

Environmental Risk Assessment

An Environmental Risk Assessment has been carried out which identifies all relevant sources of pollution on the site including fuel storage, containment, drainage and underground pipework with the potential pathways for pollution and the potential receptors for pollution. This follows the format in “Risk assessments for your environmental permit” at the GOV.UK website.

Hazard	Receptor	Pathway	Probability of Exposure	Consequence	Risk Management	What is the overall risk
Emissions to air from generator stacks: - planned maintenance and testing - emergency outage	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Air	Low – during normal operation High – during outage	Low – during normal operation High – during outage	<ul style="list-style-type: none"> A detailed risk assessment of the potential impacts on air quality associated with the emissions of combustion products from the data centre was completed and is submitted as part of this permit application (Air Quality Assessment J20/12794A/10). According to the assessment, the routine testing and maintenance operations of the back-up generators are considered not significant. The assessment also considers a 24-hour continuous operation scenario from all 21 back-up generators. The impact associated with the emissions of NO₂ in this scenario is also considered not significant. Planned preventative maintenance (PPM) will be in place for the maintenance and testing of the generators. Maintenance will be conducted in accordance with the manufacturer instructions and recommendations. Pollutants in engine exhaust gases are below the standards in the Data Centre FAQ. SCR fitted which will function during emergency outages. Site not located in an AQMA, closest is Slough AQMA No. 4 which is approximately 1.2km south east. 	Low
Emissions of VOCs to air during filling and emptying of storage tanks and during tank breathing.	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Air	Low	Low	<ul style="list-style-type: none"> Fuel loading and unloading activities will be conducted in line with best practices. This is not expected to eliminate the potential for harmful emissions to air, but they are expected to limit the duration of such event and therefore the potential consequences. 	Low

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					<ul style="list-style-type: none"> Approved suppliers will be arranged for the delivery of diesel, which will be undertaken in accordance with delivery procedures which will be developed as part of the Environmental Management System. The diesel tanks will be fitted with vents however these will only allow minimal potential for fumes to escape 	
Noise associated with the movement of vehicles (fuel deliveries)	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Air	Medium	Low	<ul style="list-style-type: none"> On-site vehicles will be required to adhere to a maximum speed limit of 5mph. Fuel oil deliveries will only be carried out during daytime hours under normal conditions, and are expected to be infrequent. In the event of an emergency power outage, more frequent deliveries may be required and therefore refuelling activities at other times is possible. However, due to the distance between the Site and the closest residential receptors (approximately 400m south east), it is not expected that noise from vehicles will impact the local vicinity in a detrimental way. A Noise Management Plan will be developed as part of the Environmental Management System. Any noise complaint received will be logged. An appropriately designated person will investigate the complaint and will take action to identify the source of the noise, and further measures and controls will be implemented where appropriate. Site access and operational areas will be maintained and repaired to minimise emissions of noise due to uneven and poor condition of surfaces. 	Low
Noise associated with the operation of the generators	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Air	Low	Medium	<p>A Noise Assessment has been undertaken for the data centre. The assessment concluded that operation of the generators is unlikely to cause an adverse impact on the nearby noise-sensitive receptors. This is due to:</p> <ul style="list-style-type: none"> The generators will be housed within bespoke container units fitted with noise attenuation. 	Low

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					<ul style="list-style-type: none"> All equipment will be maintained and operated in accordance with the manufacturer's instructions and recommendations and maintained in good working order. The planned maintenance and testing of the generators is not predicted to result in excessive levels of noise that could adversely impact identified sensitive receptors. Testing regime is expected to consist of up to 1 hour per month for each generator, and there will be no more than 3 to 4 generators being tested at the same time. A Noise Management Plan will be developed as part of the Environmental Management System. Any noise complaint received will be logged. An appropriately designated person will investigate the complaint and will take action to identify the source of the noise and remedial measures will be implemented where appropriate 	
Odour emissions from the diesel storage tanks	Human receptors, including industrial, residential and commercial properties.	Air	Medium	Low	<ul style="list-style-type: none"> The diesel tanks will be vented, however odour emissions are not expected to be significant. The closest residential receptors are located at more than 400m to the east and south-east of the Site. Winds at the closest weather station (London Heathrow Airport) are predominantly from the west and south-west, therefore some receptors are located downwind from the Site. However, due to the distance and limited odour emissions associated with the operation of the site, impact on these receptors is unlikely. An Odour Management Plan will be developed as part of the Environmental Management System. Any odour complaint received will be logged. An appropriately designated person will investigate the complaint and will take action to identify the source of the odour and remedial measures will be implemented where appropriate. 	Low

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Surface water run-off from external areas potentially contaminated, such as areas around the generators or fuel tanks.	Land, groundwater, surface water bodies.	Percolation through the ground. Discharge to nearby water bodies	Low	High	<ul style="list-style-type: none"> Oil storage and distribution system will be to petrol filling station standards with bunding and leak detection. Areas where fuel is to be stored will be subject to daily visual inspections as part of daily operational activities. 	Low
Accidental release of diesel from diesel storage tanks, pipework and bunds	Land, groundwater, surface water bodies.	Percolation through the ground. Discharge to nearby water bodies	Low	High	<ul style="list-style-type: none"> Diesel storage tanks have been designed in line with current standards. Diesel storage tanks will be provided with bund to ensure any accidental release is contained. Diesel tanks will be fitted with leak detection and high-level alarms to avoid overfilling. A planned preventative maintenance programme will be in place to ensure equipment and infrastructure (e.g. bunds, surfacing, pipework) are in good condition and therefore to reduce the likelihood of accidental releases of fuel and the potential consequences of these. Spill kits will be available for use in the unlikely event of an unplanned fuel release. A spill procedure will be developed for the site as part of the Environmental Management System. Areas where fuel is to be stored will be subject to daily visual inspections as part of daily operational activities. External areas and areas surrounding the diesel storage tanks will be laid down to hardstanding, hence reducing the risk of pollutants percolating into the ground, and provided with surface water drains to collect and discharge contaminated water run-off. Drainage system will be maintained in good condition and regularly cleaned/inspected to prevent blockages. 	Low
Accidental spillage of diesel during refuelling/fuel	Ground, groundwater, surface water	Percolation through the ground.	Low	High	<ul style="list-style-type: none"> Fuel loading and unloading activities will be conducted in line with best practices. This is not expected to eliminate the potential for accidental spillages, but they are expected to 	Low

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polishing (e.g. pipe rupture)		Discharge to nearby water bodies.			<p>limit the duration of such event and therefore the potential consequences.</p> <ul style="list-style-type: none"> • Deliveries will take place from tankers in a bunded fuel unloading area to the main top up tanks. • Approved suppliers will be arranged for the delivery of diesel, which will be undertaken in accordance with delivery procedures which will be developed as part of the Environmental Management System. 	
Fire	<p>Human receptors, including industrial, residential and commercial properties, and ecological receptors.</p> <p>Ground, groundwater, surface water</p>	Air/smoke, run-off and percolation through the ground or discharge to nearby water bodies.	Low	High	<p>Activities will be managed and operated in accordance with a management system, including:</p> <ul style="list-style-type: none"> • Emergency procedures and actions required in the event of a fire. • Maintenance of all plant and equipment and electrical installations. • Hot works requiring permit to work. • Good housekeeping to prevent and control leaks and spills of oils and flammables. • Strictly enforced No Smoking Policy. • Good site access for emergency vehicles. • Emergency training. 	Low
Security and Vandalism	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Various, depending on areas affected.	Low	Low	24/7 security presence at the site including gates and fencing to prevent trespassing, etc.	Low
Flooding	Human receptors, including industrial, residential and commercial properties, and ecological receptors.	Percolation through the ground. Discharge to nearby water bodies	Low	High	<p>The area occupied by the Site is considered at very low risk (less than 0.1% probability) from surface water flooding or flooding from rivers or the sea.</p> <p>An Accident Management Plan will be developed as part of the Environmental Management System, which will contain</p>	Low

Environmental Permit Application
GB One, Slough - EPR/CP3042QG/A001
Delta-Simons Project Number 22-0598.01

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	Land, groundwater, surface water bodies.				emergency procedures and describe the actions to follow in the event of a flooding of the Site.	