VIRTUS London 12 Ltd

ENVIRONMENTAL RISK ASSESSMENT

London 12, 485 Berkshire Avenue, Slough

70114956/LON12/ERA
AUGUST 2024

CONFIDENTIAL

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TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70114956

OUR REF. NO. 70114956/LON12/ERA

DATE: AUGUST 2024

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Rev 1			
Date	August 2024			
Prepared by	Sion Sleep			
Signature	sion.sleep@wsp.com Digitally signed by sion.sleep@wsp.com DN: cn=sion.sleep@wsp.com Reason: I am the author of this document Date: 2024.08.30 11:04:19 +01'00'			
Checked by	Derek Schoehuys			
Signature				
Authorised by	Derek Schoehuys			
Signature	Digitally signed by Schoehuys, Derek (UKDPS001) DN: cn=Schoehuys, Derek (UKDPS001), ou=Active, email=Derek.Schoehuys@wsp.com Reason: I am approving this document Date: 2024.08.30 12:46:13 +01'00'			
Project number	70114956			
Report number	70114956/LON12/ERA			
File reference	WSP Central Data			

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1 INTRODUCTION

1.1 AUTHORISATION

This Environmental Risk Assessment (ERA) has been compiled for the Virtus London 12 (LON12) Data Centre located within the Slough Trading Estate, Slough, west of London as part of the "Virtus Slough Campus" installation.

1.2 BACKGROUND INFORMATION

The Data Centres are connected to the local electricity transmission network via multiple grid connections. The nature of the Data Centres and the requirement to always have an available energy supply has resulted in the installation of ultra-low sulphur diesel-fired standby generators at the Virtus Slough Campus.

LON3 (7.2MW IT load) has its full capacity of 6 (six) diesel-fired standby generators installed. LON4 (27MW IT load) has 5 (five) engines for HV generation installed and 14 (fourteen) LV generators installed. LON10 (6.6MW IT load) has its full capacity of five engines installed. London 12, for which this reports relates has will have 16 (sixteen) generators installed to support its IT load.

The Data Centres are operated independently but managed under a common management system and management structure as other Virtus Data Centres across North London.

The generators will provide power to each Data Centre in the event of an emergency situation such as a failure of the local electricity transmission network, or an internal component failure requiring disconnection from the grid. During such events there is a potential for a delay between fault detection and initial operation of these back-up generators; hence the initial uninterruptible power supply is provided by on-site battery arrays in order to cover this 'time gap' and the consequent loss or reduction in the power supply to the data servers.

The total rated thermal input (under standby power operating conditions) of all LON12 generators will be 101.44 MWth and 281.95 MWth across the Virtus Slough Campus. The existing Slough Campus (LON3, LON4 and LON10) is already permitted to operate as a Part A1 combustion activity installation under an Environmental Permit as per the Environmental Permitting (England and Wales) Regulations 2016, as amended. This ERA has been undertaken to support the variation application to add LON12 to the existing permit.

1.3 OBJECTIVES OF THE ENVIRONMENTAL RISK ASSESSMENT (ERA)

The aim of the ERA is to identify any significant risks associated with LON12 and to demonstrate how the risk of environmental pollution or harm will be minimised through appropriate measures and Best Available Techniques.

This ERA has been undertaken in accordance with GOV.UK web-based guidance Risk assessments for your environmental permit[1] (updated August 2022). The ERA:

- Identifies potential accidents and the measures in place to minimise them happening;
- Identifies events or equipment failures that could damage the environment;
- Considers the likely frequency of how often these events or failures are likely to occur; and,
- Details the consequences if they do occur.

The guidance referred to above requires all receptors that are near the Site and those that could reasonably be affected by the Virtus Slough Campus to be identified and considered as part of the ERA.

1.3.1 EMERGENCY RESPONSE PLAN

LON12 will adopt the Slough Campus' existing emergency response plan. The Virtus Slough Campus has in place procedures for managing accidents, incidents and complaints. These dictate the actions to take in the event of these occurring and are part of the Site Environmental Management System (EMS).

The process of managing and responding to environmental incidents is incorporated into an overall Incident Management Process (Chapter 2 of the Virtus Operations Manual) controlled via the Virtus Service Management Centre. All incidents are reported to the Compliance Manager, who is responsible for assessment of actions completed and updating of procedures and escalating to a business continuity plan where necessary.

Virtus has an Emergency Preparedness Response Process detailed in **Error! Reference source not found.**. The process identifies risks under the headings of operational (environmental), third party (environmental), standards/statutory risk, and risks arising from natural disasters. This will be reviewed and updated as necessary once the Site is fully complete.

[1] https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit#risk-assessments-for-bespoke-permits

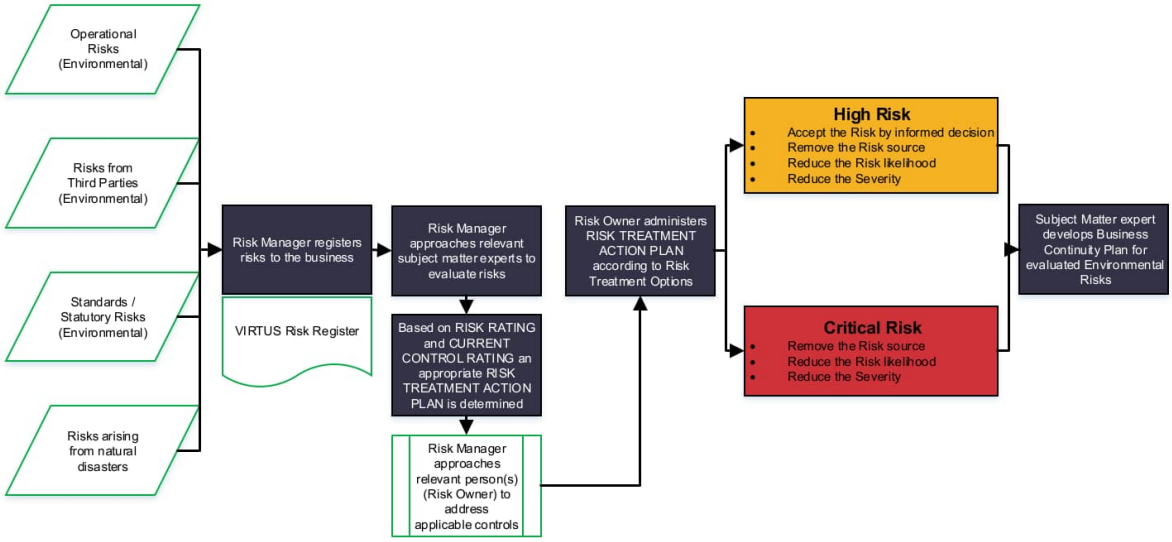

Figure 1-1 - Emergency Preparedness Response Plan

1.4 RECORD KEEPING

Records of all environmental accidents, incidents and complaints will be kept and be accessible to the management team.

1.5 RESPONSIBILITY

The ERA is the responsibility of the Compliance Manager.

2 SITE SETTING AND RECEPTORS

2.1 INSTALLATION ADDRESS

The address of LON12 is:

Virtus Slough Campus
LONDON 12
485 Berkshire Avenue
Slough
SL1 4PL

OS national grid reference: SU 95864 81174

2.2 SITE LOCALITY

LON 12 is located within the Slough Trading Estate, approximately 3 km north-west of Slough town centre. The Trading Estate dominates a large area of the town and is well located with the Bath Road (A4) to the south providing access to the M4 motorway and the Farnham Road (A355) to the east. The Estate is also bisected by the London (Paddington) to Bristol Railway Line (www.slough.gov.uk). The Estate comprises a wide variety of business, industrial and warehouse uses.

LON 12 is surrounded by a number of business, industrial and warehouse uses which form part of the Slough Trading Estate. Residential areas border the Estate boundary in all directions. Alongside residential properties, these areas consist of typical residential amenities including schools and other educational facilities, supermarkets / grocers, sports and community centres, retail facilities and some restaurants. The closest residential receptors are located approximately 260 m north of LON 12.

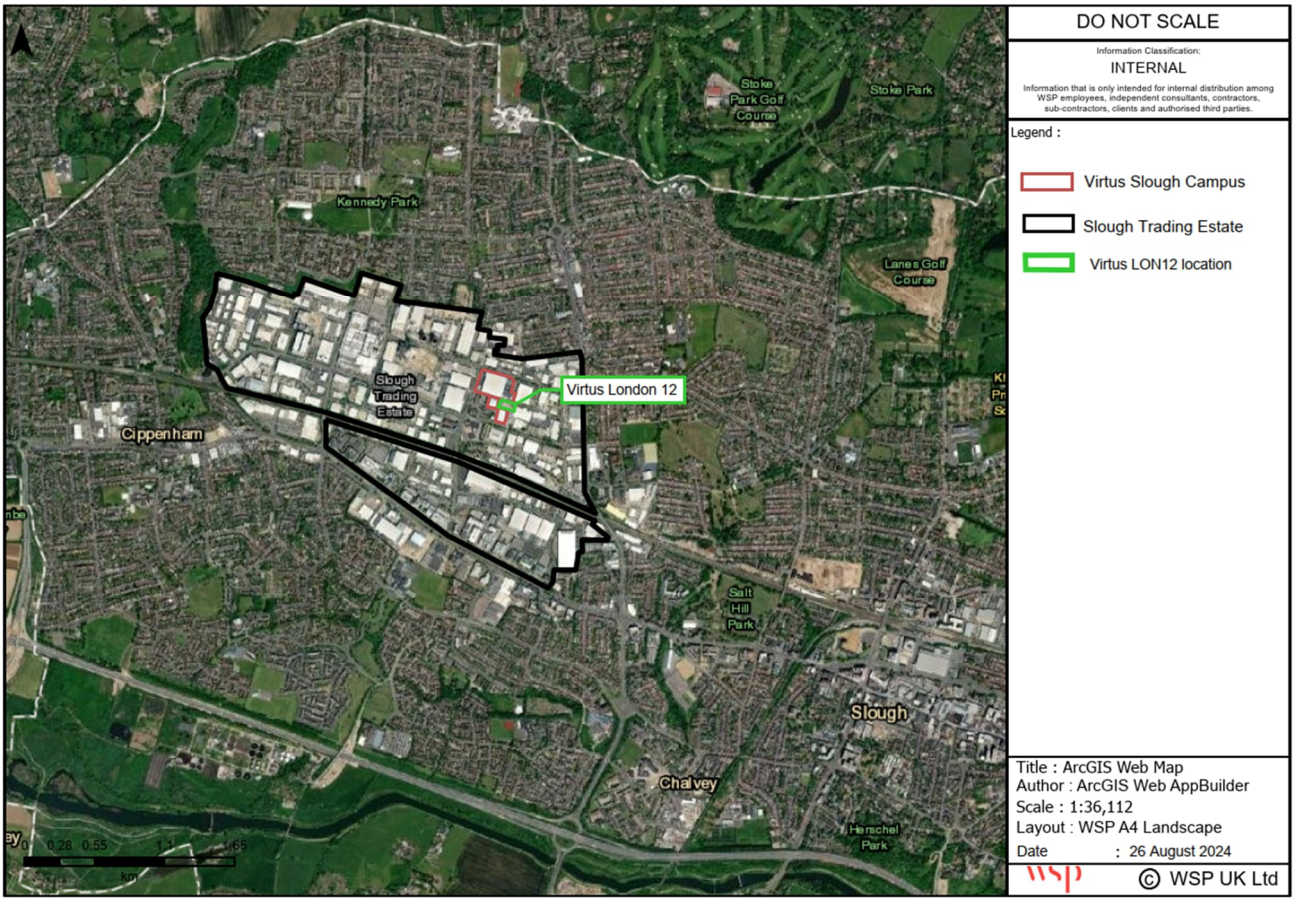

Figure 2-1 - Virtus Slough Campus located within the Slough Trading Estate

2.3 SURROUNDING LAND USE

The Virtus Slough Campus is surrounded by a number of business, industrial and warehouse premises which form part of the Slough Trading Estate. Residential properties surround the Estate boundary in all directions. The surrounding land use is detailed in Table 2-1 - Surrounding Land Use.

Table 2-1 - Surrounding Land Use

Boundary	Land Use
North	Surrounding land use to the north of the Campus include business, industrial and warehouse premises which form part of the Estate. Beyond the northern boundary of the Estate is a catering food and drink supplier, further business premises and an industrial estate. The nearest residential village lies immediately beyond Montrose Avenue, approximately 250 m north-east of the Campus.
South	Surrounding land use to the south of the Campus include business, industrial and warehouse premises which form part of the Estate. The Estate is traversed by a main line railway, located approximately 226 m south of the installation. Bath Road Service Road forms the southern boundary of the Estate. Beyond the southern boundary of the Estate

Boundary	Land Use
	is a residential village and retail park, with the nearest residential property located approximately 792 m south of the Campus.
East	Surrounding land use to the east of the Campus include business, industrial and warehouse premises which form part of the Estate. Farnham Road forms the eastern boundary of the Estate. Beyond the eastern boundary of the Estate are supermarkets and restaurants, educational institutions and a sports centre (Herschel Sports) and playing grounds. The nearest residential property is located approximately 150 m north-east of the Campus. The Salthill Stream (River) is located approximately 1 km from the Campus.
West	Surrounding land use to the west of the Campus include business, industrial and warehouse premises which form part of the Estate (comprising the majority of the Estate). Haymill Valley (Local Nature Reserve) runs along the western boundary of the Estate (approximately 1.35 km west of the Campus). The Chalvey Ditches at Slough (River) runs through the Haymill Valley in a south easterly direction (approximately 1.47 km from the Campus. The nearest residential property is located approximately 1.4 km west of the Campus.

2.4 RAW MATERIAL AND WASTE INVENTORY

Table 2-2 - Raw Material and Waste Inventory details the raw material and waste inventory for the Virtus Slough Campus.

Table 2-2 - Raw Material and Waste Inventory

Inventory	Description
Raw Material	
Ultra low sulphur gas oil	Each generator set has/will have a dedicated bulk fuel tank. These are situated underneath each generator set container.
Waste	
Oil/Fuel Hazardous Waste	Following the containment of spill/leaked material, the Facilities Management team will arrange for a controlled clean up and disposal.

2.5 INDUSTRIAL AND COMMERCIAL RECEPTORS

LON12 is bounded by Berkshire Avenue to the north and Buckingham Avenue to the south. The Campus is located within the eastern half of Slough Trading Estate. As such, there are a number of surrounding industrial and commercial receptors which reflect a variety of business operations in the area.

2.6 RESIDENTIAL RECEPTORS

Residential areas border Slough Trading Estate in all directions. Alongside residential properties, these areas consist of typical residential amenities including schools and other educational facilities,

supermarkets / grocers, sports and community centres, retail facilities and some restaurants. The closest residential receptors are located approximately 260 m north-east of the Virtus Slough Campus.

2.7 GEOLOGY, HYDROLOGY AND HYDROGEOLOGY

2.7.1 GEOLOGY

The Geology of Britain Viewer (displaying BGS data) indicates that the Virtus Slough Campus is underlain by superficial deposits of clay and silt (Langley Silt Member). The underlying solid bedrock geology is comprised of the Lambeth Group – clay, silt and sand.

2.7.2 HYDROGEOLOGY

Groundwater vulnerability data provided by the Environment Agency within the Landmark Envirocheck Report dated February 2022 indicates that the Superficial Langley Silt Deposits are classified as Unproductive Strata and the Lambeth Group is classified as a Secondary A Aquifer.

The Virtus Slough Campus is located within a Zone 3 (total catchment) groundwater Source Protection Zone.

There are no groundwater abstractions located on the Virtus Slough Campus. Six licensed groundwater abstractions are located within 1 km of the Virtus Slough Campus (Table 2-3).

Table 2-3 - Licensed Groundwater Abstractions within 1 km of the Virtus Slough Campus (Landmark Envirocheck, 2022)

Licensee	Details	Abstraction Point	Approximate Distance (m)	Direction
Aeroserve Euro Limited	Industrial; Commercial and Public Services: Laundry Use	Groundwater	119	East
Equinix (UK) Ltd	Other industrial / commercial / public services: evaporative cooling	Groundwater	436	West
Aeroserve Euro Limited	Industrial; commercial and public services: laundry use	Groundwater	588	South-East
Slough Energy Supplies Ltd	Private water undertaking: general use	Groundwater	810	North-West
Unilever UK Limited	Other industrial / commercial / public services: non-evaporative cooling	Groundwater	830	South-West
Equinix (UK) Ltd	Other industrial / commercial / public services: evaporative cooling	Groundwater	881	West

2.7.3 HYDROLOGY

Chalvey Ditches at Slough flows in a south-easterly direction passing the western boundary of the Slough Trading Estate. The Salthill Stream flows in a southerly direction approximately 0.65 km

from the eastern boundary of the Estate. These river water bodies confluence near the Eton College Golf Course before joining the River Thames (Cookham to Egham) (Table 2-3).

Figure 2-2 - Surface Water Features

The Landmark Envirocheck Report dated February 2022 indicates that there is one surface water feature within 1 km of the Virtus Slough Campus (Table 2-4).

Table 2-4 - Surface Water Features within 1 km of the Virtus Slough Campus (Landmark Envirocheck, 2022)

Surface Water Feature	Approximate Distance (m)	Direction	National Grid Reference
Un-named feature	572	South-East	496221; 180837

The Landmark Envirocheck Report indicates that there are no surface water abstractions within 1 km of the Virtus Slough Campus.

2.8 NATURE AND HERITAGE CONSERVATION

A nature and heritage conservation screening report dated 24/03/2022 was provided by the Environment Agency. Table 2-5 outlines the nature and heritage conservation sites identified within a screening distance from LON12. A sensitive receptor screening exercise confirmed that no

additional nature and heritage sites have been designated within the relevant screening distances since the previous report was issued. **Error! Reference source not found.**

Table 2-5 - Nature and Heritage Conservation Sites (Environment Agency, 2022)

Designations	Screening Distance (km)	Nature and Heritage Conservation Sites	Figure Reference
Special Areas of Conservation	10	Burnham Beeches	Figure 2-3**Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**Table 2-5**Error! Reference source not found.Error! Reference source not found.**
		Windsor Forest & Great Park	
Special Protection Area	10	South West London Waterbodies	
Ramsar	10	South West London Waterbodies	
Local Nature Reserves	2	Cocksherd Wood	
		Haymill Valley	
Local Wildlife Sites	2	Railway Triangle (off Stranraer Gardens)	Figure 2-4**Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.Error! Reference source not found.**
		Wet Woodland next to Farnham Park Golf Course	
		Haymill Valley	
		Cocksherd Wood	

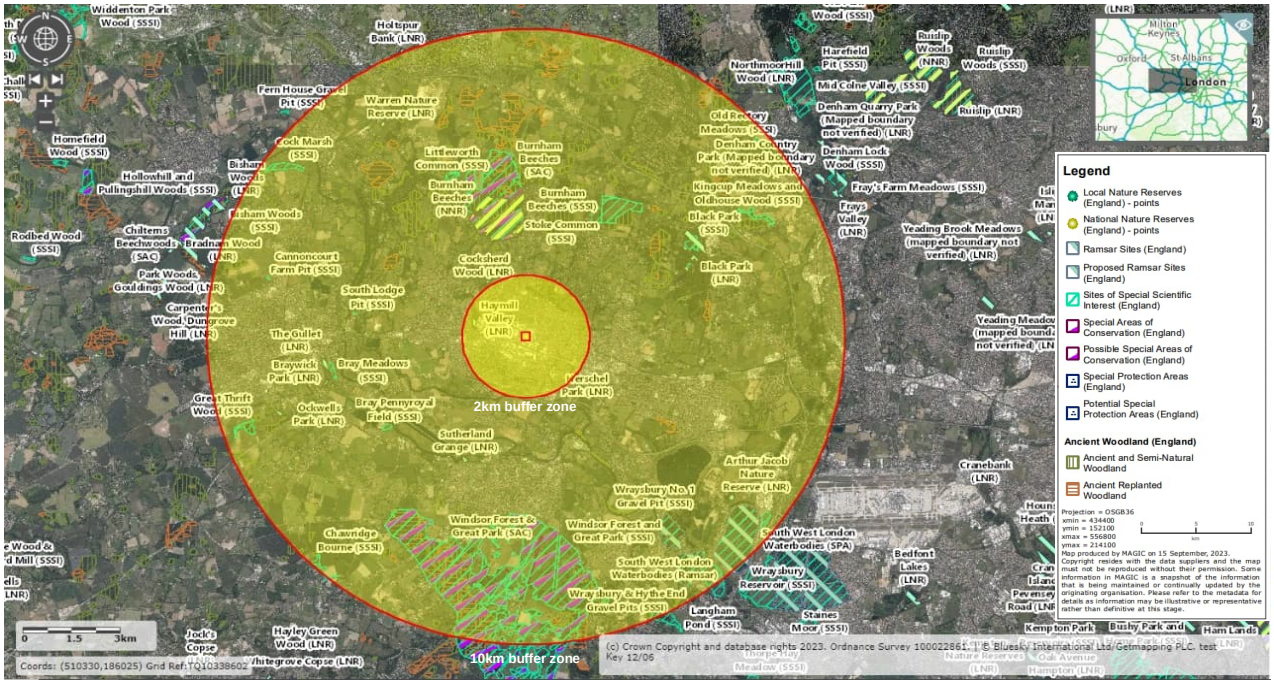

Figure 2-3 - Nature and Heritage Conservation Sites (magic.defra.gov.uk, 2023)

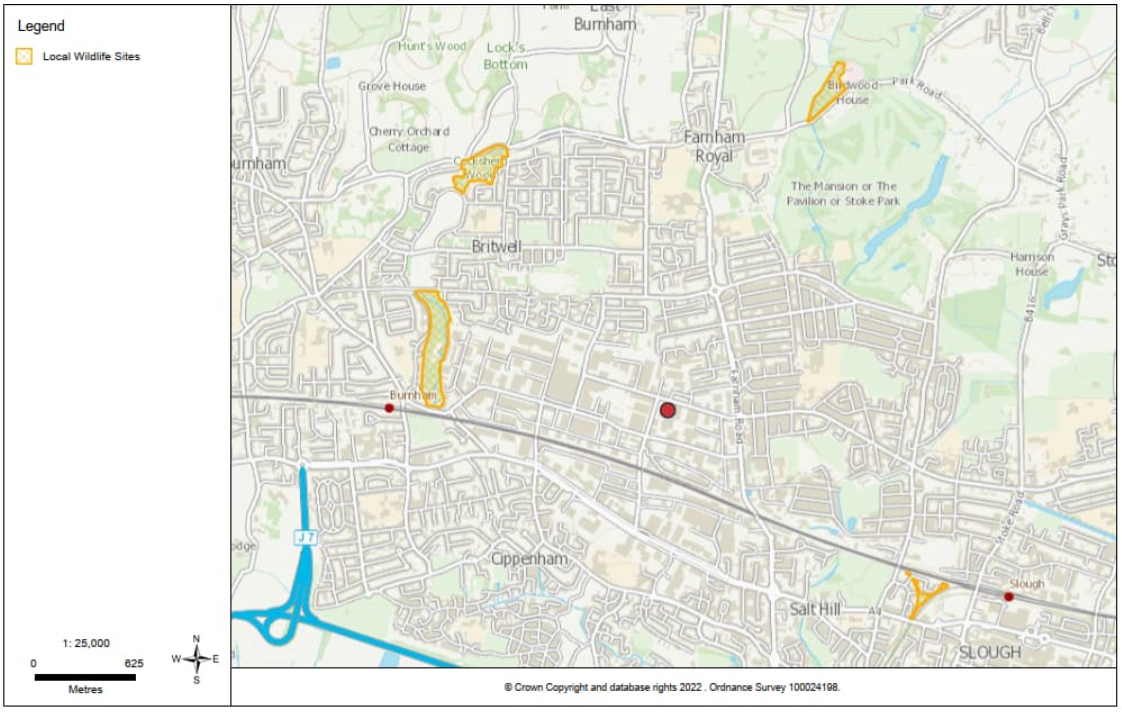

Figure 2-4 - Local Wildlife Sites (Environment Agency, 2022)

2.9 CULTURAL HERITAGE

Two Grade II Listed Buildings are located within a 1 km buffer of the Virtus Slough Campus, namely the Railway Bridge located approximately 374 m south-west of the Campus and the Milestone at SU 9556 8054 located approximately 783 m south-west of the Campus (**Error! Reference source not found.**The closest Grade I listed building, Baylis House, is located approximately 1.3 km south-east of the Campus. The closest Grade II* listed building, entrance gates, lamps and lodges to Stoke Park, is located approximately 2 km north-east of the Campus.

Three scheduled monuments are located within a 2 km buffer of the Campus; namely:

- Bowl barrow in Stoke Park Playing Field located approximately 1.5 km north-east of the Campus,
- Montem Mound: a motte at Salt Hill, Upton-cum Chalvey located approximately 1.6 km south-east of the Campus; and,
- Moated site at Cippenham Court located approximately 1.6 km south-west of the Campus.

There are no World Heritage Sites within 5 km of the Campus.

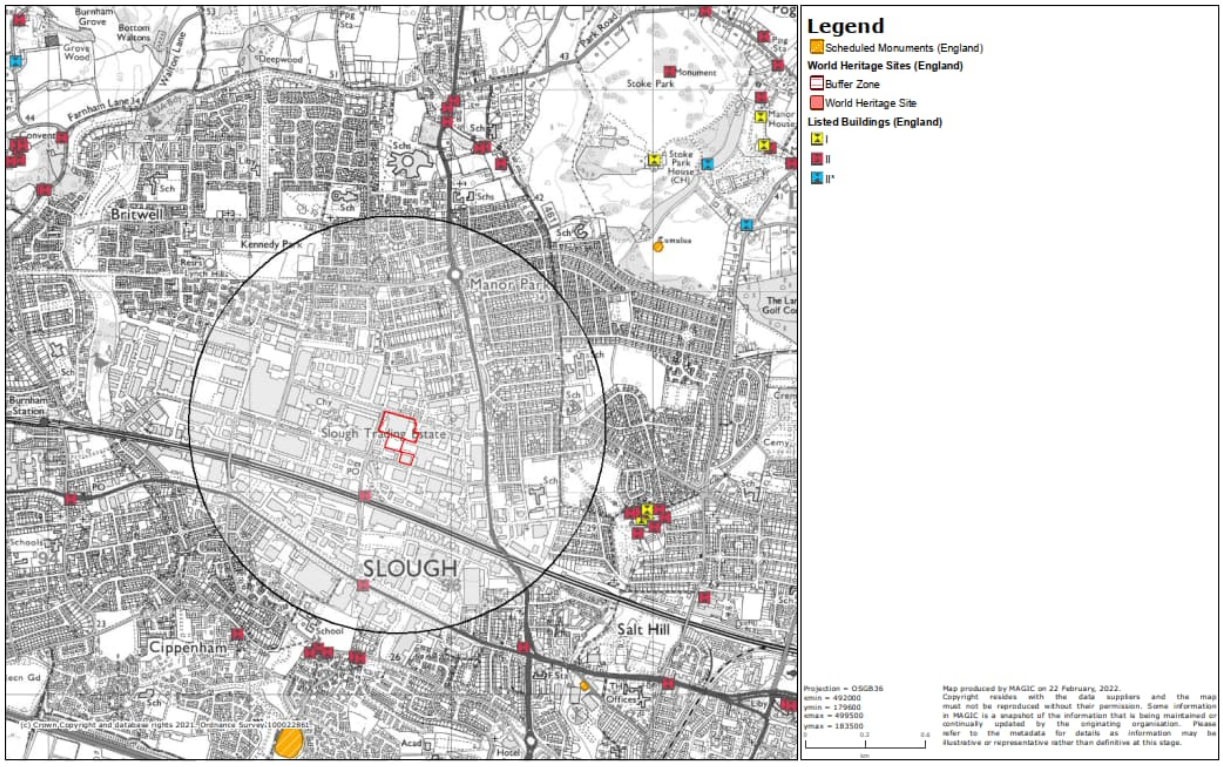

Figure 2-5 - Cultural Heritage (magic.defra.gov.uk, 2022)

3 ENVIRONMENTAL RISK ASSESSMENT

3.1 SCOPE

The environmental risk assessment in the following sections has been based on GOV.UK Guidance https://www.gov.uk/guidance/risk-assessments-for-your-environmental-permit. The environmental risks associated with the operation of the Virtus Slough Campus are considered for the following potential impacts:

- Odour;
- Noise and vibration;
- Uncontrolled or unintended fugitive emissions;
- Visible emissions;
- Discharges; and,
- Accidents.

3.2 METHODOLOGY

The following steps outline the methodology that has been followed in the undertaking of the ERA associated with the Virtus Slough Campus environmental permit application.

Step One- Identification of Risks

The key environmental risk areas have been identified in Section 3.1.

Step Two- Identification of Receptors

Section 2 of this document describes the site setting and the land uses in the vicinity of the Site. This information has been used to identify the main receptors that could be potentially at risk from the activities being applied for in the environmental permit application.

Step Three- Identification of Pathways between Sources and Receptors

For each of the identified hazards associated with the activities being applied for in the environmental permit application, the ERA has considered the pathways through which each hazard may impact on a sensitive receptor identified under Step Two. Where such pathways exist, the risks of potentially significant impacts have been assessed along with any controls and mitigation in place.

Step Four- Assessment of Risks

The risks from each potential impact is assessed according to the activity being undertaken.

Step Five- Controls for Risks

The GOV.UK Guidance states: “You’ll need to show how you’re managing any risks appropriately by controlling and monitoring your emissions and through your management system.”

The ERA is required to demonstrate how the risk of pollution or harm can be mitigated and the control measures that are in place as part of the environmental management system to reduce residual risks.

Step Six- Presentation of the Results

The findings of the ERA are presented in Table 3-1 to Table 3-6.

3.3 ODOUR RISK ASSESSMENT

The risks associated with odour from the Site are considered to be very low. The risk assessment with regards to odour is presented in Table 3-1 - Odour Risk Assessment.

Table 3-1 - Odour Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Odour from the displacement of gases to air during filling of ultra low sulphur gas oil	- Local business employees - Residents (closest residential receptor is located is ~ 250 m north of the Campus)	Air	Virtus has an oil/fuel delivery procedure. This will be implemented each time the day tanks require filling. Included in this procedure is the requirement for any 'at risk' drains to be covered to prevent any illegal discharges and spill kits must be positioned nearby. The Nine Point Fuel/Chemical Spill Procedure will continue to be implemented. Pipework between generators allows for the transfer of diesel from	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Increased nuisance to residents and workers	Very Low provided equipment is operated in accordance with manufacturers recommendations.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			generator to generator. This transfer is undertaken infrequently as the generators are only operated during maintenance or grid failures. These are routinely kept closed.			
Odour from the process due to failure of equipment, accident or other abnormal operation	- Local business employees - Residents (closest residential receptor is located is ~ 250 m north-east of the Campus)	Air	The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management The generators only operate during maintenance or grid failures as they are for emergency backup only. In the event of one failing during operation it would immediately be shut down. Any unusual odours to be investigated immediately in accordance with procedures within the EMS. Record and act on complaints in accordance with the EMS.	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Increased nuisance to residents and workers	Very Low provided equipment is operated in accordance with manufacturers recommendations.

3.4 NOISE AND VIBRATION RISK ASSESSMENT

The risks associated with noise and vibration from the Site are considered to be very low. The risk assessment with regards to noise and vibration is presented in Table 3-2.

Table 3-2 - Noise and Vibration Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Noise from normal operation of diesel generators	- Local business employees - Residents (closest residential receptor is located is ~ 250 m north-east of the Site)	Air (noise propagation)	A noise impact assessment is currently being undertaken to determine the potential impact of noise on nearby receptors. Noise attenuation measures include: - Generator sets positioned in noise insulated steel container units; - Engine exhaust silencers with louvres positioned in the exhaust 'stacks'; and, The generators will continue to be maintained and inspected in line with best practice (SFG20). These	Low- Mitigation measures in place should ensure that exposure is minimised.	Very Low – Increased nuisance to residents and workers	Very Low - provided equipment is operated in accordance with manufacturers recommendations.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management. Any unusual noise or vibration to be investigated immediately in accordance with procedures within the EMS. Record and act on complaints in accordance with the EMS			
Noise and vibration from diesel generators due to failure of equipment, accident or other abnormal operation	- Local business employees - Residents (closest residential receptor is located is ~ 150 m north-east of the Campus)	Air (noise propagation)	Any unusual noise or vibration to be investigated immediately in accordance with procedures within the EMS. Record and act on complaints in accordance with the EMS.	Low- Mitigation measures in place should ensure that exposure is minimised.	Very Low – Increased nuisance to residents and workers	Very Low - provided equipment is operated in accordance with manufacturers recommendations.

3.5 UNCONTROLLED OR UNINTENDED FUGITIVE EMISSIONS RISK ASSESSMENT

The risks associated with uncontrolled or unintended fugitive emissions from the Site are considered to be not significant.

The risk assessment with regards to uncontrolled or unintended fugitive emissions is presented in Table 3-3 below.

Table 3-3 - Uncontrolled or Unintended Fugitive Emissions Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Failure of engine management system	- Local business employees - Residents (closest residential receptor is located is ~ 150 m north-east of the Campus)	Air	The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management. Any failure in the engine management system will either send an alarm and the equipment will be manually shutdown via the control software or it will not be able to operate. Any unusual emissions to be investigated immediately in	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Increased nuisance to residents and workers	Not significant provided equipment is operated in accordance with manufacturers recommendations.

			accordance with procedures within the EMS. Record and act on complaints in accordance with the EMS.			

3.6 VISIBLE EMISSIONS RISK ASSESSMENT

The risks associated with visible emissions from the Site are considered to be not significant. The risk assessment with regards to visible emissions is presented in Table 3-4 below.

Table 3-4 - Visible Emissions Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Visible emissions from diesel generators	- Local business employees - Residents (closest residential receptor is located is ~ 250 m north-east of the Campus)	Air	Exhaust air is mixed with the cooling air resulting in diluted air being emitted to atmosphere. The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management. Generators are for emergency back-up generation and only operate in the event of a grid failure or internal emergency	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Very Low – Nuisance to amenity for housing within the locality.	Not significant provided equipment is operated in accordance with manufacturers recommendations.

			outside of performance testing. Any observed plumes will be investigated immediately in accordance with procedures within the EMS.			

3.7 DISCHARGES RISK ASSESSMENT

The risk assessment with regards to discharges into the receiving environment is presented in Table 3-5 below.

Table 3-5 - Discharges Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Emissions to Air under test regime	- Local business employees - Residents (closest residential receptor is located is ~ 250 m north-east of the Campus)	Air	Air Quality Impact Assessment modelling will be undertaken to confirm the potential impact of emissions to air from the operation of the diesel generators. Generators are maintained under a preventative maintenance programme in accordance with manufacturers recommendations. Generators are for emergency back-up generation and are operated for testing purpose and emergencies. Longer operation would only be in the event of a grid failure.	Very Low	Very Low	Very Low

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			Ultra low sulphur fuel oil is used to minimise SO_2 emissions. Any observed emissions would be investigated immediately in accordance with procedures within the EMS.			
Emissions to Surface Water	The Salthill Stream (River) is located approximately 1 km east of the Campus.	Thames Water surface water sewer (LON12)	The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management (6.7.9) Drainage at the generator enclosure area passes through an alarmed full retention separator with automatic shut off prior to release. Any observed oil would be investigated immediately in accordance with procedures within the EMS.	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Very Low – Contamination of watercourse.	Not significant provided equipment is operated in accordance with manufacturers recommendations and infrastructure maintained in accordance with preventative maintenance programme.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
Emissions to Land	Land and Groundwater	Groundwater percolation (in the event that hardstanding fails) There are no soakaways on LON12	The site is fitted with new impermeable hard standing and new drainage system. The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management. Visual inspections of the external structures of the tanks and containment features are undertaken on a daily basis for signs of corrosion. This is undertaken in accordance with the Asset Integrity Programme. Checks are also carried out as the generators are serviced (minor and major service) by the OEM or OEM approved provider 6-monthly and annually. Any observed imperfections and flaws in hardstanding, will be	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Contamination of land or groundwater.	Insignificant provided equipment is operated in accordance with manufacturers recommendations and infrastructure maintained in accordance with preventative maintenance programme.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			repaired as soon as practicable. Any observed emissions to land would be investigated immediately in accordance with procedures within the EMS.			

3.8 ACCIDENT RISK ASSESSMENT

The risk assessment with regards to potential accidents which could occur as a result of the operations occurring at the Virtus Slough Campus are presented in Table 3-6 below.

Table 3-6 - Accident Risk Assessment

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
What has the potential to cause harm?	**What is at risk? What do I wish to protect?**	**How can the hazard get to the receptor?**	**What measures will you take to reduce the risk? If it occurs who is responsible for what?**	**How likely is this contact?**	**What is the harm that can be caused?**	**What is the risk that still remains? The balance of probability and consequence.**
Leak from fuel deliveries and vehicles	Land Groundwater	Drains Groundwater percolation (in the event that hardstanding or drainage fails)	Hardstanding and drainage is being installed to current engineering standards to fully contain any loss. Virtus has an oil/fuel delivery procedure. This will be implemented each time the day tanks require filling. Included in this procedure is the requirement for any 'at risk' drains to be covered to prevent any illegal discharges and spill kits must be positioned nearby. Should a major spillage of diesel occur, the site would initiate a High; P2 incident and both Incident Management Process &	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Nuisance to amenity for housing within the locality.	Insignificant provided equipment is operated in accordance with manufacturers recommendations and hardstanding surfaces inspected in line with preventative maintenance programme.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			Pollution Incident Response Plans initiated in order to directly contain the spillage to prevent leakage entering local drains. All vehicles are tested annually in accordance with their MOT to ensure their road worthiness. Spill kits are maintained at site to clean up leaks and spills should they occur. All staff are trained in managing fuel deliveries and the use of spill kits. Any observed leaks would be investigated immediately in accordance with procedures within the EMS.			
Leak from lubricating oil	Land Groundwater	Drains Groundwater percolation (in the event that hardstanding fails)	Lubricating oil is contained within the engine which is located within an enclosed container. The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Nuisance to amenity for housing within the locality.	Insignificant provided equipment is operated in accordance with manufacturers recommendations.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			detailed in Chapter 6 of the Occupational Health Safety and Environmental Management Spill kits are maintained at site to clean up leaks and spills should they occur. All staff are trained in the use of spill kits. Any observed leaks would be investigated immediately in accordance with procedures within the EMS.			
Leak from transfer of fuel oil via connecting pipes	Land Groundwater	Drains Groundwater percolation (in the event that hardstanding fails)	The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management (6.7.9) Spill kits are maintained to clean up leaks and spills should they occur. All staff responsible for fuel transfer are trained in	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Nuisance to amenity for housing within the locality.	Insignificant provided equipment is operated in accordance with manufacturers recommendations.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			managing fuel transfers and the use of spill kits. Any observed leaks would be investigated immediately in accordance with procedures within the EMS.			
Leak of chemicals used for engine water treatment/coolant	Land Groundwater	Drains Groundwater percolation (in the event that hardstanding fails)	Coolant is contained within the engine which is located within an enclosed container Coolant levels will be checked by service engineers on a regular basis The generators and fuel storage systems will continue to be maintained and inspected in line with best practice (SFG20). These requirements are detailed in Chapter 6 of the Occupational Health Safety and Environmental Management. Spill kits are maintained at site to clean up leaks and spills should they occur.	Very Low- Mitigation measures in place should ensure that exposure is minimised.	Low – Nuisance to amenity for housing within the locality.	Insignificant provided equipment is operated in accordance with manufacturers recommendations.

Hazard	Receptor	Pathway	Risk Management	Probability of Exposure	Consequence	What is the Overall Risk?
			All staff are trained in managing deliveries and the use of spill kits. Spill kits are maintained at site to clean up leaks and spills should they occur. Any observed leaks would be investigated immediately in accordance with procedures within the EMS.			

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