storage e.g., Spills, overfilling during refuelling / disposal / transfers, failure in secondary containment, pipe ruptures, valve failure, user error, collision.	Groundwater, surface water, sewer system, soils.	Land/ water	<p>ESGs and associated tanks will be located externally to each Data Centre they serve. In general, the bulk fuel tanks will also be located in the yard area, above ground, below the generator(s) they serve. A summary of the fuel storage arrangements and controls is presented below with further details in the BAT assessment submitted with the application.</p> <p>High level/ overfill alarms and leak detection alarms which will minimise the likelihood of release to the environment. These are to be fed back to the sites building management system to provide remote monitoring.</p> <p>Associated equipment such as fuel pumps are located above drip trays to capture minor spills / leaks.</p> <p>As per the drainage plan there is 1 surface water connection to sewer for the entire campus, noted as SW1 on the site plan.</p> <p>Given the controls in place the most significant risk of fuel entering the environment is likely to be spilt fuel during refuelling. Fuel deliveries are likely rare events (~0-2 deliveries pa) given the standby nature of the plant means they operate infrequently (~<50hours pa). Existing fuel delivery, emergency preparedness and spill response procedures are to be updated to include additional plant and are in place to minimise the risk of accidents during refuelling. Fuel suppliers are to adhere to applicable procedures when attending site. Deliveries are to be carried out by competent individual(s) and supervised by site staff.</p> <p>The refuelling areas for KLON02 and 03 are designed so that spilt fuel will be directed to a nearby channel drain which will pass through a forecourt separator prior to discharging from site. Each separator has 4 'cells' to provide separate compartments and the total capacity is equivalent to a tankers worth of fuel. Tanks are to be inspected and emptied periodically or in the event of a spillage with contaminated liquids disposed of appropriately as hazardous waste.</p> <p>At present there is no separator for KLON01 however this is a hydro-brake prior to exiting the site.</p>	<p>Very low – bulk tanks</p> <p>Low – refuelling</p>	Leaks of fuel or other substances associated with Data Centres operations into the surrounding environment can cause adverse impacts to the ground water course as well as adjacent water courses.	<p>Very low – bulk tanks</p> <p>Medium – refuelling</p>

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
			<p>Spill kits (including drain covers) will be provided in close proximity of fuel storage and fill points. Drip trays to capture spillages from fill points and associated pipework will also be provided.</p> <p>Hazardous waste to be stored securely and disposed of by licenced waste carrier with duty of care information retained as evidence by the waste producer and waste carrier.</p>			
Flooding of drainage network and generators.	Groundwater, surface water, sewer system	Floodwater, surface waters, drainage system etc	<p>A flood risk assessment was completed in 2012 by Mouchel. This identified the following: <i>"The EA Flood Maps provide an indication of the sensitivity of the site to the incidence of river and sea flooding. The site is located in an area classified as low probability Flood Zone 1. The site is at generally low risk of flooding from all sources. The most significant risk is posed from surcharge of onsite sewers."</i></p> <p>The EA flood risk maps for planning³⁴, indicate the site is in a flood zone 1. The yearly chance of flooding from surface waters is categorised as "low" which equates to between 0.1% and 1% chance of a flood each year. From rivers and sea the rating is "very low" which equates to less than 0.1% chance of a flood each year.</p> <p>Routine maintenance of the onsite drainage system will help prevent surface water drains from being obstructed by debris and for rainwater to drain freely and effectively.</p> <p>Generators and fuel storage are on raised plinths or concrete slabs. No generators are below ground level.</p> <p>Emergency procedures (amongst others) are to be updated as the site expands and enacted in the event of flooding.</p>	Very low	Flooding / water damage to the generators could impact resiliency for operations.	Very low

³ [Where do you want to check? - Check your long term flood risk - GOV.UK](#)

⁴ [Find location - Flood map for planning - GOV.UK](#)

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Fire	Emissions to Air / Water	Air & Water	<p>All generators currently are/are to be fitted with a fire suppression system. The generator fire alarms are linked to the building fire alarm system with an EMPS link.</p> <p>Generators and tanks are to be fitted with valves that will automatically shut in the event of a fire shutting off the fuel supply.</p> <p>Fire suppression systems will rely on mains water to extinguish fires. In the unlikely event of a fire, there is potential for fire water from either site suppression systems / emergency services to enter the environment and cause harm. Emergency preparedness and response plans are to be produced once the site is operational to mitigate this risk.</p>	Very low	<p>Fire damage to generators could impact resiliency for operations.</p> <p>Fire would also cause emissions to air, having an adverse impact to local environment and receptors.</p> <p>Firewater could infiltrate local water courses, adversely impacting the local environment.</p>	Very low
Vandalism	Land / Surface Water / Ground Water / Air	Drainage systems, air, surface	<p>The site is manned by a dedicated security team 365 days a year with monitoring from a security office using an extensive CCTV system.</p> <p>Entry and exit to the site is tightly controlled via a security gate and turnstiles. The site is bounded by a 2.5m palisade security fence which acts as an impenetrable barrier to prevent unauthorised access to the Data Campus.</p> <p>Generator enclosures and fill points are locked by keys that are kept in a secure location with a two-point verification access control to the generator and fuel storage canopies.</p>	Very low	Damage arising from vandalism to the generators / storage tanks could impact emergency back-up potential and/or lead to fugitive emissions	Very low

5.3

Odour

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Odour from storage and combustion of fuel	Employees & residents	Airborne	Fuel is stored in sealed tanks and the ESGs operate infrequently therefore odour emissions are not anticipated therefore an odour Management Plan is not required. The complaints procedure should be followed in the event the site receives an odour complaint relating to the permitted activities.	Very low	Nuisance to on site staff and local human receptors. Could lead to complaints.	Very low

5.4 Noise and Vibration

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Noise and Vibration from start-up and operation of generators	Employees, residents, and adjacent premises / pedestrians / road users immediately surrounding the installation.	Air	<p>A noise impact assessment has been completed as part of the planning application and this has been submitted as part of the application to vary the existing environmental permit ('Noise Impact Assessment'). The conclusion of this risk assessment are as follows:</p> <p><i>The assessment of predicted noise levels from the generators indicates that during maintenance and black building testing, most receptors experience noise levels below the background levels, resulting in a low likelihood of significant adverse impacts. While some receptors may see slight increases in noise during full load testing, significant impacts are primarily anticipated at R1, R2 and R3 during specific tests. The results are influenced by the movable load bank's positioning, with worst-case scenarios considered in the calculations. Suitable loadbank locations have been identified to reduce the noise impact at these receptors."</i></p> <p>Significant noise breakout is not expected as the ESGs operate infrequently as they are emergency standby plant designed to provide power in the event of grid failure. This is a highly rare event given grid reliability. As such, annual operation is likely to be limited to testing and maintenance as referenced above.</p> <p>Generators are to be maintained in accordance with manufacturer guidelines as part of a planned preventative maintenance (PPM) regime which will reduce noise generation from wear and tear.</p> <p>The complaints procedure should be followed in the event the site receives a noise complaint relating to the generators.</p>	<p>Low – maintenance and testing</p> <p>Very low – grid failure</p>	<p>Complaints from local residences.</p> <p>Potential harm to human health due to elevated noise levels.</p>	<p>Low – maintenance and testing</p> <p>low – grid failure</p>

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Noise from site traffic e.g., fuel deliveries	Employees, residents, and adjacent premises / pedestrians / road users immediately surrounding the installation.	Air	<p>The Data Campus is located within a business park, with industrial/commercial premises to the west and north, and residential properties to the south and east.</p> <p>The generators are emergency standby plant that is operated infrequently as discussed above. As such fuel consumption is low meaning fuel deliveries are infrequent e.g. 0-2 deliveries per year. In reality the site may have no deliveries in a year therefore noise from associated traffic is not expected to be significant.</p>	Low	<p>Complaints from local receptors.</p> <p>Potential harm to human health due to elevated noise levels.</p>	Very low

5.5 Fugitive Emissions (from uncontrolled sources)

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Fuel spills during refuelling / leaks / accidents e.g., damaged tanks / pipework.	Groundwater, surface water, sewer system, soils.	Surface run off / surface waters via drainage or vertical leaching.	As detailed in Section 5.2	Very low – bulk tanks Low – refuelling	Pollution and / or harm to environmental and / or human health	Very low – bulk tanks low – refuelling
VOCs / fumes from storage / delivery of fuel	Industrial, commercial, and residential receptors	Air	<p>Fuel tanks are containerised in sealed, belly tanks which will minimise the likelihood of release to the environment.</p> <p>Refuelling activities are carried out by approved suppliers with trained competent individuals that operate in accordance with the sites refuelling procedures which will be developed as part of the sites Environmental Management System (EMS).</p> <p>Deliveries are rare, and best practices are adhered to in order to limit durations which fumes could escape into the environment.</p>	Very low	Emissions to air have an adverse impact to human health and ecological receptors in surrounding areas.	Very low

5.6 Visible emissions

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Visible Emissions from generator stacks	Industrial, commercial, and residential receptors	Visual	<p>Smoke may be visible during the first 10-15s of generator operation. After this time visible plumes are not anticipated due to high exhaust temperatures (approx. 450°C). Visible emissions after this time are to be investigated as part of generator maintenance.</p> <p>Plumes may not be visible due to line of sight, weather conditions, and the timing of generator operation as tests may be outside of working hours. They may also be infrequent therefore are not considered to be likely / significant.</p> <p>The installation of SCR, the site's PPM regime and regular fuel polishing is intended to remove impurities, and to help ensure the engine burns as cleanly as practicable to reduce visible emissions.</p> <p>The complaints procedure will be followed in the event the site receives complaints relating to the visible emissions from the generators.</p>	Low	Potential visual impacts, particularly during generator start-ups.	Very low

5.7 Global warming potential

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Global Warming Potential from combustion of fuel by generators	Global population	Airborne	The generators are emergency standby plant designed to provide power in the event of grid failure. This is a highly rare event given grid reliability. As such, annual operation is likely to be limited to maintenance and testing. This level of operation is not considered to provide a significant global warming impact.	Very low	Contribute to climate change, due to increase in greenhouse gases present in the atmosphere.	Very low

5.8

Waste

Hazard	Receptors	Pathway	Controls / Mitigation / Risk management	Probability of exposure	Consequence of exposure	Overall risk
Waste associated with generators e.g., waste fuels, oil sorbents and rags, lubricants & hydraulic fuels, solid wastes (air filters, packaging, and spare parts) and end of life plant.	Ground, soil, ground water, surface water, sewer system.	Land/ water	<p>Small quantities of wastes may be generated from routine generator maintenance activities or in the event of a spillage/leakage. This may include waste oils, oily rags or waste fuel. Quantities generated are likely to be low given the standby nature of the generators and the procedures in place to minimise waste generation.</p> <p>Procedures for licenced and responsible collection of waste oils and other hazardous wastes are to be developed once the site is operational. This will include the retention of relevant Duty of Care information.</p> <p>Waste generated during maintenance of the generators will be removed from site by the maintenance contractor upon completion of the works as part of the service contract.</p>	Very low	Potential to contaminate water/ land.	Very low

6.0 CONCLUSION

This ERA has identified and assessed the potential risks and hazards associated with the operation of the facility and from accidents.

The risks assessed and mitigation measures have been taken either through design or clearly defined operation procedures such that the potential consequences arising from these hazards is low or very low, in line with the BAT requirements for a Datacentre Facility of this size, nature and location.

Appendix A

Site Plan and Emission Points

Appendix B

Site Plan and Surrounds

Appendix C

EA Nature and Heritage Conservation Screening report