



Environmental Permit Application

Best Available Techniques and Operating Techniques

Iron Mountain UK Data Centre Limited

724-729 Dundee Road, Slough, SL1 4JU

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Appendix B	Engine Manufacturer Specifications (Caterpillar 3516E and MTU engines)
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Appendix D	Climate Change Agreement,
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DRAWINGS

Drawing Number	Drawing Title
SDC-SLR-XX-XX-D-EM-000001_P01	Site Location Plan
2947-TPA-MF- 00-DR-A-20000	Ground floor plan
2947-TPA-MF-00-DR-A-20002	Roof floor plan
SDC-SLR-XX-XX-D-EM-000005	Emissions Point Plan
VIR-GBL-ZZ-ZZ-DR-E-1002	MV Schematic
FJ_288213	Drainage and Conductivity



1.0 INTRODUCTION

SLR Consulting Limited (SLR) has been instructed by Iron Mountain (UK) Data Centre Limited (IM) to prepare a bespoke Environmental Permit (EP) application for the Iron Mountain Data Centre LON-1 (the Site), located at 724-729 Dundee Road, Slough, SL1 4JU.

Electricity for operation of the Campus is provided from connections to the local electricity transmission network; however, given the nature of data centres and their requirement to have an available energy supply at all times, the Campus also incorporates a number of emergency standby generators (SBGs).

LON-1 possesses 11 SBGs, designated for use as emergency backup generators:

- 6 MTU (HV) generators; installed in April 2006;
- 3 Caterpillar (LV) generators; installed in May 2019; and
- 2 MTU (LV) generators; installed in March 2021.

The total rated thermal input (under standby power operating conditions) of the 11 SBGs is 70.265 MWth based on the following:

- 6 x MTU DS3100 (HV) generators (existing SBGs, installed before 20th December 2018), each with a thermal rated input of 5.43MWth;
- 3 x Caterpillar 3516E (new SBGs, installed in May 2019), each with a rated thermal input of 7.857MWth; and
- 2 x MTU DS3100 (LV) generators (new SBGs, installed in March 2021), each with a thermal rated input of 7.057MWth.

These figures are based on the known electrical output of the engines and assuming a 35% efficiency as required by the Data Centre FAQ, Draft Version 21.0 to TechUK for Discussion 15/11/22, which states:

“If precise MWth figures are unavailable and spec sheets or face-plates are unclear, the calculation for MWth derived from MVA output is based on: power factor 0.8 and an assumed poor conversion efficiency of 0.35 for MWth to MWelec e.g. 3MVA = $(3 \times 0.8) / 0.35 = 6.86 \text{ MWth}$.”

Although precise MWth figures are not available an estimate based on fuel consumption suggests a better efficiency may be achieved with the CAT engines potentially operating at around 38% efficiency and the MTUs slightly more efficient at approximately 42% efficiency. The figures given above are therefore a worst case.

The SBGs provide power to the data centre in the event of an emergency situation such as a brown-out or black-out of the local electricity transmission network, where there are fluctuations or loss of the electrical power provided by the network. During such an event, there is the potential for a delay between fault detection and initial operation of the SBGs; on-site battery arrays provide a temporary uninterruptible power supply in order to cover such delays and the potential for a loss/reduction in the power supply to on-site equipment.

The SBGs are subject to planned maintenance and testing in accordance with the manufacturer requirements. There are currently no agreements in place for the elective generation of electricity for commercial export to the electricity grid and the SBGs do not operate in Triad avoidance.

The SBGs are fuelled with diesel, as such for the purpose of this EP application, the air emissions risk assessment has been based on the use of diesel fuel.



This Best Available Techniques and Operating Techniques document (BATOT) is submitted on behalf of IM, to support the EP application for the data centre. This report is an integrated document which describes both the operating techniques that are implemented at the site with respect to operation of the diesel SBGs to ensure compliance with guidelines and demonstrates that BAT is employed.

For the purpose of this BATOT, key technical standards in the following documents have been referenced:

- Develop a management system: environmental permits guidance, April 2023;
- Risk assessments for your environmental permit guidance, December 2025;
- Emergency backup diesel engines on installations: best available techniques (BAT), 23 August 2023;
- Best Available Techniques: environmental permits, January 2026;
- Data Centre FAQ, Draft Version 21.0 to TechUK for Discussion 15/11/22; and
- Specified generator: comply with permit conditions, December 2022.

1.1 Pre-Application Advice

Enhanced pre-application advice was sought from the EA; this was via a call (Microsoft Teams) on 21st January 2026. During the meeting the EA confirmed the following:

- That a bespoke EP application for a Section 1.1 Part A(1)(a) burning any fuel in an appliance with a thermal rated input of 50 megawatts or more is required.
- Directly associated activities are limited to the storage of raw materials and surface water drainage.
- The application fee (£21,128) and the supporting documents required for the EP application.
- Confirmation of the standards and guidance relevant to the EP application for the data centre.
- The EA also provided a Habitats Screening Report and the Data Centre FAQ headline approach v21 15.11.22 BAT guidance document, supplementary pre-application advice on preparing a noise impact assessment and “Methodology for assessing the in-combination air quality impact of clusters”, dated 17 June 2024.

A copy of the EA enhanced pre-application advice letter (reference EPR/LP3020MX/P001) is presented in Appendix A.



2.0 REGULATED ACTIVITIES

The regulated activities at LON-1 consist of 11 SBGs with a net thermal rated input of 70.265MWth.

2.1 Schedule 1 Activities

Combustion activities that require an Environmental Permit (EP) are defined in Part 2, Schedule 1 of the Environmental Permitting Regulations 2016 (EPR 2016).

- Section 1.1 Part A(1)(a) burning any fuel in an appliance with a rated thermal input of 50 or more megawatts.

The EPR 2016 clarify that:

“...where two or more appliances with an aggregated rated thermal input of 50 or more megawatts are operated on the same site by the same operator, those appliances must be treated as a single appliance with a rated thermal input of 50 or more megawatts.”

The SBG provision includes for a level of redundancy in the SBG system such that, even in a worst-case blackout scenario, only the required number of SBGs would start up, to deliver the required electrical IT load for the data centre. The number of operational SBGs at the time of a blackout would be dependent on the extent of the blackout. However, it is noted that, without specific physical controls preventing operation of an SBG, the thermal input of all SBGs is required for determining the capacity of the site.

This EP application relates to the existing 11 SBGs at LON-1 as, where all of the engines operate, the total thermal input would be greater than 50MW, making this a Section 1.1 Part A(1)(a) combustion activity.

There are two other combustion activities on site however these are not considered further in this application because:

- The gas boiler is being decommissioned and will be removed from the site in 2026.
- The diesel-powered pump that operates the sprinkler system is relatively small and has a thermal input of less than 1MWth.

2.2 Stationary Technical Unit (STU)

The definition of a STU is not included in the EP Regulations. However, the EA ‘RGN 2 Understanding the meaning of regulated facility’ (May 2019) states:

“The essence of a “technical unit” is that it can carry out the Activity, or Activities, on its own. This means that the technical unit must include enough plant and machinery to allow the Activity to take place in a controlled manner for a sufficient period of time for the operation to reach it’s designed or intended output.”

Each SBG could be considered as an STU (for the purposes of combusting fuel) but would fall below the threshold of 50MW. However, the Environmental Permitting Regulations state “For the purpose of paragraph (a), where two or more appliances with an aggregate rated thermal input of 50 megawatts or more are operated on the same site by the same operator those appliances must be treated as a single appliance with a rated thermal input of 50 megawatts or more.” The diesel generators on site are therefore treated as a single technical unit in line with the aggregation rule stated above.

In the event of a worst-case blackout of the local transmission system, potentially all the SBGs at the data centre will be operated to deliver the required IT load, though with the redundancy built into the system it is unlikely that more than 9 engines would ever operate simultaneously. In the event of engine failures or SBGs being under maintenance, the



remaining SBGs will be operated to the required load, but this can only be identified at that time. Therefore, the operation of individual SBGs is linked to the availability of other SBGs, and all SBGs in the data centre are considered to be technically connected.

Discussion of the DAAs at the site are provided in section 2.3.

2.3 Directly Associated Activities

Schedule 1, Part 1 Regulation 2(1) of the EP Regulations provides that a DAA is an operation that, in relation to any other activity:

- has a technical connection with the activity;
- is carried out on the same site as the activity; and
- could have an effect on pollution.

As stated in A2.19 of RGN 2, a DAA must “serve” a STU. Therefore, a DAA will normally be something that would not be in place if the STU was not present on-site. A2.22 continues that there are four types of technical connection with a STU:

- a. input activities concerned with the storage and treatment of inputs,
- b. intermediate activities concerned with storage and treatment of intermediate products,
- c. Output activities concerned with finishing and packaging products and
- d. Output activities concerned with the treatment of waste.

A2.11 of RGN-2 states:

“Storage facilities may be technically connected. ...Stores at the same location are normally technically connected, and as their operation can give rise to pollution, either locally or at the Activity, they are likely to be DAAs.”

In addition to the above, it must also be clear how a DAA may affect emissions from the data centre. Incorrect storage of a raw material/fuel, or the discharge of contaminated surface water could cause off-site releases of pollutants.

Therefore, at LON-1, the storage of fuel oil and surface water drainage from the permitted Installation area are considered to be DAAs of the ‘combustion’ STU for the data centre as these relate to the storage and treatment of inputs.

There are no intermediate storage or treatment activities.

There are no finishing or packaging activities as the output is electricity.



3.0 DATA CENTRE LOCATION

The Iron Mountain LON-1 Data is located on 724-729 Dundee Road, Slough, SL1 4JU. The approximate centre of the site is at a national grid reference (NGR) SU 94926 81766. The site location is shown on drawing SDC-SLR-XX-XX-D-EM-000001_P01.

LON-1 is immediately surrounded by residential areas to the north and the west, and by commercial and industrial properties to the east and the south. There are multiple commercial premises adjacent to the south of the site, and a residential area approximately 30m to the west and 40m to the north. The closest commercial properties to the site are a Travelodge hotel, located directly adjacent to the east of the TN campus, and a data centre (Global Switch) 20m to the west.

The site does not fall within any Air Quality Management Areas. ¹

The immediate environmental site setting is summarised in Table 3 -1.

Table 3-1: Surrounding Land Uses

Boundary	Closest Distance (m)	Description
North	Adjacent	Scafell Road, residential apartments and properties, and Kennedy Park.
East	Adjacent	Local road network including Dundee Road and Fairlie Road, and a number of commercial and industrial properties including offices and a children's trampolining site.
South	Adjacent	Banbury Avenue and Oxford Avenue with a number of commercial and industrial properties including a number of offices.
West	Adjacent	Commercial properties, residential areas around Sandown Road, Greystoke Road and Amberley Road, and an area of woodland which constitutes the Haymill Valley Local Nature Reserve.

¹ [AQMAs interactive map](#) accessed 24/02/26



4.0 LON-1 OVERVIEW

LON-1 currently possesses of 11 SBGs with a total generating capacity of 24.6 MWe. The SBGs are fired on diesel.

8 of the SBGs are housed next to the LON-1 data centre building, within a dedicated generator compound located at ground level. Each engine is within a steel container with an air outlet mounted above the container. The other 3 generators are located on the roof of the building.

Each SBG has a single flue for the discharge of combustion emissions; these flues extend vertically and currently terminate at 8.1m or 5.2m above ground level. Air Quality Modelling has indicated no breaches of air quality standards where engines are tested individually during the working day with a break of at least an hour between each test. There is a potential for an impact during a blackbuilding test but these are not part of the regular programme of testing. A programme to refurbish some of the SBGs is underway.

The generating capacity of the installed SBGs at LON-1 is summarised in Table 4-1, The locations of the SBGs are indicated on Drawings 2947-TPA-MF- 00-DR-A-20000 and 2947-TPA-MF- -DR-A-20002.

Locations of all the emission points are presented on Drawing SDC-SLR-XX-XX-D-EM-000005.

Table 4-1: TN Generating Capacity of the SBGs

Building and Generator	Type/Model of Diesel Engine	SBG Rated Electrical Output (MWe)	SBG Thermal Rated Input (MWth)
Ground floor HV1	MTU 20V4000 DS3100	1.9	5.43
Ground floor HV2	MTU 20V4000 DS3100	1.9	5.43
Ground floor HV3	MTU 20V4000 DS3100	1.9	5.43
Ground floor HV4	MTU 20V4000 DS3100	1.9	5.43
Ground floor HV5	MTU 20V4000 DS3100	1.9	5.43
Grond floor HV 6	MTU 20V4000 DS3100	1.9	5.43
Ground floor LV4	Cat 3516E	2.75	7.857
Ground floor LV R	Cat 3516E	2.75	7.857
Roof LV5	Cat 3516E	2.75	7.857
Roof LV6	MTU 20V4000 DS3100	2.47	7.057
Roof LV7	MTU 20V4000 DS3100	2.47	7.057

4.1 Staffing

LON-1 operates 24 hours 365 days a year. This data centre has the following employees (these figures are approximate):

- There is a maximum of 20 staff on site during the day.



- The minimum number of staff on site at any one time will be three.
- Minimum levels of staffing occur overnight.

4.2 SBG Selection and Resilience Configuration

The data centre comprises 6 data halls. The data centre has been designed to ensure the number of SBGs per data hall are more than sufficient to service potential clients and to ensure resilience.

The SBGs have been selected based on the designed customer demand electrical load for each data hall. This approach ensures that the SBGs are operated at their optimal design capacity, as operating diesel SBG sets at low loads (i.e. underloading) for extended periods of time can potentially impact uptime and engine life. This approach will result in the reduced consumption of liquid fuel and hence generation of less emission to air from the SBGs.

As part of the annual maintenance programme, testing of the SBGs throughout the year for short periods of time is required. To minimise the mass emissions to air of combustion products and potential associated adverse impacts on air quality, one SBG at a time is tested.

The existing Caterpillar models are 3516E engines. The manufacturer's specification states these engines are optimised for reduced emissions and fuel use and that they are designed to meet the US EPA Tier 2 standard. Based on standby power rating the NO_x emissions (nominal emissions) are 2,319.2mg/Nm³ (@ 5% oxygen).

As stated in the Data centre FAQ, there is no minimum NO_x emission level appropriate for existing SBGs, however the 2g-TA LUFT emissions standard is generally expected to be met. Compliance with 2g-TA LUFT usually means emissions of 2,000mg/m³ or less (@5% oxygen). The caterpillar engines are currently slightly above this level but have been shown to be compliant with a relevant standard.

The MTU generators are stated to be optimised to the NEA ORDE standard. This standard equates to the USEPA Tier 2 standard². As stated in the Data centre FAQ, Tier 2 USEPA is the minimum appropriate for new SBGs.

The manufacturers' specification for the SBGs is provided in Appendix B.

To ensure that there is an uninterrupted power supply to the site, it is typical for data centres to install generating capacity over and above that actually required, allowing for any failure or breakdown of the generators. This "resilience configuration" for the SBGs providing the electrical load demand to the site (i.e. the data centre building and installed IT equipment) is referred to using 'n', where 'n' is the number of generators of a specified MWe rating required to provide the necessary power to meet customer requirements and data centre standards. The EA Data Centre FAQ states that 2n is the exemplar (i.e. twice as many SBGs as required are installed). However other arrangements are commonly used, such as n+1. The resilience arrangement at the LON-1 data centre is summarised below:

- The HV engines 1 to 6 serve data halls 1,2 and 3 providing an n+3 configuration
- The LV engines 4,5,6,7 and R serve data halls 4,5 and 6 providing an n+1 configuration.

The n+1 or n+3 configuration (i.e. 1 or 3 additional SBG added to support in the event of SBG failure or required maintenance) allows for a level of redundancy in the system. In the event of a power outage a set number of engines will operate until power is restored. Under the current arrangement all of the LV engines will operate in an emergency and 4 of the HV

² <https://www.nea.gov.sg/our-services/pollution-control/air-pollution/air-pollution-regulations>



engines. The additional engines on site mean that in the event of failure of an SBG, the site can still meet the required electrical demand in an emergency. The n+1 or n+3 configuration offers resilience and minimises the risk of disruption in service to the data centre's clients.

4.3 Reliability Data

The magnitude of risk posed by operation of the SBGs (other than for SBG testing) is strongly linked to the reliability of the provision of electricity from the local transmission network (in addition to the uninterruptable power supply (UPS) arrangements).

The LON-1 data centre is designed to provide the maximum reliability of the electrical power supply to the on-site systems that are critical for operation of the site as a data centre. The data centre is designed to Uptime Institute Tier III standard, ensuring the required level of resilience to ensure maximum uptime for critical IT infrastructure.

The electricity supply arrangements for the site include:

- Two 11kV supplies from Slough Heat and Power (SHP), who operate a biomass CHP facility on the industrial estate.
- A separate 33kV supply from the mains supply in Sterling Road.

Each of these supplies is directed via its own substation to the site switchboards.

The utility feeds configuration provides the site with the security of two individual feeds from the local power station, SHP A & B, whilst also providing a separate individual feed from the regional electricity company, SSE C.

Failure of either SHP A or SHP B will result in no loss of Site Utility Feed #1 because A & B are on a closed ring from the power station and thus site utility feed #1 would suffer no loss of supply.

Failure of both SHP A and SHP B will result in loss of site utility #1, however, at this point SHP/SSE fast switching closes the interconnect between the SHP ring circuit (A & B) switchboards and the SSE C switchboard, thus restoring the affected 11kV switchboard.

Failure of SSE C will result in loss of site utility #2, at this point SHP/SSE fast switching closes the interconnect between the SHP ring circuit A to B switchboards and the SSE C switchboards thus restoring the affected 11kV switchboard.

In this way, where power is lost from one source, power from the other source switches in ensuring power supply is maintained.

The site also houses four groups of UPS units. These will immediately provide power from the batteries in the event of a power failure ensuring continued operation until the SBGs operate.

This infrastructure design provides the required reliability for each customer suite, and the required resilience for the data centre customers. The electricity supply arrangement for the data centre is illustrated in drawing VIR-GBL-ZZ-ZZ-DR-E-1002.

There have been no power outages at the site in the past five years.

4.3.1 Technical Standards

The data centre site is designed and operated in accordance with the relevant sections of the following key guidance:

- Develop a management system: environmental permits guidance, 03 April 2023;



- Emergency backup diesel engines on installations: best available techniques (BAT), 23 August 2023;
- Best Available Techniques: environmental permits, February 2016; and
- Specified generator: comply with permit conditions, 28 December 2022.

In addition, the site is operated in accordance with *Data Centre FAQ, Draft Version 21.0 to TechUK for Discussion 15/11/22* with respect to standby operation. It is noted that this guidance is draft, however, for the purposes of this application, this guidance is considered to represent the current EA position on BAT for data centre back-up generation systems.

Operation of the SBGs (other than for maintenance and testing) will commence in the event that electricity is not available from the local transmission network (e.g. brown- or black-out) or on internal failure of electrical supply (e.g. transformer failure, UPS problem).

The SBGs on-site will also be operated for maintenance and testing purposes. Each SBG will operate for no more than 50 hours per annum and therefore will not be subject to the emission limit value (ELV) for NO_x.

4.3.1.1 Emergency Operation

Emergency operations are taken to include any outages in the power supply and unplanned hours required to come off grid to make emergency repair of electrical infrastructure associated within the data centre itself.

Given the short start-up and shutdown times for diesel engines, the SBGs are regarded, for the purposes of determining operating hours, as commencing operation at the first fuel ignition. This is taken to include the shorter periods of plant 'overlap' when engines provided as redundancy are started as a precautionary measure before final customer load is reached with the optimum/minimum number of SBGs.

In the event of emergency operation of the SBGs, the Operator will notify the EA in accordance with the requirements stated in the environmental permit.

5.0 OPERATING REGIME

5.1 SBG Scheduled Operating Regime

During planned maintenance and testing the SBGs will each be typically operated for less than 50 hours per year.

The planned maintenance and testing regime for the SBGs is scheduled to ensure that the impact on air quality as a result of the fuel combustion emissions is minimised.

The planned operating regime for the 11 SBGs (i.e. testing and maintenance) is presented in Table 5-1.

Table 5-1: LON-1 Planned SBG Testing Regime

Operational Requirement	HV Generators	LV Generators	Notes
Off-load testing during maintenance usually 2 nd Wednesday of the month	5 minutes	5 minutes	Each generator tested individually
On-load testing	Half hour test every quarter	Annual 400 minute test	LV generators tested individually HV generators maximum of three at any one time



Total Annual Operational Hours Per SBG	3	7.7	Actual figures may vary, in 2024 individual engines were tested for between 0.63 and 5.33 hours
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The scheduled maintenance and testing regime for each SBG is well within the 50-hour testing regime for SBGs which are used purely for a stand-by emergency role, as stated in the EA Data centre FAQ.

6.0 EMISSIONS

6.1 Emissions to Air

The Air Emissions Risk Assessment (AERA) (SLR Ref: 410.066934.00001 AERA) has considered the existing SBGs at LON-1.

Potential air quality impacts resulting from routine testing and maintenance operations and non-routine emergency outage operation for the site have been considered.

The AERA consider a range of different testing scenarios and also the impact of major power outage. As a worst case it was assumed that during a blackout all of the engines would operate at 100% of load for up to 72 hours. As explained above there is some redundancy in the system and it is likely that a maximum of 9 of the 11 engines would operate.

The AERA predicts for the following:

- **Planned maintenance and testing:** that there will be no significant adverse impacts on identified local human receptors and designated ecological receptors where engines are operated individually with an hour's gap between testing of the HV engines.
- **Black Building Test:** in some circumstances there were short term breaches at some receptors. However, the probability of these breaches was small. As in reality black building tests are rarely carried out the risks are not considered to be significant.

Overall, however the risk of a prolonged emergency outage is considered to be low.

Refer to the Environmental Risk Assessment for further information (document reference 410.066934.00001 ERA).

6.2 Emissions to Sewer and Surface Water

The drainage systems at the LON-1 data centre include separate foul and surface water drainage systems.

The drainage arrangements at LON-1 are illustrated on the drainage plan (reference FJ_288213) and are summarised below.

Foul Water Discharge

There is no discharges to foul sewer within the plant area where the SBGs are located. Discharge to foul sewer is from the site welfare facilities.



Surface Water Discharge

Areas of the site where the fuel tanks and generators are located benefit from concrete surfacing. Site drainage is from a series of surface water drains which direct water to three discharge points, as shown on drawing FJ_288213. There are currently no interceptors installed in the surface water drainage system. However, each drain is fitted with a valve just before the discharge point. These can be activated from a switch in the oil pump room. In the case of a diesel spillage or other incident with the potential to impact surface water, all three surface water valves will be closed, containing contaminated water on site. The water can then be removed by tanker to safeguard downstream receptors.

The Environment Agency are keen to see further work completed to protect the nearby water course and associated nature reserve. In their CAR form dated 2nd February 2026, they highlight that further work is needed to protect surface water, with interceptors being the usual standard for this type of site. However, they acknowledge that interceptors may be difficult to retrofit and have indicated that where this is not possible the alternative would be to install oil detection within the drainage system, linked to an automatic shut off for the valves mentioned above.

The potential to install interceptors at each of the three discharge points will be evaluated. Where it is possible to do so, interceptors will be installed. However, it is likely to be impractical due to the constraints on site. Where space restrictions or disruption to services would make this unviable, arrangements will be made to install oil detection within each of the drainage runs, linked to automatic closing of the valves if oil is detected. This work will be completed by June 2027.

The discharge points are to the surface water drains in the industrial estate and are understood to eventually drain into the brook in the nearby nature reserve.

6.3 Emissions to Land

There will be no point source emissions to land from the LON-1 data centre site.

6.4 Fugitive Emissions

Significant fugitive emissions, odours and dust are not anticipated in respect of the LON-1 data centre. No fine friable material is used or stored on site. The only likely emissions of dust are particulates released from the stacks as a result of burning diesel. This is addressed in the Air Emissions Risk Assessment.

Diesel is stored in double skinned tanks or tanks within a concrete bund and transferred via sealed pipes. It is unlikely that emissions of odour will occur. A summary of the storage arrangements for fuel is provided in Section 9 of this document.

IM maintains a spill procedure, and relevant operating personnel have been/will be provided with spill response training. This includes immediately closing the valves in the surface water drainage system to prevent any emissions from site via the surface water system. Additionally, the requirement for completing regular inspections of the data centre sites is included in the EMS and maintenance procedures. This includes maintenance of site surfacing and drainage infrastructure.

6.5 Noise and Vibration

Given the location of three of the diesel generators externally on the roof of the building and the close proximity of residential receptors a noise impact assessment has been completed. This is included in the permit application.

The noise impact assessment considered 3 scenarios, expected to capture worst case emissions for noise and including daytime and nighttime testing of the engines. The



assessment showed that predicted noise levels were negligible during routine testing and met the low impact or no adverse impact criteria in almost all cases. An adverse impact was predicted at one receptor in certain scenarios, however the modified assessment (taking into account the context) showed that the site could be classed as low impact or no adverse impact as a whole.

As the noise impact is considered negligible during routine testing and would have no adverse impact during emergency operation a stand alone noise management plan is not considered necessary.

Measures in place to limit the impact of noise include:

- Use of acoustic attenuators and silencers on exhaust flues, and ventilation emission points;
- Use of acoustic enclosures for the SBGs which are mounted on anti vibration mounts;
- SBGs positioned to maximise screening by buildings, with the main building between the ground level engines and the nearest residential receptors;
- SBG testing is limited in frequency and on-time over the calendar year;
- SBG testing is scheduled for the daytime hours only;
- Avoidance of concurrent testing across SBGs where practicable;
- Preventative maintenance, with regular inspection and servicing and
- Recording of responding to noise complaints.

Should a complaint be received regarding noise or any other aspect of the site operations a record will be made of the complainant, the perceived problem and the time it occurred. The complaint will be raised with the site manager who will investigate the cause as soon as possible and plan any required mitigation. A timescale will be agreed for any necessary repairs or improvements to address the issue and prevent recurrence. Unless they have requested otherwise, feedback will be provided to the complainant following the investigation to communicate any findings and the mitigation that has been put in place.

7.0 RESOURCE USE AND EFFICIENCY

7.1 Types and Amounts of Raw Materials

Diesel and oil use is summarised below:

- Diesel
- Lubricating oil: used in the engines and other mechanical equipment. Occasional top up or replacement will be required during scheduled or forced maintenance periods only.
- The lubricating oil for the SBGs will be stored within the engine and will be manually topped up during servicing by the appointed service contractor.

The SBG engines are designed for the combustion of diesel fuel.

A typical composition of diesel fuel is shown in 7-1.



Table 7-1: Typical Diesel Fuel Oil Specification

CHEMICAL	TYPICAL % (MASS BASIS)
Carbon	89.7
Hydrogen	10.2
Sulphur	<0.1

The BAT objective with regard to raw materials is achieved by the appropriate design, operation and maintenance of the SBGs to ensure the lowest possible consumption rate by the selection of the least hazardous materials and by the provision of appropriate storage methods.

Cogeneration (Combined Heat and Power)

The provision/implementation of combined heat and power (CHP) is not applicable as the SBGs each operate for substantially less than 500 hours per annum for the provision of emergency power generation; each engine inherently only operates for a small fraction of the year for planned maintenance and testing. It is therefore not possible to provide a viable source of heat to off-takers.

7.2 Fuel Storage

7.2.1 Bulk Tanks

Diesel fuel is stored in five bulk tanks. There are two 80,000l tanks, adjacent to the ground level generators. These tanks are connected to the pump room and feed the day tanks for HV1 to HV6. There are also three 44,500l tanks located at the west end of the building. These tanks feed LV5, LV6 and LV7, located on the roof of the building, via a pipeline which runs up the external wall of the building. All of the tanks are constructed from steel, designed to the BS799 5 2010 standard and manufactured to the OFS T200 standard and are fully bundled to at least 110% of the capacity of the tank. Those at the west end of the building, near the site road, have integral steel bunds and are protected by crash barriers to prevent accidental damage caused by passing vehicles. The two larger tanks are also double skinned, based on Adler and Allan's March 2025 inspection, and are located within a concrete bund which provides tertiary containment. These tanks are protected from accidental damage by being inside a fenced lockable compound.

The 44,500l tanks do not have leak detection but all of the tanks have a gauge to indicate the fuel level and they are fitted with local high-level alarms. The fill points are within a lockable cabinet.

The 80,000l tanks have leak detection with a probe fitted to detect oil within the outer bund and activate an alarm. The fill points for these tanks are fitted in a lockable cabinet with a drip tray fitted. Non return valves are fitted to these two tanks to minimise the risk of spills when delivery tankers are disconnected.

The tanks, pipes and bunds are subject to regular inspections and maintenance with tanks, bunds and pipework being given a visual inspection by site staff at least weekly and annual inspections being carried out by a third party OFTEC registered technician. In October 2024 the concrete bund was inspected, cleaned and lined with a polyurea coating to maintain it in an impermeable condition. The coating is a minimum of 2mm thick and will hold spilled fuel for at least 72 hours before it starts to deteriorate. The construction quality report for this upgrade is attached as Appendix C.



7.2.2 Existing Generator Day Tank and Belly Tank Diesel Storage

- All HV sets have 4,000l day tanks.
- LV sets 5,6 and 7 have 1,000l day tanks.
- LV sets 4 and R have 44,500 l belly tanks.

All tanks are designed to BS799 5 2010 and manufactured in line with the OFS T200 standard. They are bunded to 110% capacity and fitted with fuel gauges and high-level alarms.

Tanks for LV5 and LV6 are double skinned tanks and sit within a plant room which is designed to provide tertiary containment. The tank for LV7 is described as single skinned, however this is also inside the plant room which is designed to provide secondary containment. The room includes an alarm should a leak or spill be detected and this is connected to automatic shut off valves to prevent further filling of the tanks in the event of a leak.

Day tanks for HV2, HV3 and HV4 are within steel bunds capable of holding 110% of the capacity of the tank and are located within a plant room with alarmed containment.

The larger belly tanks are within steel bunds providing 110% of the capacity of the tank mounted on a raised concrete base. The fill points are within a lockable cabinet with a drip tray. These tanks have an electronic level gauge to indicate the level of fuel in the tank and are fitted with overfill alarms. A probe is fitted in the bund to detect liquid in the bund.

The belly tanks are vented to air to prevent over pressure when they are filled.

All day tanks and belly tanks are subject to regular inspection and maintenance with a minimum of a weekly inspection carried out by site staff and an annual inspection by a third party OFTEC registered technician.

7.2.3 Below Ground Diesel Storage Tanks

There are no below ground diesel storage tanks. All tanks and pipework are located above ground allowing ease of inspection and maintenance.

7.3 Energy Efficiency

7.3.1 Climate Change Agreement

Iron Mountain is a participant in a Climate Change Agreement, (CCA) (agreement reference DATC/T00031 v1). Energy management techniques have been implemented to monitor, record and track energy consumption at the installation. The CCA Agreement is included in Appendix D.

An ISO 50001 certified energy management system is also in place, via which energy efficiency and reduction is managed.

7.3.2 Energy Efficiency Directive (EED)

The EED exempts “those peak load and back-up electricity generating installations which are planned to operate under 1,500 operating hours per year as a rolling average over a period of five years”.

Based on the planned maintenance and testing schedule, in total the SBGs at the Lon-1 data centre are operated for less than the 1,500 hour threshold. For the purpose of this EP application, the data centre is therefore exempt from the EED requirements and an assessment of energy efficiency in accordance with the Reference Document on Best Available Techniques for Energy Efficiency, February 2009 is not required.



7.3.3 Energy Management

The management of energy is an integral part of the environmental and energy management system (MS), and an energy policy has been developed. The system is accredited to ISO50001. Training aimed at minimising energy use and developing good housekeeping techniques is a part of the staff training programme. Energy use and its minimisation are managed via the ISO50001 certified energy Management System (MS). Improvement plans are managed through the ISO50001 MS and identify the areas where energy is utilised and potential energy efficiency measures that could be made. The system ensures that the financial viability of any proposed measures is appraised and improvements are implemented where practical.

7.3.4 Measures for the Improvement of Energy Efficiency

The SBGs are subject to periodic maintenance and inspections that include ensuring the engines are optimised to minimise the heat rate (energy consumption) whilst maintaining the relevant emissions standards.

Energy recovery is not reasonably practicable for engines with so few anticipated operational hours, however, as part of the ISO50001 MS, assessment of the site's energy usage will be undertaken with a view to identifying measures to reduce energy consumption.

7.3.5 Energy Usage

The overall efficiency of the data centre SBGs (11 SBGs) (under the provision of 'standby' power), is approximately 41% with SBG efficiencies, estimated from fuel usage, of:

- MTU HV generators 42%
- MTU LV generators 42%
- Caterpillar LV generators 38%

The specification for the engines indicates the following fuel usage:

- MTU generators: 494.6l/hr at 75% of power rating and 633.7l/hr at 100% of power rating.
- Caterpillar generators: 594.7l/hr at 75% of power rating and 720.4l/hr at 100% of power rating.

7.4 Water Minimisation

There is no consumption of water associated with the SBG combustion activities, and diesel use/storage at the LON-1 data centre.

7.5 Waste Minimisation

Management of waste oil generated as result of servicing is as follows.

Whilst the site does not inherently produce significant amounts of waste, a waste minimisation audit will be performed once every four years throughout the operational lifetime of the data centres in accordance with EP requirements. The aim of this audit will be to minimise the use of all raw materials and thus prevent waste at source.

Waste oils (EWC 13 02) from the SBGs is unlikely to exceed 5m³ or 4.5 tonnes per annum. Oily wastes are stored in suitable containers, such as 205 litre drums, located on bunded stillages whilst awaiting collection for off-site disposal or recovery by a licensed waste contractor.



Other waste will be minimal, comprising items such as cleaning rags and used filters arising from maintenance of the generators. These will be stored in suitable containers and will be sent off site for disposal using a licensed waste contractor.

7.6 F Gases

Fluorinated gases (F-gases) are used at the data centre in the refrigeration systems for chiller units and air conditioning units. The chiller and air conditioning units are subject to regular maintenance and leak testing; these requirements are included in the site's preventative maintenance programme. Maintenance and testing is undertaken by an approved external specialist contractor; copies of the certificates of the engineers qualified to install, maintain and service refrigeration equipment are maintained on file.

IM maintains an F-gas register for each asset containing refrigerant; the register details the location of the asset, asset model and serial number, refrigerant type and charge, the global warming potential (GWP), carbon dioxide equivalent (CO₂e kg) and maintenance/leak test frequency details.

Leak detection and maintenance records are maintained which include details of the quantity of refrigerant used to recharge the units, date of recharge and leak re-test for those assets where leaks are identified. IM has appointed a responsible third-party engineer with specialist skills in air conditioning and refrigeration for undertaking maintenance activities.

8.0 MANAGEMENT SYSTEMS

The data storage services at the site are managed in accordance with the following standards:

- ISO/IEC27001:2013 that specifies the requirements for establishing, implementing, maintaining and continually improving an information security management system;
- ISO14001:2015 that specifies the requirements for an environmental management system to enable an organisation to develop and implement a policy and objectives which take into account legal requirements and other requirements to which the organization subscribes, and information about significant environmental aspects;
- ISO50001:2018 that specifies requirements for establishing, implementing and maintaining an energy management system, whose purpose is to enable an organization to follow a systematic approach in achieving continual improvement of energy performance, including energy efficiency, energy use and consumption;
- ISO9001, which sets out the international standard for quality management; and
- ISO22301, which sets out the international standard for business continuity management.

8.1 Environmental Management System (EMS)

IM continue to be operated in accordance with the ISO14001 certified EMS. A copy of the certification is provided in Appendix The EMS includes the policies, management principles, organisational structure, responsibilities, standards/ procedures, process controls and resources which are in place to manage environmental protection across all aspects of the business.

The EMS places particular importance on:

- Reducing risks to the environment to a level that is as low as reasonably practicable using best available techniques;
- Integrating EMS responsibilities within line management;



- A commitment to personnel environmental awareness and competence;
- The ongoing monitoring and review of environmental performance; and
- A commitment to working to achieve continuous improvement in environmental performance.

Policy

The EMS includes an Environmental Policy which clearly defines the operator's commitment to continual improvement and to developing objectives and targets aimed at preventing pollution and improving environmental performance. The Policy is reviewed annually by top management and communicated to all employees.

Organisation

The operator has established and maintains documented procedures for identifying and recording environmental aspects for all its activities and services. Where significant, the environmental aspects are considered in the development, implementation and maintenance of the EMS. These are also considered when introducing new or modified activities and services. The operator will also document in the EMS the process for the setting, managing and reviewing environmental objectives and targets.

The operator documents in the EMS the structure and responsibility within the organisation. Senior management have overall responsibility for the provision and maintenance of an effective EMS Policy and improvement programme and to ensure that the requirements of the EMS are addressed in all management and business decisions.

The operator maintains an internal audit programme for periodic internal audits of environmental documents, procedures, implementation and compliance status to determine whether the EMS conforms to planned arrangements, and to determine whether it has been appropriately implemented and maintained in accordance with its Environmental Policy. As an accredited system the EMS is also be subject to external audit.

Environmental Aspects Evaluation

The environmental significance of the site activities have been determined by means of environmental aspects evaluation. The operator has identified the aspects and impacts (direct and indirect) relevant to its activities, highlighting which substances, activities or incidents related to the aspects that could potentially have a harmful effect on the environment. Any substance, activity or incident that has the potential to cause harm, or under the worst-case scenario has a high-risk of potential to harm are identified as being 'significant'.

The operator's main activities are identified and recorded, in an aspect and impact register; evaluation of these aspects and impacts and the associated implications are recorded. Environmental aspects are considered under the following conditions:

- Normal operation (i.e. standard operating procedures and conditions);
- Abnormal operation (i.e. standard operating procedures but non-standard conditions); and
- Emergency conditions.

Aspects which are identified as being 'significant' are managed by establishing operational controls, processes, procedures, training and monitoring activities such as audits. The operator's management team are responsible for reviewing aspects and impacts defined as being significant. All staff are responsible for working in accordance with procedures relating to environmental compliance.



Environmental Risk Assessment

Environmental risk assessments, together with the environmental aspect evaluation, inform routine management system (MS) procedures for the management of risks under normal circumstances, and emergency plans to mitigate impacts under abnormal circumstances. Such assessments cover the implications of material storage, fuel transfer, drainage and site security.

Environmental risk assessments are carried out:

- for normal operating conditions,
- for potential abnormal/emergency conditions,
- for existing equipment,
- for existing material storage,
- before a new substance is introduced,
- before the installation of new plant on-site and
- before existing plant is modified.

All significant risks are recorded, in an aspect and impact register.

The operator is required and encourages full and open reporting of all environmental incidents, including near misses. Staff are encouraged to report environmental incidents and problems which may result from (inter alia) the following factors:

- pollution incidents,
- potential pollution incidents,
- breaches of legislation,
- supplier non-compliances,
- contractor non-compliances,
- non-compliances identified during audits and
- other management system non-compliances.

Additionally, contractor personnel are informed of the need to report incidents.

Monitoring, Control and Change Management

The primary mechanism that ensures operational control to minimise adverse environmental risks is the aspect and impacts register. Processes and procedures address each significant aspect and generate the information and data necessary to monitor environmental performance, identify faults, identify opportunities for improvement and optimise maintenance routines.

The EMS provides for the controlled implementation of changes which may have environmental implications, ensuring any environmental risks posed by the proposed change is adequately managed.

Change control includes consideration of the need for the change, identification of the potential environmental implications, measures required to minimise the potential environmental impacts of the change, those responsible for resolution of any issues and an implementation timescale. Change control includes consideration of (inter alia):

- legal obligations,
- results of routine monitoring activities,



- changing commercial circumstances,
- improvement targets,
- review of the environmental aspects, which will include risks from climate change,
- complaints or suggestions from the public,
- staff suggestions and
- non-compliances.

Accident Prevention and Management

The environmental aspect and impact register has been used to identify potential risks to the environment and this will be updated to include requirements of the EP. The EMS includes documented procedures to manage these risks.

The following are also in place:

- A Disaster Recovery Plan to counteract potential interruptions to business activities and to protect critical business processes from the effects of major failures of information systems or disasters. Risk assessments are undertaken to ensure that the Disaster Recovery Plan has appropriate controls in place; and
- An Emergency Action Plan and Risk Assessment Initial Environmental Review, which details emergency/accident procedures and incident management responsibilities, including management of significant pollution incidents and fire. The plan includes contact numbers for key company personnel and emergency services.

The Ground floor HV generators are each equipped with flame detection to allow fires to be quickly identified and dealt with. All other generators include sprinkler systems along side fire detection inside the container so that water suppression is automatically applied in the event of a fire.

Training

Environmental training is provided; for both general awareness and job-specific training.

The site is managed by a sufficient number of staff, who have the competencies to operate the site. In accordance with the EMS:

- All staff have clearly defined roles and responsibilities;
- Records are maintained of the knowledge and skills required for each post;
- Records are maintained of the training undertaken and relevant qualifications obtained by staff to meet the competence requirement of each post; and
- Operations are governed by standard operating instructions.

Each individual's knowledge and skills are assessed and matched against the needs of the job position. Additional experience and/or training requirements necessary to enable an individual to undertake their assigned role will be identified, prioritised and planned.

Training records are maintained and training needs regularly reviewed. Refresher training is provided where required.

All contractors are given appropriate training prior to the commencement of any works or services.



Review and Audit

The operator recognises that continuous improvement requires the ongoing appraisal of the EMS and Environmental Policy in order to ensure that they remain effective, in line with developing best practice and relevant to the business as a whole. An annual management review of the EMS is undertaken to ensure that it remains appropriate and effective at controlling environmental performance and to identify any areas where opportunities exist for improvement. The review includes a review of all incidents, non-compliances and complaints to identify and address any recurrent issues.

The EMS and site activities are internally audited at least annually, either by site staff with suitable audit experience/training or by a suitably qualified and experienced third party. The EMS is also reviewed externally in order to maintain the ISO14001 accreditation.

Where corrective action is identified as being required, through audit (or otherwise), which for example involves modifications to plant and equipment, the implementation of such changes is managed via the EMS change management process.

Fuel and raw material use are also reviewed with targets being set for the following year to drive continuous improvement.

8.1.1 Climate Change Risk Assessment and Adaptation Plan

A climate change risk assessment has been carried out and is integrated into the EMS for the site under Iron Mountains ISO140001 and ISO500001 accreditations. This will be kept under regular review with suitable adaptation measures put in place so that the data centre is resilient to possible changes in weather patterns (such as increased episodes of extreme heat, heavy rain or high winds) as a result of climate change.

9.0 MONITORING

9.1 Emission Limits

The 11 SBGs at LON-1 will each be operated for less than 500 hours per annum and will therefore not be subject to emissions limit values (ELV) for the substances listed in Annex V of Directive 2010/75/EU on industrial emissions (Industrial Emissions Directive, IED).

As the SBGs are not be used for the elective generation of electricity they are not considered to be 'specified generators' in accordance with the Environmental Permitting Regulations 2018 (EPR 2018) and hence will not be subject to the ELV for NO_x (190mg/Nm³) because the regulations exclude emergency backup generators from this requirement.

The operator records:

- the operating hours of each engine for planned maintenance,
- the operating hours of each engine for emergency operation and
- the amount of fuel used on an annual basis.

For the purposes of determining operating hours, the SBGs are regarded as having minimal start-up or shut-down times. Operational hours are counted from the first fuel ignition. This includes the shorter periods of plant 'overlap' when redundant plant is started as a precautionary measure before final load is reached with the optimum/minimum number of SBGs.



9.2 Point Source Emissions to Atmosphere

Point source emissions to air arise from the SBGs as a result of diesel combustion. Air emissions modelling has been completed for the SBGs at LON-1. Based on the findings of the air emissions risk assessment (410.066934.00001 AERA) the products of combustion which are released to air as a result of planned maintenance and testing of the SBGs will not result in an adverse impact on the environment during normal testing carried out for individual engines during the period between 8am and 8pm.

For operation of all SBGs under an emergency (brown- or black-out) scenario the model suggested that in some circumstances this might have an impact on nearby residential receptors. A programme of engine refurbishment is being carried out in the second half of 2026.

9.3 Point Source Emissions to Sewer

There are no discharges to sewer associated with the permissible activities at LON-1.

9.4 Point Source Emissions to Water

There are three emission points to surface water as shown on drawing FJ_288213. These discharge points take general clean site drainage from the building roof, site roads, car park and landscaped areas. The tank bunding and other protections put in place to contain diesel fuel will prevent contamination of surface water. In the event of a spillage outside a bund (e.g. due to an accident with a delivery tanker) all three discharge points are fitted with a valve that can be operated remotely to contain contaminated water on site. The contaminated water can then be collected by tanker for off-site disposal. Consideration is to be given to the installation of oil interceptors on each of these drainage runs but may be difficult to retrofit. Where it is not feasible, oil detection will be fitted so that the valves close automatically in the event of oil being detected in the drain. The fuel delivery procedures specifies that these valves must be closed during tanker deliveries.

10.0 BEST AVAILABLE TECHNIQUES

The assessment for the implementation for Best Available Techniques (BAT) at the data centres is based on the following:

- the latest version of the '*Data Centre FAQ, Draft Version 21.0 to TechUK for Discussion 15/11/22*' – Release To Industry', provided by the EA; and
- with respect to technology selection, Department of Energy & Climate Change, Developing Best Available Techniques for Combustion Plants Operating in the Balancing Market, Final Report, June 2016.

10.1 Data Centre BAT - Operating Regime

10.1.1 Planned Maintenance and Testing

During operation for planned testing/maintenance at the data centre, the SBGs each operate typically for between 1 and 8 hours per year; this is notably below the 50 hour per annum data centre BAT requirement.

In the event that electricity is not available from the local transmission network (e.g. brown- or black-out) the SBGs will be operated to deliver the required data centre customer load.



Whilst emergency operation (if required) would increase the total operational hours of each SBG, it is extremely unlikely that operation of any single SBG would exceed 500 hours per annum (it being the definition of an 'emergency' unit that it would operate for less than this time).

The SBG provision includes for a level of redundancy to the SBG system such that, even in a worse case blackout scenario, a maximum of 9 of the 11 engines would operate, with the other 2 engines providing cover for any diesel engine failure or outage due to routine maintenance. Should an SBG fail, that engine will be covered by the remaining engines, which will operate to share the required IT load at that time.

Emergency operations are taken to include unplanned hours required to come off grid to make emergency repair of electrical infrastructure within the data centre.

The Operator will notify the EA:

- In advance of planned outage/maintenance of the local transmission system that is expected to exceed 18 continuous hours; and
- Upon an incident of unplanned continuous outage that exceeds 18 hours.

10.1.2 Elective Electricity Generation

The SBGs at the data centre do not operated for elective electricity generation.

10.1.3 Operating Regime Time Limit

The air emissions modelling (410.064891.00001 AERA) has predicted that operation of the SBGs for the planned maintenance and testing regime will not result in adverse impacts on air quality. The operator will therefore not operate the SBGs for more than these hours per year for the purpose of planned maintenance and testing.

10.2 Data Centre BAT: Engine Selection

Diesel-fired SBGs have been chosen for the provision of emergency back-up energy in the event of a black- or brown out at the facility. A BAT assessment has been undertaken which compares diesel SBGs to other available technologies to support the chosen technology.

The following key requirements for the SBGs to provide emergency back-up electricity have been considered for the selected technologies:

- Start-up time;
- Reliability;
- Independence of off-system services; and
- Causing the least environmental impact.

A comparison of these technology types is presented in Table 10-1. Start up, efficiency and emissions data as stated has been obtained from a report prepared by the DECC (Department of Energy & Climate Change, Developing Best Available Techniques for Combustion Plants Operating in the Balancing Market, Final Report, June 2016) unless otherwise stated. Figures are reported at oxygen reference values of 15%.



Table 10-1: Comparison of Technologies

	Combined Cycle Gas Turbines (CCGT)	Open Cycle Gas Turbines (OCGT)	Aero Derivative Gas Turbines ³	Gas Engines	Diesel Engines
Process Description	CCGT technology uses a primary gas turbine coupled to a secondary steam turbine. Air is compressed through a rotating compressor, then mixed with fuel and combusted before being expanded through a gas turbine, converting the thermal energy into rotation of the turbine blades. Some of the mechanical energy powers the compressor, with the majority turning a SBG which converts the mechanical energy to electricity. The hot turbine exhaust gases then pass through a boiler to generate steam. The steam is fed to a steam turbine which powers a second SBG, producing further electricity.	OCGT consist of a compressor, combustion chamber and gas turbine. They differ from CCGTs in that they operate without the secondary component to recover heat. Air is fed into the compressor, pressurised and then passed to the combustion chamber where fuel is added and combusted. The hot exhaust gas turns the turbine blades and energy is converted to electricity. OCGTs can provide STOR and peaking services but not fast reserve services as during start-up thermal stresses need to be managed through a slow heating up process.	Aero Derivative Gas Turbines are similar to open cycle gas turbines but have been derived from turbines used for aeronautical applications. As a result of the different requirements for use of gas turbines in aircraft, they are more flexible than OCGT plant, and are able to operate under wider ranges of load and start up and shut down quicker than other turbines.	A gas engine consists of a bank of fixed cylinders inside which pistons move, injecting air and fuel, compressing the mixture, igniting the mixture and then expanding the hot gas produced converting the thermal energy into rotation of a crank shaft. The engine load is adjusted by controlling the amount of gas and air injected into the cylinder, which is controlled by an automated system. A SBG connected to the crank shaft of the engine converts the mechanical energy into electricity.	Diesel engines work in a similar fashion to gas engines with the key difference being that diesel fuel is injected into the cylinder after compression of the air has taken place and automatically ignites as a result of the high temperature of the compressed air. Engines are generally rated for a continuous power output but can exceed this by stated amounts for shorter periods of time in modes named Standby (1hr maximum) and Prime (12hr maximum). These higher power outputs come at the cost of higher emissions and greater equipment stress.
Start-Up Time⁴	1 – >3.5 hours	15 -30 minutes	As low as 1 minute	1-10 minutes	<10 minutes



	Combined Cycle Gas Turbines (CCGT)	Open Cycle Gas Turbines (OCGT)	Aero Derivative Gas Turbines ³	Gas Engines	Diesel Engines
Thermal Efficiency (LHV%)	58.8-60.7	38.3-39.9	35-39	35.0-45.0	35.0-37.0
Notes	The secondary steam turbine increases the start-up time of the facility, as it requires slow warming. The complexity and footprint of a combined cycle, combined with the efficiency of steam cycles only being high at relatively large capacities means that CCGT systems are only suitable for large facilities (c.100MW+)	The significant amount of heat lost in the exhaust gas makes open cycle gas turbines significantly less efficient than combined cycle systems.	As with the open-cycle gas turbine, heat loss in exhaust gases means these systems are not as efficient as other options. Certain enhancements can be added, e.g. steam injection, but these are relatively novel and difficult to apply in a non-continuous scenario.	Gas engines are proven, reliable technology and are known to perform well and emit relatively low amounts of NO _x , SO _x and particulates when compared to diesel fired engines.	Diesel engines, unabated, emit relatively high amounts of SO ₂ and particulate matter as well as NO _x . The use of low sulphur fuel, catalysts and particle filters can reduce this but diesel engine emissions are considerably higher than other options.

³ GE Power Systems, Aero Derivative Gas Turbines – Design and Operating Features

⁴ Note that this is based on typical industrial facilities.



10.2.1 Technology Selection

Gas Turbines

As per Table 10.1, CCGTs are not considered BAT for the provision of emergency/standby power. This is due to their lengthy start up times and their size limitations; the efficiency of steam cycles being relatively low at small capacity and the overall system complexity being more appropriate to larger size installations.

OCGTs have relatively high capital investment, operating and maintenance costs and lower thermal efficiencies than can be achieved by CCGTs and gas engines.

Aero derivative gas turbines can achieve suitably short start-up times of as low as one minute, however they suffer from relatively low efficiencies compared to engines and the enhancements which have recently become available to improve these are relatively novel and unproven. This is especially applicable for non-continuous operation, where steam or water injection may become a problem as a result of potential condensation within turbine sections.

Reciprocating Engines

Reciprocating engines perform well in terms of their thermal efficiencies. At the upper end of their efficiency range, gas engines have higher thermal efficiencies than diesel engines and OCGTs.

Reciprocating engines also have shorter start up times and are thus more suitable for the provision of emergency/standby power. Under standby conditions, higher emissions are produced, including NO_x, SO₂ and Particulate Matter as soot.

Gas engines benefit from lower NO_x emissions than diesel engines and can utilise gas delivered by the national gas grid, avoiding the additional transport and fuel storage issues associated with diesel systems.

Reciprocating engines fired on diesel fuel oil have a high response (i.e. low start-up duration) and good independent performance reliability due to the on-site storage of diesel fuel in sufficient quantities, which will be managed and controlled by the facility, with the option for fuel oil to be sourced from more than one supplier for delivery to the site. Diesel-fired engines do have a large number of moving parts which can be subject to failure and require regular ongoing maintenance to ensure reliability, however these moving parts can be readily obtained and replaced and are typically included as part of the service agreement with the generator vendor. Due to the number of moving parts, diesel generators when operated can be noisy and generate vibration.

When compared to gas-fired generators diesel engines produce more polluting emissions to air, most notably NO_x and particulate matter, which can impact local air quality if operated for prolonged periods of time.

Final Choice of Engine

From the above options, and considering all the aspects required of the plant to provide emergency/standby power for the data centre, diesel engines have been determined as BAT on the basis that:

- These engines provide a fast response speed to the required load; as stated previously, fast start-up of standby generators for data centre is fundamental as an almost instantaneous supply of electricity is required in the event of power loss to the site.



- Diesel engines have low maintenance costs and replacement parts are readily available.
- The need for a reliable supply of fuel (diesel) is essential to ensure reliance, the on-site storage of sufficient quantities of diesel fuel provides the required level of independent performance reliability.

In addition, the diesel engines will allow for the use of HVO as an alternative fuel without having any detrimental impact on the engine.

The storage of gas on-site as a fuel source will not be possible due to restraints on available space, additionally there are significant health and safety risks associated with such storage. As such, there will be reliance on an off-site supply of gas, which would have to be provided to the site via a pipeline which would be operated and maintained by others. Should this supply of gas be interrupted there will be no emergency back-up generation for the data centre, and as such would not meet the resilience requirements of the facility.

10.3 Data Centre BAT: Emissions

The '*Data Centre FAQ Headline Approach*' specifies the BAT emissions specification for new diesel-fired reciprocating engines as 2g TA-Luft or US EPA Tier2 (or equivalent standard).

The manufacturer specification for the MTU engines states these engines are optimised for reduced emissions and fuel use and the engines are compliant with the NEA (ORDE) standard. This standard is the same as the US EPA Tier 2 standard. No emission levels are listed in the specification.

The specification for the caterpillar engines shows these are also optimised for emissions and meet the US EPA Tier 2 standard. The specification for the caterpillar engines provides the nominal emissions of NO_x from the engines in standby as 2,319.2mg/Nm³.

The operator will report the following to the EA (annually):

- the operating hours of each SBG for planned maintenance and testing;
- the total operating hours of all SBGs for emergency use and the number of emergency occurrences; and
- the annual amount of fuel used.

Given the short start-up and shutdown times for diesel engines, the SBGs are regarded, for the purposes of determining operating hours, as commencing operation at the first fuel ignition.

10.4 Data Centre BAT: Stacks

Data Centre FAQ Headline Approach states that data centres usually have very low profile sites and as such can have short, below roof level emission stacks which can impact on the efficiency of dispersion of emissions. BAT is that release stacks are vertical to aid the dispersion of emissions from the SBGs.

By elevating stack heights, it is possible to increase the dispersion of exhaust gases as a result of mixing with the surrounding air once the plume of exhaust gases leaves the stack. Whilst this will not reduce the concentration of pollutants leaving the stack, it will result in a lower concentration at ground level – i.e. a lesser impact on the receptor. Increasing the stack height also avoids the effects of building wake and entrainment of the emissions in the locality of the emission source. The use of taller stacks does have an impact on the operation of the engine(s) as it will marginally increase the back pressure on the engine.



By bringing together the exhaust streams for multiple engines, it is possible to improve the mixing of flue gases with the surrounding air. This aggregation does not decrease the absolute quantities of NO_x emitted but does lead to a lower concentration at ground level – i.e. a lesser impact on the receptor. The reduction in ground level concentration is achieved through improved mixing with the surrounding air once the plume of exhaust gases leaves the stack. A higher mass flowrate of gases will result in a greater momentum that increases the final height of the plume after it has left the aggregated stack. This increased mixing leads to a lower concentration of pollutants at receptors. That is not practical in this instance as the engines will not all operate together, a maximum of 9 engines will operate should an incident occur. During normal testing engines are tested individually during the working day to prevent air quality impacts.

Each SBG has a dedicated stack.

Further air emissions controls are not considered necessary as, given the very low probability of emergency operation at the site, the overall environmental risk is not considered to be significant⁵.

10.5 Data Centre BAT: Electrical System Reliability

Section 4.4 provides a description of the on-site electricity supply system for the data centre which has been implemented to service the ‘customer load’. In addition to the SBGs, there are two connections to a local supplier and a physical connection to the local transmission network (to allow for the failure of any single connection).

The electrical system for the data centre provides significant protection against the failure of (or fluctuation in) the electrical supply to the site before it would become necessary to start the SBGs.

The operator will ensure information security at the data centre is managed in accordance with ISO 27001:2013 standard.

Operation of the SBGs will in the main be limited to maintenance and testing. The operator has implemented a programme of planned maintenance and testing of the SBGs, in accordance with manufacturer requirements, to limit unplanned maintenance/testing of the generators and thus avoiding the unnecessary use of diesel and the generation of emissions to air.

10.6 Data Centre BAT: Air Quality Action Plan

An Air Quality Action Plan is required where the air quality model “indicates a very significant risk to local air quality and identified receptors” (*Data Centre FAQ Headline Approach*, Environment Agency, Nov 2022). An Air Quality Action Plan is not considered necessary in this case as no significant impacts are expected under normal operating circumstances.

10.7 Data Centre BAT: Fuel Storage

Fuel is stored in day tanks within the container units for each of the 6 HV SBGs and 3 of the 5 LV SBGs. Fuel is stored in belly tanks located with the container units for LV4 and LVR.

There is also bulk storage of diesel at the data centre in two 80,000l tanks on the ground level, adjacent to the ground floor SBGs and three 44,500l tanks located at the west end of the building feeding the generator plant room on the roof.

⁵ Refer to Air Emissions Risk Assessment (SLR Ref: 410.064891.00001 AERA) and Environmental Risk Assessment (SLR Ref: 410.064891.00001 ERA)



The area around the tanks and fuel tanker offloading areas are hard surfaced with concrete; this minimises the risk of percolation of any unplanned fuel releases to the underlying soil and groundwater.

The two larger tanks are located in a fenced compound protected by the building itself. There is a crash barrier around the outside of the three tanks at the west end of the building, providing protection from accidental damage by passing vehicles.

To minimise the risk of unauthorised access the data centre site has security fencing around the entire site. There is secured access to the site via entrance gates. There is CCTV covering internal and external areas of the site. And security staff are on site 24 hours a day 7 days a week.

SBG Day Tanks and SBG Belly Tanks

The SBGs are housed within proprietary steel container units, with a purpose-built plant room on the roof.

For the SBGs with day tanks, each is in a container unit or plant room with a 4000l or 1000l day tank which automatically supplies fuel to the SBG. The container or plant room provides secondary containment for the day tank or tertiary containment for those that tanks that are double skinned (see section 7.2). The plant room is constructed with an impermeable floor and impermeable covering to the lower part of the wall. The plant room is fitted with probes to raise the alarm if diesel is detected.

Each day tank has a sight glass and or electric gauge to allow monitoring of the fuel level and is fitted with an overfill alarm.

The belly tanks are of steel construction and located within a steel bund to provide secondary containment. The tanks have a contents gauge and high-level alarm. A probe is also located within the bund to raise an alarm if diesel is detected in the bund.

The fill point for the belly tanks is located in a lockable cabinet provided with a drip tray.

Fuel delivery to the day tanks is from the bulk tanks.

The delivery of fuel to the proposed SBGs belly tanks will be direct from a fuel tanker.

The existing day tanks have the following protection measures:

- 110% containment,
- Tank level sight glass,
- Overfill alarm,
- Leak detection within the plant room,
- To minimise the risk of corrosion all pipework is constructed of corrosion resistant material and has been painted.

The belly tanks have the following protection measures:

- Bund designed to provide 110% containment,
- tank contents level gauge,
- leak detection provided by bund sensor,
- High and low level alarms,
- mechanical relief valves to prevent over pressurisation of fuel supplied from the belly tanks,



- To minimise the risk of corrosion all pipework will be painted or constructed of corrosion resistant material.

In addition to the above protection measures each generator is fitted with a fuel shut off valve which will activate in the event of a fire. Pipes are a pipe in pipe arrangement to provide secondary containment.

10.7.1 Bulk Tanks

The bulk tanks are all situated above ground so that the tanks, bunds and pipework are accessible for inspection and maintenance. Pipes are a pipe in pipe arrangement to provide secondary containment.

The tanks are double skinned and constructed from steel. The two larger tanks are also located in a concrete bund with an oil-resistant lining. The bunds hold a minimum of 110% capacity of the largest tank in the bund. Tanks A and B (the 80,000l tanks) are linked by a balance pipe but valves are fitted so that each tank can be isolated.

The tanks are located in a fenced compound or behind a crash barrier to provide protection from accidental damage.

Diesel is automatically pumped from the bulk tanks directly to the existing SBG day tanks. Diesel is delivered by road tanker to the bulk tanks.

Each of the bulk tanks have the following protection measures:

- A tank level gauge is located at the tank fill point,
- A high-level alarm is fitted,
- A leak detection alarm is fitted for the larger two tanks, with a probe in the external bund to detect diesel,
- To minimise the risk of corrosion all tanks and pipework is constructed of corrosion resistant material and/or painted; The concrete bunds are properly maintained with an oil-resistant coating applied to the inside of the bund,
- The fill point is in a locked cabinet with associated drip tray.

10.7.2 Fuel Delivery

The delivery pipework from the bulk tank to the day tanks is above ground and is based on a pipe in pipe arrangement, providing secondary containment. The delivery pipework does not have leak detection but is subject to weekly inspection to check pipework integrity and for leaks.

A summary of how the bulk tanks are filled is provided below (refer to the Fuel Delivery and Storage procedure presented in Appendix E for further detail):

- A trained staff member takes a gauge reading and compare this to the known capacity of the tank (recorded in the procedure). Where accuracy is in doubt a dipstick reading is taken to confirm the level.
- Sump pumps are switched off by manual controls as a precaution, to protect the surface water drain.
- Where necessary the local area is appropriately cordoned off using barriers and cones. The tanker is supervised at all times.
- The drain closure valves are switched to closed, to prevent any illegal discharges and covers are placed over any at risk drains before unloading begins.



- spill protection is positioned for ease of access if required. (Spill kits are located next to the bulk tanks).
- Fuel delivery tankers are required to park close to the receiving tank.
- The tanks are not filled to more than 95% of their capacity. The supplier must be given an accurate reading. Any concerns over the accuracy of the readings must be reported to the site manager.

10.7.3 Tertiary Containment

Tertiary containment for the larger two bulk tanks is provided by the concrete bund and for most of the day tanks by the construction of the plant room. The site roads and service yard have concrete hard standing where the fuel tanker off-loading areas are located. This provides containment in the event of a spill from a tanker with the surface water drains being closed prior to deliveries to protect surface water.

Any unplanned release of diesel would be prevented from percolating into the ground by the hard standing. In the event of a spill all three surface water drains can be closed remotely from a switch in the building. Plans are in place to consider providing oil interceptors for these drains or where that is not possible oil detection and automatic shut off of the valves.

Further details of the surface water drainage system is provided in section 6.2 Emissions to Water.

10.7.4 Preventative and Predictive Maintenance (PPM)

The operator has a planned preventative maintenance (PPM) system in place. PPM is managed and completed by the facilities management personnel and appointed approved third-party specialists, as required. The PPM system is used to inform facility management personnel of plant status and any system issues.

The PPM system includes the requirement for regular inspection, maintenance and testing of containment on the fuel storage tanks, along with regular checks of the condition of tertiary containment at the site.

Visual weekly inspections by site staff are carried out in accordance with the PPM to confirm the integrity of storage tanks/bunds, spill prevention and protection equipment, and to identify any unsafe conditions.

Annual inspections of the tanks and bunds are carried out by a third party OFTEC registered technician.

Where there are any changes to the generators, tanks or containment the Fuel Storage Inspection Log will be updated to reflect this and ensure all infrastructure is regularly inspected and maintained.

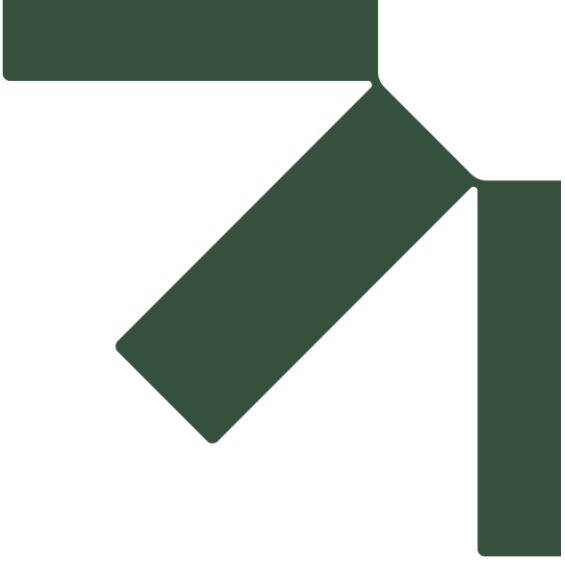
The facility is manned 24 hours a day by data centre personnel with a minimum of 3 employees on site at all times.

It is considered that diesel delivery and storage arrangements are BAT.

11.0 CONCLUSION

Based on the above discussions, it is considered that the SBGs and associated diesel storage arrangements at the data centre will be operated and maintained in accordance with all relevant BAT.





Appendix A EA Enhanced Pre-application Advice

Environmental Permit Application

Best Available Techniques and Operating Techniques

Iron Mountain

SLR Project No.: 410.066934.00001

IRON MOUNTAIN (UK) DATA CENTRE
LIMITED

Date: 22/01/2026

Dear Maria Francis,

Pre application advice – Enhanced service

Pre-application reference EPR/LP3020MX/P001

Waste and installations

Site: LON1 Data Centre in Slough, located at 724 729 Dundee Road, Slough, SL1 4JU

Thank you for your pre application enquiry on 01/12/2025.

I am pleased to provide you with your pre-application advice. This advice is based on the information provided on your pre application advice form and conversations/emails recorded on the following dates:

- Emails on 23/12/2025 (basic pre-application advice provided) and 07/01/2026 (habitats screening report provided)
- Telephone conversation on 21/01/2026 (Environment Agency – Kirsty White, Guy Elliot; Iron Mountain – Adam Gilio, Paul Edwards, Craig Allen; SLR – Alison Cook, Paul Wright)

We note that the installation has been operating for five years without the necessary environmental permit, with the two new combustion units taking the thermal input of the facility over the 50 MWth threshold for the combustion listed activity.

What this enhanced pre application advice covers

As part of this service, we have provided you with the following information:

Documents attached:

- Supplementary pre-application advice on preparing a noise impact assessment
- Methodology for assessing the in-combination air quality impact of clusters, dated 17 June 2024

Habitats screening: already provided

Application charge required

The application will be classed as a new application and subject to a fee of £19,103 in accordance with Table 1.10, reference 1.10.1 of the EA Charging Scheme.

There will be an additional fee for a Habitats Assessment of £779.

1.19.7 - £1,246 (noise management plan) - there may be an additional charge if a noise and vibration management plan is required.

Forms required to be submitted

Parts A, B2, B2.5, B3, F1 and Medium Combustion Plant (MCP) spreadsheet.

customer service line **03706 506 506**

floodline **03459 88 11 88**

incident hotline **0800 80 70 60**

If sections are not applicable to your permit, please indicate this rather than leaving a section blank.

For limited operating hours MCP, the column “Will the medium combustion plant be operated as a limited operating hours plant?” of the Combustion Plant Spreadsheet must be completed for all plant.

Please find links to these forms below:

[New bespoke environmental permit: application forms \(England\) - GOV.UK](#)

Additional documents required

- **Non-Technical Summary**
- **Drawings**
- **Environmental Risk Assessment**
- **Air Emissions Risk Assessment**

following our guidance at [Air emissions risk assessment for your environmental permit - GOV.UK](#) and [Environmental permitting: air dispersion modelling reports - GOV.UK](#) and including the following:

Covering both the emergency (power outage) and testing / maintenance scenarios
Emergency power outage to be modelled at a worst-case scenario of loss of on-site power during an emergency event lasting 72 hours.

An assessment against the short-term nitrogen monoxide (NO) Environmental Assessment Level (EAL).

Acute exposure risk assessment, using the US EPA acute exposure guidelines levels (AEGLs).

For combined impacts, we advise consideration of report ‘Methodology for assessing the in-combination air quality impact of clusters, dated 17 June 2024’.

Habitats assessment.

Model input files.

- **Noise impact assessment**

You are required to submit a Noise Impact Assessment and Noise Management Plan to accompany this application, which should be undertaken in accordance with:

Our guidance at [Noise and vibration management: environmental permits - GOV.UK](#)

BS 4142:2014+A1:2019 – Method for Rating and Assessing Industrial and Commercial Sound

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floodline **03459 88 11 88**

incident hotline **0800 80 70 60**

[Method implementation document \(MID\) for BS 4142 - GOV.UK](#)

You may also find it useful to refer to the attached "Supplementary pre-application advice on preparing a noise impact assessment".

- **Best Available Techniques (BAT)**

To include:

Consideration of Data Centre FAQ Headline Approach, DRAFT version 21.0 H.Tee 15/11/22, already provided.

Addressing BAT for Emergency backup diesel engines on installations: best available techniques (BAT) - GOV.UK,

Include copies of engine specification sheets - these will provide evidence of engine standards and proof of BAT.

Confirmation that new engines are specified to at least one of the two recognised main international standards 2g-TA Luft or US EPA tier 2 or equivalent (applicable to new MCP, i.e. generators put into operation after 20/12/2018) or detailed technical justification when deviation from these standards is proposed.

Engines are emissions optimised.

Consideration of abatement i.e. Selective Catalytic Reduction (SCR) and SCR ready (available space to retrofit) as set out in the advice already provided.

New generators are provided with vertical stacks with no impediments to dispersion such as caps or cowls (proposed improvement plan for legacy generators).

Testing < 50 hrs per annum per engine, minimised & staggered.

Clearly defined maintenance scenarios in terms of numbers of plant operating at any one time, duration and load of plant operation. Where our decision is to issue a permit, you will be required to operate within the risk envelope identified in the application, subject to our assessment of the air quality impacts.

Drainage infrastructure and pollution prevention measures to include details of primary (tank specification), secondary containment, surfacing, oil/water interceptor..., also refer to the guidance links in the pre-application advice already provided.

- **Site Condition Report (SCR)**

In accordance with H5 (Environmental permitting: H5 Site condition report - GOV.UK) and where storing, using, producing or releasing hazardous substances – does the SCR:

Identify relevant hazardous substances (RHS).

Include a stage 1-3 assessment, and

Where this identifies a risk to soil/and or groundwater – establish baseline reference data.

- **Monitoring**

Standards, frequencies, information on sampling ports.

Additional information

We have already provided our basic pre-application advice documents which cover relevant information for your application. You should read these carefully and use the information to help prepare your application.

You must ensure you provide dates of birth for all appropriate people as per Appendix 1 in form Part A. Failure to do so will delay your application being put into our systems. Please note that these details will not be made available on the Public Register.

After you apply

The information that you need to submit with your application is explained in the application form and its guidance. The Environment Agency will check that you have submitted this information and the correct application charges. This is to ensure we have enough information to start to determine your permit application.

We will contact you if information is missing and can feasibly be provided within 10 working days. If we consider information cannot be provided within this time frame we will return your application with a list of what is missing.

We'll retain 20% of the correct application charge to cover our costs in reviewing your application and requesting information. This maximum amount we'll retain is capped at £1,613. This is explained in the environmental permitting charges guidance.

We will not charge this if we return an application after having done very little work – for example, because it contained obvious errors or omissions.

Once we have duly made an application we will start to determine it.

Once an application is validated and duly made, it is ready to be allocated for determination. Determination is when we do our technical checks. We may need to ask you for further information or additional documents during determination and it is important you send anything requested as quickly as possible.

The time it takes us to allocate an application depends on a number of factors, including the complexity of the specific application and the availability of a member of our team with the right skills to assess it.

The amount of time taken to determine your application will vary. It will be impacted by factors such as:

- The quality of the application
- The complexity of the application
- Whether an application is of high public interest
- Whether the application includes novel technologies or techniques

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floodline **03459 88 11 88**

incident hotline **0800 80 70 60**

- Whether the determination requires input from others, both internal and external to the Environment Agency
- Whether modelling and/or monitoring and assessment is required, for example Air Quality modelling and assessment or water discharge or groundwater activity specific substances assessment.

The Permitting Officer determining your application will be able to keep you updated with the progress of your application.

What happens next?

If you submit an environmental permit application then please quote this pre-application reference number: EPR/LP3020MX/P001

If the advice above details using the [online digital application form](#), your application can be submitted using this method. If not, please send your completed application documents via email to:

psc@environment-agency.gov.uk

Please email applications where possible. If email is not possible you can submit by post to:

Environment Agency, Permitting Support Centre, Quadrant 2, 99 Parkway Avenue,
Sheffield, S9 4WF

Scope of this advice

We have only provided the specific advice you requested based on the information provided. We cannot provide advice on all aspects of your application, so it is important you read all available online guidance and the application forms to ensure anything not covered within this advice is considered as part of your application.

However, based on the information you have provided, we have identified the following aspects you should pay particular attention to when preparing your application:

- Based on the location of the surface water release we have advised that an oil/water interceptor may be required so this will need to be addressed as part of the drainage infrastructure and pollution prevention measures.
- Based on the location of the facility (Slough cluster) for air quality impacts, we advised following the methodology in the report provided.

This is not an exhaustive list; it is important you consider the online guidance and application forms carefully to include everything you need within your application.

You may want to consider if you would benefit from additional pre-application advice on these aspects. If you require additional enhanced pre-application advice please complete our [online form](#).

It is important to remember:

- this is advice, we are not agreeing anything at this stage
- we have provided this advice based on the limited information we have about your proposals at this time
- we have only provided the advice you specifically requested
- we may need to request additional information when we have a full application

Disclaimer

The advice given is based on the information you have provided, and does not constitute a formal response or decision of the Environment Agency with regard to future permit applications. Any views or opinions expressed are without prejudice to the Environment Agency's formal consideration of any application. Please note that any application is subject to duly making and then full technical checks during determination, and additional information may be required based on your detailed submission and site specific requirements and the advice given is to address the specific pre-application request.

This advice covers installations only.

Other permissions from the Environment Agency and/or other bodies may be required for associated or other activities.

Enhanced pre application cost

The pre-application advice will cost £2000 plus VAT. An invoice will be sent separately. This will include a link to pay online. You can also pay your application charges online but this is a different link so please ensure you are using the correct one when you apply.

This pre-application request is now closed

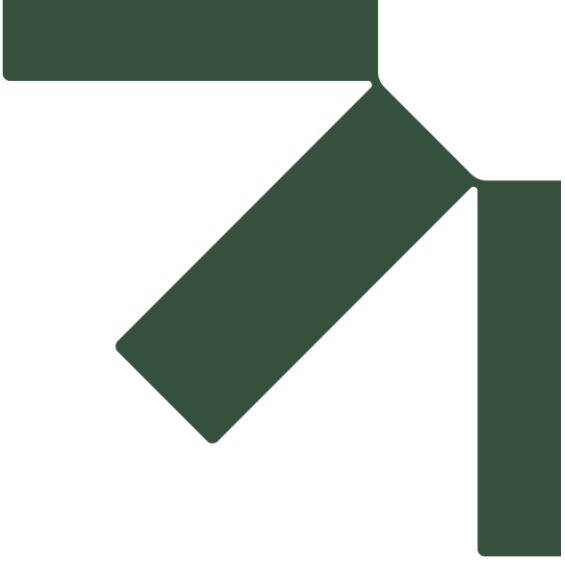
We consider this pre application request is now closed however if you have any questions regarding this letter please contact PreApplicationService@environment-agency.gov.uk.

If you require additional enhanced pre-application advice please complete our [online form](#).

Yours sincerely

Kirsty White

Senior Permitting Officer



Appendix B Engine Manufacturer Specifications (Cat® 3516Eand MTU 20V4000 DS3100 engines)

Environmental Permit Application

Best Available Techniques and Operating Techniques

Iron Mountain

SLR Project No.: 410.066934.00001



Diesel Generator Set

MTU 20V4000 DS3100

380V – 11 kV/50 Hz/standby power/NEA (ORDE) optimized
20V4000G74F/water charge air cooling



Optional equipment and finishing shown. Standard may vary.

Product highlights

Benefits

- Low fuel consumption
- Optimized system integration ability
- High reliability
- High availability of power
- Long maintenance intervals

Support

- Global product support offered

Standards

- Engine-generator set is designed and manufactured in facilities certified to standards ISO 2008:9001 and ISO 2004:14001
- Generator set complies to ISO 8528
- Generator meets NEMA MG1, BS5000, ISO, DIN EN and IEC standards
- NFPA 110

Power rating

- System ratings: 3000 kVA - 3010 kVA
- Accepts rated load in one step per NFPA 110
- Generator set complies to G3 according to ISO 8528-5
- Generator set exceeds load steps according to ISO 8528-5

Performance assurance certification (PAC)

- Engine-generator set tested to ISO 8528-5 for transient response
- 85% load factor
- Verified product design, quality and performance integrity
- All engine systems are prototype and factory tested

Complete range of accessories available

- Control panel
- Power panel
- Circuit breaker/power distribution
- Fuel system
- Fuel connections with shut-off valve mounted to base frame
- Starting/charging system
- Exhaust system
- Mechanical and electrical driven radiators
- Medium and oversized voltage alternators

Emissions

- NEA (ORDE) optimized

Certifications

- CE certification option
- Unit certificate acc. to BDEW (German Grid-Code)



A Rolls-Royce
solution

Application data ¹⁾

Engine			Liquid capacity (lubrication)	
Manufacturer		MTU	Total oil system capacity: l	390
Model		20V4000G74F	Engine jacket water capacity: l	205
Type		4-cycle	Intercooler coolant capacity: l	50
Arrangement		20V	Combustion air requirements	
Displacement: l		95.4	Combustion air volume: m³/s	2.6
Bore: mm		170	Max. air intake restriction: mbar	50
Stroke: mm		210	Cooling/radiator system	
Compression ratio		16.4	Coolant flow rate (HT circuit): m³/hr	80
Rated speed: rpm		1500	Coolant flow rate (LT circuit): m³/hr	32.5
Engine governor		ECU 9	Heat rejection to coolant: kW	1030
Max power: kWm		2670	Heat radiated to charge air cooling: kW	490
Air cleaner		dry	Heat radiated to ambient: kW	105
Fuel system			Fan power for electr. radiator (40°C): kW	70
Maximum fuel lift: m		5	Exhaust system	
Total fuel flow: l/min		27	Exhaust gas temp. (after turbocharger): °C	550
Fuel consumption ²⁾			Exhaust gas volume: m³/s	8.6
At 100% of power rating:	l/hr	g/kwh	Maximum allowable back pressure: mbar	85
At 75% of power rating:	633.7	197	Minimum allowable back pressure: mbar	30
At 50% of power rating:	494.6	205		
	345.8	215		

Standard and optional features

System ratings (kW/kVA)

Generator model	Voltage	NEA (ORDE) optimized					
		without radiator			with mechanical radiator		
		kWel	kVA*	AMPS	kWel	kVA*	AMPS
Leroy Somer LSA53.2 M12 (Low voltage Leroy Somer standard)	380 V	2528	3160	4801	2472	3090	4695
	400 V	2528	3160	4561	2472	3090	4460
	415 V	2528	3160	4396	2472	3090	4299
Marathon 1030FDL7094 (Low voltage Marathon)	380 V	2536	3170	4816	2464	3080	4680
	400 V	2536	3170	4576	2464	3080	4446
	415 V	2536	3170	4410	2464	3080	4285
Marathon 1030FDH7101 (Medium volt. marathon)	11 kV	2536	3170	166	2472	3090	162
Leroy Somer LSA53.2 ZL14 (Medium volt. Leroy Somer)	11 kV	2544	3180	167	2472	3090	162

* cos phi = 0.8

1 All data refers only to the engine and is based on ISO standard conditions (25°C and 100m above sea level).
2 Values referenced are in accordance with ISO 3046-1. Conversion calculated with fuel density of 0.83 g/ml. All fuel consumption values refer to rated engine power.

Standard and optional features

Engine

- 4-cycle
- Standard single stage air filter
- Oil drain extension & shut-off valve
- Closed crankcase ventilation
- Governor-electronic isochronous
- Common rail fuel injection
- NEA (ORDE) optimized engine

Generator

- 4 pole three-phase synchronous generator
- Brushless, self-excited, self-regulating, self-ventilated
- Digital voltage regulator
- Anti condensation heater
- Stator winding Y-connected, accessible neutral (brought out)
- Protection IP23
- Insulation class H, utilization acc. to H
- Radio suppression EN55011, group 1, cl. B
- Short circuit capability 3xIn for 10sec
- Winding and bearing RTDs (without monitoring)
- Excitation by AREP
- Mounting of CT's: 2 core CT's
- Winding pitch: 2/3 winding
- Voltage setpoint adjustment $\pm 10\%$
- Meets NEMA MG-1, BS 5000, IEC 60034-1, VDE 0530, DIN EN 12601, AS1359 and ISO 8528 requirements
- Leroy Somer low voltage generator
- ☐ Marathon low voltage generator
- ☐ Oversized generator
- ☐ Medium voltage generator

Cooling system

- Jacket water pump
- Thermostat(s)
- Water charge air cooling
- ☐ Mechanical radiator
- ☐ Electrical driven front-end cooler
- ☐ Jacket water heater

Control panel

- Pre-wired control cabinet for easy application of customized controller (V1+)
- ☐ Island operation (V2)
- ☐ Automatic mains failure operation with ATS (V3a)
- ☐ Automatic mains failure operation incl. control of generator and mains breaker (V3b)
- ☐ Island parallel operation of multiple gensets (V4)
- ☐ Automatic mains failure operation with short (< 10s) mains parallel overlap synchronization (V5)
- ☐ Mains parallel operation of a single genset (V6)
- ☐ Mains parallel operation of multiple gensets (V7)
- ☐ Basler controller
- ☐ Deif controller
- Complete system metering
- Digital metering
- Engine parameters
- Generator protection functions
- Engine protection
- SAE J1939 engine ECU communications
- Parametrization software
- Multilingual capability
- Multiple programmable contact inputs
- Multiple contact outputs
- Event recording
- IP 54 front panel rating with integrated gasket
- ☐ Different expansion modules
- ☐ Remote annunciator
- ☐ Daytank control
- ☐ Generator winding temperature monitoring
- ☐ Generator bearing temperature monitoring
- ☐ Modbus TCP-IP

Power panel

- ☐ Available in 600x600 and 600x1000
- ☐ Phase monitoring relay 230V/400V
- ☐ Supply for battery charger
- ☐ Supply for jacket water heater
- ☐ Supply for anti condensation heating
- ☐ Plug socket cabinet for 230V compatible Euro/USA
- ☐ Supply for electrical driven radiator from 45kW – 75kW (PP 600x1000)

- Represents standard features
- ☐ Represents optional features

Standard and optional features

Circuit breaker/power distribution

- ☐ 3-pole circuit breaker
- ☐ 4-pole circuit breaker
- ☐ Manual-actuated circuit breaker
- ☐ Electrical-actuated circuit breaker
- ☐ Stand-alone solution in seperate cabinet

Fuel system

- ☒ Flexible fuel connectors mounted to base frame
- ☐ Fuel filter with water separator
- ☐ Fuel filter with water separator heavy-duty
- ☐ Switchable fuel filter with water separator
- ☐ Switchable fuel filter with water separator heavy-duty
- ☐ Seperate fuel cooler
- ☐ Fuel cooler integrated into cooling equipment

Starting/charging system

- ☒ 24V starter
- ☐ Starter batteries, cables, rack, disconnect switch
- ☐ Battery charger

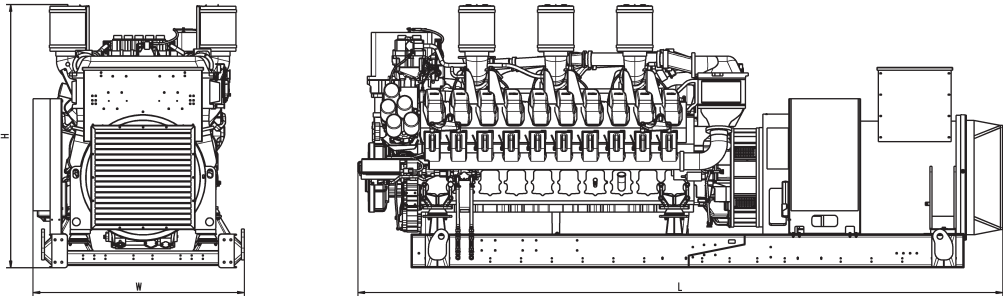
Mounting system

- ☒ Welded base frame
- ☒ Resilient engine and generator mounting
- ☒ Modular base frame design

Exhaust system

- ☐ Exhaust bellows with connection flange
- ☐ Exhaust silencer with 10 dB(A) sound attenuation
- ☐ Exhaust silencer with 30 dB(A) sound attenuation
- ☐ Exhaust silencer with 40 dB(A) sound attenuation
- ☐ Y-connection-pipe

Weights and dimensions



Drawing above for illustration purposes only, based on a standard open power 400 Volt engine-generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

System	Dimensions (L x W x H)	Weight (dry/less tank)
Open power unit (OPU)	5760 x 1887 x 2332 mm	15819 kg

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific engine-generator set.

Sound data

— Consult your local MTU distributor for sound data.

Emissions data

— Consult your local MTU distributor for emissions data.

Rating definitions and conditions

- Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. No overload capability for this rating. Ratings are in accordance with ISO 8528-1, ISO-3046-1, BS 5514 and AS 2789.
Average load factor: ≤ 85%. Operating hours/year: max. 500.
- Consult your local MTU Distributor for derating information.

Cat® 3516E

Diesel Generator Sets

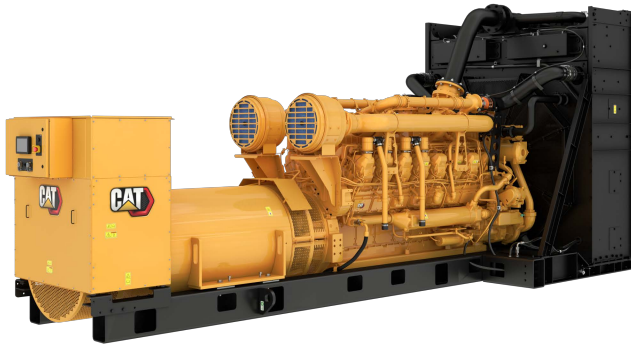


Image shown may not reflect actual configuration

Bore – mm (in)	170 (6.69)
Stroke – mm (in)	215 (8.46)
Displacement – L (in ³)	78.1 (4766)
Compression Ratio	14.7:1
Aspiration	TA
Fuel System	EUI
Governor Type	ADEM™ A5

Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Emissions Performance
2750 (3438)	2750 (3438)	2500 (3125)	U.S. EPA Certified for Emergency Stationary Applications (Tier 2)

Features

Cat® Diesel Engine

- Meets U.S. EPA Stationary Emergency Use Only (Tier 2) emission standards
- Reliable performance proven in thousands of applications worldwide
- Certified alternative fuels including Hydrotreated Vegetable Oil (HVO), Renewable Diesel (RD) and Hydrotreated Renewable Diesel (HRD) which meet EN 15940 or ASTM D975 can be used or blended with EN 590 diesel

Generator Set Package

- Accepts 100% block load in one step
- Meets NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements
- Reliability verified through torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators

- Superior motor starting capability minimizes need for oversizing generator
- Designed to match performance and output characteristics of Cat diesel engines

Cooling System

- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

Cat Energy Control System (ECS)

- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements
- Graphical touchscreen display
- Easily upgradeable

Warranty

- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support

- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing

- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Standard and Optional Equipment

Engine

Air Cleaner

- ☐ Single element

Muffler

- ☐ Industrial grade (15 dB)
- ☐ Critical grade (25 dB)
- ☐ Hospital grade (35 dB)

Starting

- ☐ Standard batteries
- ☐ Oversized batteries
- ☐ Heavy duty electric starter(s)
- ☐ Air starter(s)
- ☐ Jacket water heater

Alternator

Output voltage

- ☐ 416V ☐ 12470V
- ☐ 480V ☐ 13200V
- ☐ 600V ☐ 13800V
- ☐ 4160V

Temperature Rise (over 40°C ambient)

- ☐ 150°C
- ☐ 125°C/130°C
- ☐ 105°C
- ☐ 80°C

Winding type

- ☐ Form wound

Excitation

- ☐ Permanent magnet (PM)

Attachments

- ☐ Anti-condensation heater
- ☐ Stator and bearing temperature monitoring and protection

Power Termination

Type

- ☐ Bus bar
- ☐ Circuit breaker
- ☐ 1600A ☐ 2000A
- ☐ 2500A ☐ 3000A
- ☐ 3200A ☐ 4000A
- ☐ 5000A
- ☐ IEC ☐ UL
- ☐ 3-pole ☐ 4-pole
- ☐ Manually operated
- ☐ Electrically operated

Trip Unit

- ☐ LSI ☐ LSI-G
- ☐ LSI-P ☐ LSIG-P

Control System

Controller

- ☐ Cat ECS 100
- ☐ Cat ECS 200
- ☐ EMCP 4.4

Attachments

- ☐ Local annunciator module
- ☐ Remote annunciator module
- ☐ Expansion I/O module
- ☐ Remote monitoring software

Charging

- ☐ Battery charger – 10A
- ☐ Battery charger – 20A
- ☐ Battery charger – 35A

Vibration Isolators

- ☐ Rubber
- ☐ Spring
- ☐ Seismic rated

Cat Connect

Connectivity

- ☐ Ethernet
- ☐ Cellular

Extended Service Options

Terms

- ☐ 2 year (prime)
- ☐ 3 year
- ☐ 5 year
- ☐ 10 year

Coverage

- ☐ Silver
- ☐ Gold
- ☐ Platinum
- ☐ Platinum Plus

Ancillary Equipment

- ☐ Automatic transfer switch (ATS)
- ☐ Paralleling switchgear
- ☐ Paralleling controls

Certifications

- ☐ ULC 2200 Listed
- ☐ IBC seismic certification
- ☐ OSHPD pre-approval

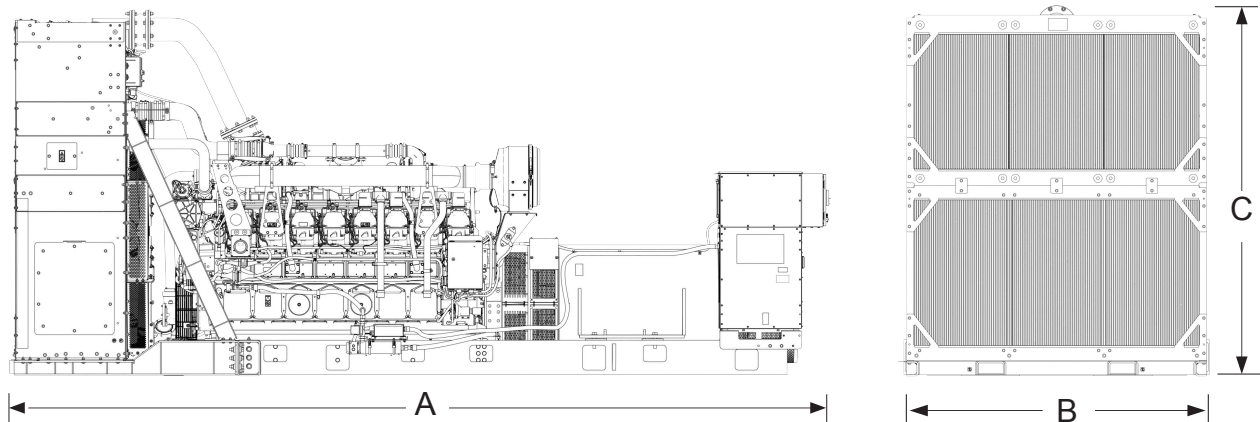
Note: Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.

Package Performance

Performance	Standby		Mission Critical		Prime	
Frequency	60 Hz		60 Hz		60 Hz	
Gen set power rating with fan	2750 ekW		2750 ekW		2500 ekW	
Gen set power rating with fan @ 0.8 power factor	3438 kVA		3438 kVA		3125 kVA	
Emissions	EPA ESE (TIER 2)		EPA ESE (TIER 2)		EPA ESE (TIER 2)	
Performance number	EM5400-01		EM5402-01		EM5404-01	
Fuel Consumption						
100% load with fan – L/hr (gal/hr)	720.4	(190.3)	720.4	(190.3)	649.4	(171.5)
75% load with fan – L/hr (gal/hr)	549.7	(145.2)	549.7	(145.2)	508.7	(134.4)
50% load with fan – L/hr (gal/hr)	401.7	(106.1)	401.7	(106.1)	372.8	(98.5)
25% load with fan – L/hr (gal/hr)	235.1	(62.1)	235.1	(62.1)	220.1	(58.1)
Cooling System						
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	2688	(94925)	2688	(94925)	2688	(94925)
Engine coolant capacity – L (gal)	233.0	(61.6)	233.0	(61.6)	233.0	(61.6)
Radiator coolant capacity – L (gal)	184.0	(48.6)	184.0	(48.6)	184.0	(48.6)
Total coolant capacity – L (gal)	417.0	(110.2)	417.0	(110.2)	417.0	(110.2)
Inlet Air						
Combustion air inlet flow rate – m³/min (cfm)	229.2	(8093.3)	229.2	(8093.3)	215.7	(7616.9)
Exhaust System						
Exhaust stack gas temperature – °C (°F)	493.0	(919.3)	493.0	(919.3)	472.7	(882.9)
Exhaust gas flow rate – m³/min (cfm)	625.4	(22081.8)	625.4	(22081.8)	570.0	(20127.3)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection						
Heat rejection to jacket water – kW (Btu/min)	894	(50827)	894	(50827)	827	(47027)
Heat rejection to exhaust (total) – kW (Btu/min)	2849	(162025)	2849	(162025)	2514	(142941)
Heat rejection to aftercooler – kW (Btu/min)	941	(53492)	941	(53492)	844	(47998)
Heat rejection to atmosphere from engine – kW (Btu/min)	160	(9124)	160	(9124)	147	(8364)
Heat rejection from alternator – kW (Btu/min)	126	(7172)	126	(7172)	112	(6386)
Emissions* (Nominal)						
NOx mg/Nm³ (g/hp-h)	2319.2	(5.00)	2319.2	(5.00)	2275.1	(4.82)
CO mg/Nm³ (g/hp-h)	321.4	(0.69)	321.4	(0.69)	183.8	(0.39)
HC mg/Nm³ (g/hp-h)	30.7	(0.08)	30.7	(0.08)	33.1	(0.08)
PM mg/Nm³ (g/hp-h)	20.0	(0.05)	20.0	(0.05)	14.6	(0.04)
Emissions* (Potential Site Variation)						
NOx mg/Nm³ (g/hp-h)	2783.0	(6.00)	2783.0	(6.00)	2730.1	(5.79)
CO mg/Nm³ (g/hp-h)	536.7	(1.16)	536.7	(1.16)	307.0	(0.65)
HC mg/Nm³ (g/hp-h)	40.8	(0.10)	40.8	(0.10)	44.1	(0.11)
PM mg/Nm³ (g/hp-h)	28.1	(0.07)	28.1	(0.07)	20.4	(0.05)

*mg/Nm³ levels are corrected to 5% O₂. Contact your local Cat dealer for further information.

Weights and Dimensions



Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
7015 (276.2)	2558 (100.7)	3163 (124.5)	18 480 (40,750)

Note: For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.

Ratings Definitions

Standby

Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby rated ekW. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Mission Critical

Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical rated ekW. Typical peak demand up to 100% of rated ekW for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime

Output available with varying load for an unlimited time. Average power output is 70% of the prime rated ekW. Typical peak demand is 100% of prime rated ekW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Applicable Codes and Standards

AS 1359, ULC 2200 3rd edition, UL 489, UL 869A, IBC, IEC 60034-1, ISO 3046, ISO 8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU and facilitates compliance to NFPA 37, NFPA 70, NFPA 99, NFPA 110.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications

- All ratings Tier III/Tier IV compliant per Uptime Institute requirements.
- All ratings ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates

Fuel consumption reported in accordance with ISO 3046-1, based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 15°C (59°F) and weighing 850 g/liter (7.0936 lbs/U.S. gal.) All fuel consumption values refer to rated engine power.

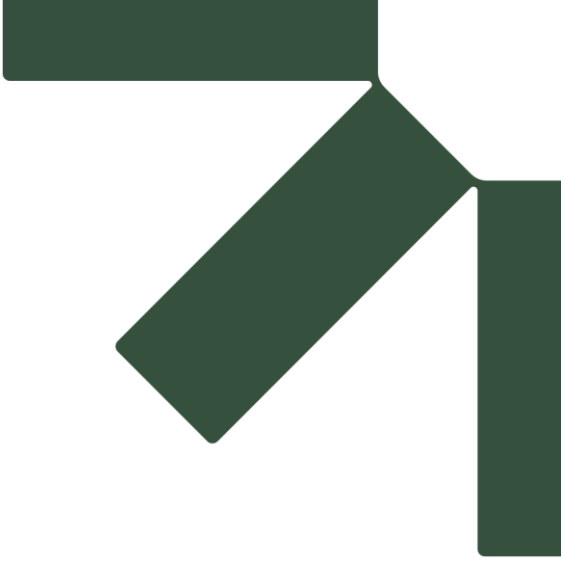
www.cat.com/electricpower

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The International System of Units (SI) is used in this publication.

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Appendix C Fuel Storage Bund Lining, Coating Completion QA Report

Environmental Permit Application

Best Available Techniques and Operating Techniques

IRON MOUNTAIN

SLR Project No.: 410.066934.00001



Iron Mountain
Fuel Storage Bund Lining

Matt Tedds 19/10/24

Coating completion QA Report.

Job Number	FJ00247983
Company	Iron Mountain
Site contact	Gary Angel
Date of completion	18/10/24
Description of works	Bund Lining

Introduction

The following details the Scope of Work undertaken as part of the bund lining activities at Iron Mountain, Slough. Additionally, this document provides detail of the scope of the works which were carried out along with confirmation of general 'housekeeping' requirements Iron Mountain must undertake to maintain the coating.

Scope of Works

The following Scope of Work was agreed with Iron Mountain prior to commencement. The activities undertaken on site are set out in the subsequent sections of the report.

- Removal of any friable materials
- Sealing of any potential fixtures and furniture within the bund
- Masking off areas to be repaired, prime and reline with Polyurea

Removal of any existing loose and/or friable material from bund

Adler and Allan (A&A) attended Iron Mountains, Slough site to commence work to complete bund lining works. Works commenced on 15th October 2024 and it was estimated to take around 4 days to complete all works. The bund in question had existing lining that required cleaning and any loose friable materials removing. The bund then would require preparing, priming and finally lining.

Surface Preparation, Sealing and Priming

The surfaces of the bund will be cleaned and dried to ensure that we can seal all furniture which has been installed into the bund, including earth tape, structural feet, pads and cable tray.

A&A applied a Sikaflex bead to seal any fixtures and fittings within the bund, this is used to ensure that the Polyurea has maximum adhesion to the bunds in these known weak spots.

Application of primer

Materials used	CPR404 Rapid Cure Primer
Application type	Brush & Roller applied
Primer batch number	0924251601
Thickness (microns ≥ 75)	100

Atmospheric checks

Time	Air Temp +5°C to +45°C	Humidity Max of 75%	Wind speed	Surface temp +5°C to +45°C (must be at least 3°C above Dew point)	Substrate moisture Max 4%	Dew point
12:00	22°C	72%	N/A	20°C	0%	16.7°C
13:00	22°C	72%	N/A	20°C	0%	16.7°C
14:00	22°C	72%	N/A	20°C	0%	16.7°C

Application of Elastoline Polyurea

Elastoline Polyurea lining system was installed into the bund area once the preparation works were complete. The bund area was walked over by A&A to identify that all areas were sufficiently repaired and the conditions on site were sufficient to start applying the Elastoline materials. Once applied the bund is then visually checked for pinholes, any located are then repaired with sealant then Polyurea is then applied over the repair.

Application of Polyurea

Machine type used	Graco EXP2i elite
Batch number	ISO – 240709-005 Resin – 240709-007
Area of application	Bund Lining
Thickness (microns)	≥2000

Atmospheric checks

Time	Air Temp +5°C to +45°C	Humidity Max of 75%	Wind speed	Surface temp +5°C to +45°C (must be at least 3°C above Dew point)	Substrate moisture Max 4%	Dew point
11:00	19°C	63%	N/A	20°C	0%	11.8°C
12:00	19°C	63%	N/A	20°C	0%	11.8°C
13:00	19°C	63%	N/A	20°C	0%	11.8°C
14:00	19°C	63%	N/A	20°C	0%	11.8°C

Plant for Application

Spray gun type	Tip Size	Mixing chamber
Graco P2 Probler	0	0.0

Thickness Checks DFT

1 check per 1m² – thickness must be $\geq 2\text{mm}$

2.5	2.2	2.2	2.4	2.3	2.4	2.2	2.4
2.3	2.0	2.4	2.2	2.2	2.3	2.4	2.0

Processing temperatures

ISO (Isocyanate) (70-76)	Resin (70-76)	Hose (65-73)
74	71	67

Processing Pressures (Pascals)

Static	Spraying (2300-2600)
2750	2500

Photographs

Photos 1 and 2 – Bund Before Photos

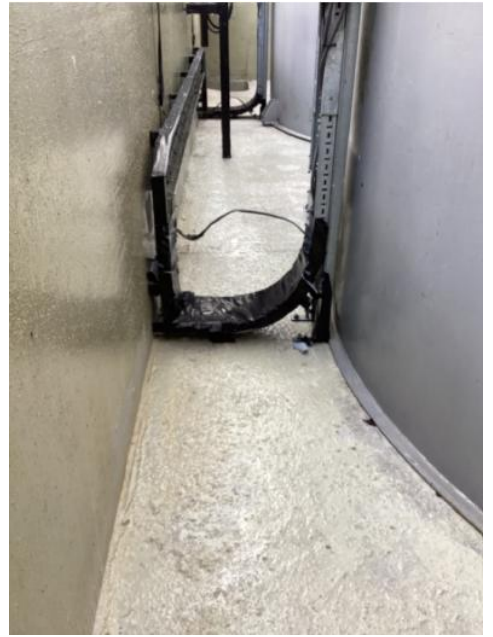


Photos 3 and 4 – Bund Cleaned



Iron Mountain

Photos 5 and 6 – Primed



Photos 7 and 8 – Sprayed



Photos 9 and 10 - Primer Batches



Photos 11 and 12 – Polyurea Batch

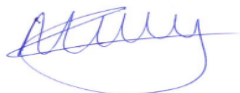


Job Completion Sign off

Visual checks	Pass
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Adler and Allan

Signature



Name M Tedds

Date 19/10/24

Iron Mountain Representative

Signature

Name

Date

Housekeeping of Polyurea Bund Lining

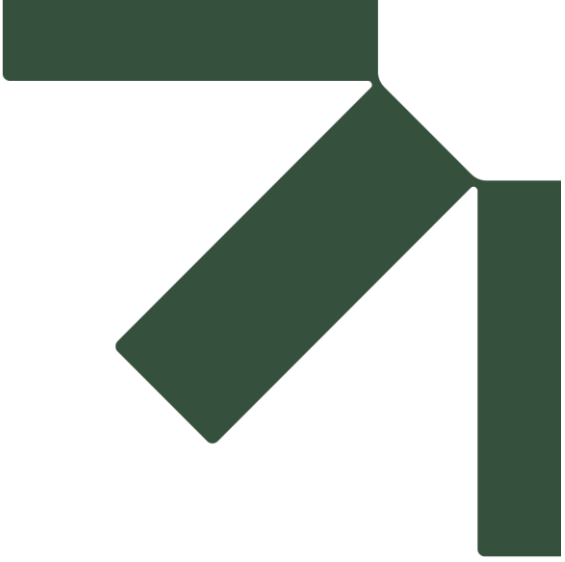
Once Polyurea has been sprayed onto the desired surface or substrate it will create a waterproof membrane to the surface it is applied to. This membrane is impermeable and will help the bund to which it is applied to provide the secondary containment that it is designed to deliver.

Polyurea is also resistant to fuels and chemicals, however it is not designed to hold these liquids for long periods of time. Polyurea is designed to be resistant for a period of 72 hours as a secondary containment measure, however after this period of time if spillages are not cleaned up then the Polyurea is susceptible to deteriorate.

Spillages should be cleaned up in a timely manner and we would advise that this be within 24 hours, cleaning of the surfaces should be completed with water and very mild degreasers in the case of fuels or neutralising agents in the case of chemicals.

If these instructions are not followed then there is a potential for the Polyurea to degrade, become damaged or even dissolve if not maintained correctly or cleaned when required.

This Polyurea coating is not designed to be used for primary containment.



Appendix D Climate Change Agreement

Environmental Permit Application

Best Available Techniques and Operating Techniques

IRON MOUNTAIN

SLR Project No.: 410.066934.00001

UMBRELLA CLIMATE CHANGE AGREEMENT FOR THE DATA CENTRES SECTOR

Agreement dated 14 February 2022

THIS AGREEMENT is made the 14 February 2022

BETWEEN:

- (1) the Environment Agency (“the Administrator”); and
- (2) the Sector Association set out in Schedule 2 (“the Sector Association”).

RECITALS

- (A) Section 30 of and Schedule 6 to the Finance Act 2000 (“the Act”) make provision for a tax known as the climate change levy (“the Levy”). The Levy is charged on the supply of taxable commodities as defined in paragraph 3 of Schedule 6 to the Act.
- (B) Paragraphs 42(1)(ba) and 42(1)(c) of Schedule 6 to the Act provide that the amount payable by way of the Levy shall be discounted from the full rate where the supply is a reduced-rate supply. A reduced-rate supply is a taxable supply supplied to a facility specified in a certificate given by the Administrator to the Commissioners for Her Majesty’s Revenue and Customs as a facility which is covered by a climate change agreement for a period specified in the certificate in accordance with paragraphs 42 to 52F of Schedule 6 to the Act.
- (C) A climate change agreement is defined in paragraph 46 of Schedule 6 to the Act. It may consist of a combination of agreements that falls within paragraph 48. A combination of agreements falls within paragraph 48 if a number of conditions are satisfied. The first condition is that the combination of agreements is a combination of an umbrella agreement and an agreement that, in relation to the umbrella agreement, is an underlying agreement.
- (D) This agreement is an umbrella agreement entered into for the purposes of the reduced rate of Levy. It is not intended to give rise to contractual obligations between the parties.
- (E) The Sector Association is a representative as defined in paragraph 47(2) of Schedule 6 to the Act of each facility to which this agreement applies.
- (F) The facility or facilities set out in Schedule 4 to this agreement are a facility or facilities to which an agreement applies.

AGREED TERMS

IT IS AGREED as follows:

1. INTERPRETATION

1.1 In this Agreement, unless the context otherwise requires:

“account” means the account in the Register of a sector association or an operator;

“agreement” means, as the context requires, either:

UMBRELLA CLIMATE CHANGE AGREEMENT FOR THE DATA CENTRES SECTOR

Agreement dated 14 February 2022

- a) this agreement; or
- b) an umbrella agreement or an underlying agreement;

“amendments window” means the period from 1 July 2021 to 30 September 2021 where the Administrator can vary underlying agreements in accordance with the amendments provided for in the technical annex;

“base year” for a target period, means:

- a) for a target unit which includes a greenfield facility, the 12 month period starting on the date of an underlying agreement which provides for that target period;
- b) for a target unit which does not include a greenfield facility, a 12 month period which—
 - i) ends before the date of an underlying agreement which provides for that target period or before the date an underlying agreement is first varied to provide for that target period; and
 - ii) is agreed between an operator and the administrator before they enter into the underlying agreement or before the underlying agreement is first varied to provide for that target period;

“buy-out fee” means the fee calculated in accordance with Rule 7;

“certification period” means, any of the following periods:

- (a) 1 April 2013 to 30 June 2015;
- (b) 1 July 2015 to 30 June 2017;
- (c) 1 July 2017 to 30 June 2019;
- (d) 1 July 2019 to 30 June 2021;
- (e) 1 July 2021 to 30 June 2023; or
- (f) 1 July 2023 to 31 March 2025.

“charges” means charges due to the Administrator under the charging scheme;

“charging scheme” means the Climate Change Agreements Charges Scheme 2012 made by the Administrator or any replacement or revision of that charging scheme;

“emissions” means the total emissions in tCO₂ equivalent for a target period;

“facility” means a facility within the meaning of paragraph 50(2) to (6) of Schedule 6 to the Act;

“facility number” means the unique identification number of a facility set out in schedule 4 of this Agreement;

“greenfield facility” means a facility which started to carry out the process by virtue of which it is a facility within the meaning of paragraph 50 of Schedule 6 during the 12 month period ending on the date the operator applies for the facility to be covered by an agreement;

UMBRELLA CLIMATE CHANGE AGREEMENT FOR THE DATA CENTRES SECTOR

Agreement dated 14 February 2022

“new entrant period one” means the period from 1 January 2021 to 31 March 2021 where new entrant facilities enter into Climate Change Agreements;

“new entrant period two” means the period from 17th December 2021 to 30 June 2022 where new entrant facilities enter into Climate Change Agreements;

“Novem ratio target” has the meaning set out in the technical annex;

“operator” means a party to an underlying agreement other than the Administrator;

“personal information” means:

- a) the address of the registered office of the sector association or operator;
- b) the name, address and email address of:
 - i) in the case of a sector association, a person who can be contacted in respect of the sector association;
 - ii) in the case of an Operator, the responsible person; and
- c) the name, address and email address of a person who can be contacted in respect of the facility or each facility covered by an agreement;

“the Register” means the electronic system established and operated by the Administrator for the administration of agreements;

“the Regulations” means the Climate Change Agreements (Administration) Regulations 2012 S.I. 2012/1976, as amended by [S.I. 2013/508](#), [S.I. 2016/1189](#) and [S.I. 2020/958](#);

“Rule or Rules” means the Rules for the Operation of Climate Change Agreements or any of them set out in Schedule 1 to this Agreement as varied from time to time;

“Schedule 6” means Schedule 6 to the Finance Act 2000;

“sector” means the sector consisting of facilities which are covered by the same umbrella agreement;

“sector association” means the party to this agreement other than the Administrator;

“sector commitment” means the commitment set out in Schedule 5 of the umbrella agreement, as varied from time to time;

“surplus” means the amount by which the emissions have fallen below the target for any target period;

“target” (for a target period) means the percentage improvement in energy efficiency or carbon efficiency from the base year (for that target period) applicable to the target unit, set out in Schedule 6 to the underlying agreement, as varied from time to time;

“target period 1” means the target period from 1 January 2013 to 31 December 2014;

“target period 2” means the target period from 1 January 2015 to 31 December 2016;

“target period 3” means the target period from 1 January 2017 to 31 December 2018;

UMBRELLA CLIMATE CHANGE AGREEMENT FOR THE DATA CENTRES SECTOR

Agreement dated 14 February 2022

“target period 4” means the target period from 1 January 2019 to 31 December 2020;

“target period 5” means the target period from 1 January 2021 to 31 December 2022;

“target unit” means a facility or group of facilities to which an underlying agreement applies;

“tCO₂ equivalent” means tonnes of carbon dioxide equivalent;

“technical annex” means the technical annex to this Agreement dated 18 December 2020 and published by the Administrator or the Secretary of State available via the Administrator’s website;

“throughput” means the measure of production, or factor related to production, used to determine the relationship between the amount of energy used by the target unit and the levels of activity of the target unit, as set out in Schedule 6 to an underlying agreement;

“the Tribunal” means the First-tier Tribunal established under the Tribunal Courts and Enforcement Act 2007¹;

“umbrella agreement” means, as the context requires, either:

- a) this agreement; or
- b) an agreement that is an umbrella agreement for the purposes of paragraph 48 of Schedule 6 to the Act;

“underlying agreement” means an agreement that is an underlying agreement for the purposes of paragraph 48 or Schedule 6 to the Act.

- 1.2 Other words and expressions used in this Agreement have the same meaning as they bear in Schedule 6 to the Finance Act 2000 or the Regulations.

2. FACILITIES TO WHICH THIS AGREEMENT APPLIES

2.1 This Agreement applies to the facilities set out in Schedule 4.

2.2 A facility belongs to the sector if it is a facility which undertakes one or more of the activities set out in Schedule 3.

3. SECTOR COMMITMENT

3.1 The sector commitment for the sector to which this Agreement applies is set out in Schedule 5 to this Agreement, as varied from time to time.

3.2 N/A.

¹ Appeals are assigned to the General Regulatory Chamber of the First-tier Tribunal by virtue of article 3(a) of the First-tier Tribunal and Upper Tribunal (Chambers) Order 2010 (S.I. 2010/2655). The Tribunal Procedure (First-tier Tribunal) (General Regulatory Chamber) Rules 2009 (S.I. 2009/1976) sets out procedural rules relating to such appeals.

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- 3.3 The sector commitment and associated targets may be varied to take into consideration target period 5 in accordance with the procedure set out in Rule 12.

4. THE RULES

- 4.1 Schedule 1 to this Agreement which sets out the Rules for the operation of Climate Change Agreements has effect.
- 4.2 The Sector Association agrees to comply with the Rules.

5. DURATION AND TERMINATION OF THIS AGREEMENT

- 5.1 Subject to clause 5.2 below, this Agreement takes effect on 1 April 2013 or, if later, the date on which this Agreement is first activated by the Administrator, and ends on 31 March 2025.
- 5.2 This Agreement may be terminated before 31 March 2025:
- 5.2.1 at any time by a notice served on the Administrator by the Sector Association giving at least 20 working days' notice; or
 - 5.2.2 in accordance with the Regulations.
- 5.3 Any variation to this Agreement made under regulation 14A of the Regulations in respect of target period 5 takes effect on 1 January 2021 or, if later, the date on which the variation is activated by the Administrator.

6. VARIATION OF AGREEMENT

- 6.1 Subject to clauses 3.2, 3.3, 6.2 and 6.3, this Agreement may be varied at any time if agreed between the Administrator and the Sector Association.
- 6.2 The facilities to which this Agreement applies may be varied in accordance with Rules 9 and 10.
- 6.3 Under the power in regulation 14A of the Regulations, this Agreement may be varied by the Administrator to take account of changes in the terms specified by the Regulations from time to time as terms which must be included in Agreements.

7. COLLECTION OF CHARGES

- 7.1 The parties agree that the Administrator shall not be liable to pay any expenses of the Sector Association in connection with or arising out of the collection of charges under Rule 16, nor to indemnify or remunerate the Sector Association in connection with the collection of charges.

Signed by authority of the Environment
Agency:

Signed on behalf of the Sector
Association:

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A handwritten signature in blue ink, appearing to read 'K Sydney', with a horizontal line underneath.

Karl Sydney
Operations Manager (Energy Efficiency)

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SCHEDULE 1
RULES FOR THE OPERATION OF CLIMATE CHANGE AGREEMENTS

1. OBLIGATIONS OF A SECTOR ASSOCIATION AND OF AN OPERATOR

1.1 An Operator and a Sector Association must:

- 1.1.1 supply such information to the Administrator as the Administrator may request in connection with an agreement, by the date specified in the request;
- 1.1.2 notify the Administrator of any changes to its personal information within 20 working days of the change;
- 1.1.3 co-operate with any person appointed by the Administrator to undertake an independent audit of information provided to the Administrator; and
- 1.1.4 comply with the provisions of the charging scheme. If a charge remains unpaid after the date on which it is due, it may be recovered by the Administrator as a civil debt.

2. OBLIGATIONS OF A SECTOR ASSOCIATION

- 2.1 Following the setting of the sector commitment by the Secretary of State or following a variation in respect of a new sector commitment for target period 5 under Rule 12.2, a Sector Association must distribute the sector commitment between each target unit under the umbrella agreement.

3. OBLIGATIONS OF AN OPERATOR

3.1 An Operator must:

- 3.1.1 notify the Administrator and the Sector Association within 20 working days of the date when the Operator has reason to believe that a facility covered by an underlying agreement may not be eligible for inclusion in the underlying agreement;
- 3.1.2 notify the Administrator within 20 working days of becoming aware of any structural change or other change set out in the technical annex which may give rise to a variation to the target in accordance with Rule 11;
- 3.1.3 notify the Administrator within 20 working days of discovering any error in the data provided to the Administrator for the base year;
- 3.1.4 provide to the Administrator on or before 1 May following the end of a target period such information as has been requested by the Administrator in order to determine whether progress towards meeting the target is, or is likely to be, taken to be satisfactory;
- 3.1.5 provide any other information requested at any time by the Administrator by the date specified in the request to enable the Administrator to determine that:

(a) the target has been met; or

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(b) the Operator is complying with the terms of the underlying agreement;

- 3.1.6 notify the Administrator within 20 working days of the Operator or a facility in a target unit becoming a firm in difficulty, within the meaning of the European Commission Guidelines on State aid for rescuing and restructuring non-financial undertakings in difficulty (2014/C 249/01);
 - 3.1.7 provide the responsible person with full authority to carry out his or her functions, including authorisation to accept on behalf of the Operator the service of any notice; and
 - 3.1.8 provide a current UK postal address and an operational email address of the responsible person for service of any notice.
- 3.2 If the Administrator enters into an underlying agreement before a target has been agreed, conditional upon the Operator providing sufficient information within a specified period in order to set the target for the target unit, the Operator must supply any data requested by the Administrator within the period specified by the Administrator on energy use and throughput of the target unit.

4. OPERATION OF THE REGISTER

- 4.1 Subject to Rules 4.2 and 4.3, to the extent possible, a Sector Association and an Operator must communicate with the Administrator using the Register.
- 4.2 Until a Sector Association and an Operator have been notified by the Administrator that the Operator is able to operate an account on its own behalf, an Operator must provide all information to the Sector Association to comply with the obligations of an Operator under an underlying agreement. The Sector Association must then operate the Register on behalf of the Operator to provide the information to the Administrator.
- 4.3 After receiving notification from the Administrator that an Operator is able to operate an account on its own behalf, an Operator must notify the Administrator if it wishes to access its account directly to comply with its obligations under an underlying agreement. If an Operator makes such notification, the Operator must then operate the Register on its own behalf in order to comply with its obligations under an underlying agreement. If an Operator does not make such notification, the Operator must continue to provide all information to the Sector Association to comply with the obligations of an Operator under an underlying agreement and the Sector Association must continue to operate the Register on behalf of the Operator to provide information to the Administrator.

5. CERTIFICATION OF A FACILITY

- 5.1 The Administrator must certify that a facility is covered by an agreement from the date on which an underlying agreement takes effect to the end of the first certification period. The first certification period in respect of new agreements that take effect on or after 1 January 2021 is provided for in Rule 5A.
- 5.2 The Administrator must certify that a facility is covered by an agreement for any subsequent certification period other than the certification period in which the underlying agreement is first

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activated, where it appears to the Administrator that progress made in the immediately preceding certification period, whether under the underlying agreement or under any previous underlying agreement, towards meeting targets set for the target unit is, or is likely to be, satisfactory.

5.3 For the purposes of this Rule, progress made in the immediately preceding certification period towards meeting targets set for the target unit is, or is likely to be satisfactory only where condition 1 and condition 2 are satisfied.

5.4 Condition 1 is that:

5.4.1 the target set for the target unit for the relevant target period is met, in accordance with Rule 6; or

5.4.2 if the target set for the target unit has not been met, the target unit has paid the buy-out fee in accordance with Rule 7.

5.5 Condition 2 is that obligations imposed under or by virtue of regulations made for the purpose of implementing the Greenhouse Gas Emissions Trading Scheme Regulations 2012, as amended from time to time, have been complied with in respect of each facility comprising the target unit.

5.6 If:

5.6.1 a target unit has failed to meet its target in accordance with Rule 6 and the Operator has failed to pay the buy-out fee in accordance with Rule 7;

5.6.2 obligations imposed under or by virtue of regulations made for the purpose of implementing the Greenhouse Gas Emissions Trading Scheme Regulations 2012, as amended from time to time, have not been complied with in respect of any facility in a target unit; or

5.6.3 the underlying agreement or umbrella agreement is terminated in accordance with Regulation 17(3) or Regulation 18,

the Administrator must not certify that the facility or facilities comprising the target unit are covered by an agreement or, where a certificate has been issued, the Administrator must vary the certificate in accordance with paragraph 45 of Schedule 6.

5.7 If:

5.7.1 a facility is not or ceases to be eligible for inclusion in an agreement; or

5.7.2 a facility is excluded from an underlying agreement under Rule 10;

the Administrator must not certify that the facility is covered by an agreement or, where a certificate has been issued, the Administrator must vary the certificate in accordance with paragraph 45 of Schedule 6.

5.8 If the information supplied to the Administrator is insufficient to determine whether:

5.8.1 the target for the target period has been met; or

5.8.2 obligations imposed under or by virtue of regulations made for the purpose of implementing the Greenhouse Gas Emissions Trading Scheme Regulations 2012, as

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amended from time to time, have been complied with in respect of each facility comprising the target unit;

the Administrator may refuse to certify that the facility or facilities are covered by an agreement or, where a certificate has been issued, the Administrator may vary that certificate in accordance with paragraph 45 of Schedule 6.

5.9 Subject to Rule 5.10, if the Administrator does not certify a facility or varies a certificate that has been issued, the Administrator must serve a decision notice on the Sector Association and the Operator of the facility setting out the reasons for the decision, unless a notice of termination has already been served.

5.10 The Administrator is not required to serve a decision notice where a facility has been certified under this Rule and it is subsequently discovered that the target unit for the relevant target period had not been met because of an error in the information originally supplied to the Administrator provided that:

5.10.1 the Sector Association and the Operator have satisfied the Administrator that the error was unintentional; and

5.10.2 the Operator has paid any buy-out fee in accordance with Rule 7.

6. FIRST CERTIFICATION PERIOD

6.1 This rule applies in respect of any new agreements first activated after the coming into force of SI 2020/958.

6.2 The first certification period that applies to the facilities covered by this Agreement and added during new entrant period one begins on the date on which the Administrator activates the Agreement and ends on 30 June 2021.

6.3 The subsequent certification periods for facilities covered by this Agreement and added during new entrant period one are:

6.3.1 1 July 2021 to 30 June 2023;

6.3.2 1 July 2023 to 31 March 2025.

6.4 The first certification period that applies to the facilities covered by this Agreement and added during new entrant period two begins on the date on which the Administrator activates the Agreement and ends on 30 June 2023.

6.5 The subsequent certification period for facilities covered by this Agreement and added during new entrant period two is:

6.5.1 1 July 2023 to 31 March 2025.

6. MEETING THE TARGET

6.1 A target unit meets its target for the purpose of Rule 5 if it meets or exceeds the percentage improvement in energy efficiency or carbon efficiency from the base year set out in Schedule 6 to the underlying agreement.

6.2 The Administrator must determine whether the target has been met in accordance with the principles, methodologies and procedures set out in the technical annex.

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- 6.3 An Operator must notify the Administrator on or before 31 January in the year following the end of a target period of any circumstances which may give rise to an adjustment to the target for the previous target period, as set out in the technical annex.
- 6.4 If an Operator makes a notification under Rule 6.3, the Administrator may adjust the previous target in accordance with the principles, methodologies and calculations set out in the technical annex and must serve a notice on the Operator, setting out:
- 6.4.1 whether or not it had decided to vary the target; and
 - 6.4.2 any revised target (as varied) for the target unit.

7. BUY-OUT MECHANISM

- 7.1 If the administrator finds that the target unit has failed to meet its targets:
- 7.1.1 at any time in the period beginning with 1 May in the year following the end of a target period and ending immediately before the first day of the next certification period; or
 - 7.1.2 at any other time,
- the obligation to make progress towards meeting targets may instead be satisfied by the payment to the administrator of a fee in accordance with Rule 7.2.
- 7.2 If Rule 7.1 applies, the administrator must serve a notice on the Operator containing the following information:
- 7.2.1 that the target unit has failed to meet its target;
 - 7.2.2 the fee to be paid, calculated in accordance with Rule 7.3 or Rule 7.4;
 - 7.2.3 the date by which the fee must be paid, determined in accordance with Rule 7.5 or Rule 7.6;
 - 7.2.4 to whom the fee must be paid;
 - 7.2.5 how the fee is to be paid; and
 - 7.2.6 that failure to pay the fee in accordance with the notice will result in the issue of a variation certificate in accordance with paragraph 45 of Schedule 6.
- 7.3 If Rule 7.1.1 applies, the amount of the fee is:

$$A \times (W - S)$$

Where:

- (a) A is £12 where the finding is of a failure to meet a target for target period 1 or target period 2, £14 where the finding is of a failure to meet a target for target period 3 or target period 4, or £18 where the finding is of a failure to meet a target for target period 5;

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- (b) W in units of tCO₂ equivalent represents the amount by which the emissions for the target period exceed the target;
- (c) S, for target periods 1 to 4, in units of tCO₂ equivalent represents any surplus; and
- (d) S, for target period 5, is zero.

7.4 If Rule 7.1.2 applies, the amount of the fee is:

$$A \times W$$

Where:

- (a) A is £12 where the finding is of a failure to meet a target for target period 1 or target period 2, £14 where the finding is of a failure to meet a target for target period 3 or target period 4, or £18 where the finding is of a failure to meet a target for target period 5;
- (b) W in units of tCO₂ equivalent represents the amount by which the emissions for the target period exceed the target.

7.5 If Rule 7.1.1 applies, the fee must be paid on or before 1 July in the year in which the target unit is found to have failed to meet its targets.

7.6 If Rule 7.1.2 applies, the fee must be paid within 30 working days beginning with the date of the notice.

7.7 Payment of the fee is deemed to have been made when the person to whom the fee must be paid as specified in the notice receives full cleared funds.

7.8 For the purposes of calculating the buy-out fee under this Rule and for calculating the amount of any surplus, the Administrator must calculate the difference between the target for the target period and the actual performance achieved during the target period, where the target and the actual performance achieved are expressed in the same units, and convert any difference between the two into a quantity of carbon dioxide equivalent, expressed in units of tCO₂ equivalent, using the principles, methodologies and calculations set out in the technical annex.

8. SURPLUS

8.1 If a facility is excluded from a target unit, the Operator must determine how any surplus should be distributed between the facilities that have been excluded from the target unit and the facilities remaining in the target unit and must notify the Administrator of the redistribution within 20 working days of the facility being excluded from the target unit.

8.2 If an Operator fails to notify the Administrator of the redistribution in accordance with Rule 8.1 any surplus remains with the facilities remaining in the target unit.

8.3 If facilities join a target unit, any surplus attributable to those joining facilities may be used by the target unit as a whole.

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9. VARIATION BY INCLUSION OF ADDITIONAL FACILITIES

- 9.1 A facility which is not already included in another umbrella agreement is eligible at any time to be considered for inclusion in an umbrella agreement where:
 - 9.1.1 it is a facility within the meaning of paragraph 50 of Schedule 6; and
 - 9.1.2 it is a facility undertaking the activities set out in Schedule 3 to an umbrella agreement.
- 9.2 A facility which is not already included in another underlying agreement is eligible at any time to be considered for inclusion in an underlying agreement where:
 - 9.2.1 it is a facility within the meaning of paragraph 50 of Schedule 6;
 - 9.2.2 it is a facility undertaking the activities set out in Schedule 3 to an umbrella agreement; and
 - 9.2.3 it has the same operator as the operator of the underlying agreement under which it will be included, as set out in the technical annex.
- 9.3 A facility which is already included in another underlying agreement is eligible to be considered for inclusion in a different underlying agreement on or before 30 September 2013 where:
 - 9.3.1 it is a facility within the meaning of paragraph 50 of Schedule 6;
 - 9.3.2 it is a facility undertaking the activities set out in Schedule 3 to an umbrella agreement; and
 - 9.3.3 it has the same operator as the operator of the underlying agreement under which it will be included, as set out in the technical annex.
- 9.4 A facility which is already included in another underlying agreement is eligible to be considered for inclusion in a different underlying agreement on or after 1 October 2013 where:
 - 9.4.1 it is a facility within the meaning of paragraph 50 of Schedule 6;
 - 9.4.2 it is a facility undertaking the activities set out in Schedule 3 to an umbrella agreement;
 - 9.4.3 it has the same operator as the operator of the underlying agreement under which it will be included, as set out in the technical annex; and
 - 9.4.4 there has been a change of operator of the facility, or to allow a new entrant to be grouped into an existing agreement as part of the amendments window in 2021.
- 9.5 An additional facility cannot be added to an umbrella agreement unless the Administrator has determined that a facility is eligible and makes a variation to the umbrella agreement to add that facility to the scheme during new entrant period one or new entrant period two.
- 9.6 The Administrator may vary the target of a target unit to take account of the inclusion of additional facilities following the principles, methodologies and calculations set out in the technical annex.
- 9.7 If a Sector Association wishes to add an additional facility to an umbrella agreement or an Operator wishes to add an additional facility to an underlying agreement in accordance with Rule 9.5, the Sector Association or the Operator must notify the Administrator setting out:

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- 9.7.1 the name of the Operator of the facility;
 - 9.7.2 the address of the facility;
 - 9.7.3 a description of the facility;
 - 9.7.4 such information as will enable the Administrator to reach a decision on establishing eligibility of the facility, as requested by the Administrator; and
 - 9.7.5 such information as will enable the Administrator to determine the revised target for the target unit, as requested by the Administrator.
- 9.8 If the Administrator receives a notification under Rule 9.7, the Administrator must serve a notice on the Operator, copied to the Sector Association:
- 9.8.1 consenting to include the additional facility in an umbrella agreement or an underlying agreement and setting out whether or not it has decided to vary the target, and if so, the revised target (as varied) for the target unit;
 - 9.8.2 refusing consent to include the facility in an umbrella agreement or an underlying agreement, giving reasons for the decision; or
 - 9.8.3 requesting such further information as is required in order to establish eligibility of the facility or reach a decision on the target for the facility.

10. VARIATION BY EXCLUSION OF FACILITIES

- 10.1 If a Sector Association or an Operator wishes to exclude a facility, or part of it, from an umbrella agreement or an underlying agreement, it must notify the Administrator of the proposed exclusion, setting out:
- 10.1.1 the name of the Operator of the facility;
 - 10.1.2 the facility number, or a description of the part that is to be excluded; and
 - 10.1.3 the reason for the exclusion.
- 10.2 If:
- 10.2.1 a Sector Association or an Operator has notified the Administrator that it wishes to exclude a facility under Rule 10.1; or
 - 10.2.2 the Administrator has terminated an agreement so far as it relates to an individual facility under Regulation 17(4),
- the Administrator may vary the target to take account of the exclusion or termination following the principles, methodologies and calculations set out in the technical annex, and may request such information from the Sector Association or the Operator as it requires in order to determine the revised target.
- 10.3 If the Administrator decides to vary or not to vary the target under Rule 10.2, it must serve a notice on the Operator, copied to the Sector Association, setting out whether or not it has decided to vary the target, and if so the revised target (as varied) for the target unit.

11. VARIATION OF TARGETS IN OTHER CIRCUMSTANCES

11.1 The Administrator may vary the target to take account of:

11.1.1 any structural changes or other changes to the target unit which the Operator must notify to the Administrator under Rule 3.1.2;

11.1.2 any errors in the data provided to the Administrator for the base year; or

11.1.3 in respect of a target unit which has a Novem ratio target, the removal of a product produced in the target period which was produced in the base year,

following the principles, methodologies and calculations set out in the technical annex.

11.2 The Administrator may request any information of a Sector Association or an Operator as it requires in order to determine the revised target under Rule 11.1.

11.3 If the Administrator decides to vary or not to vary a target under Rule 11.1, it must serve a notice on the Operator, copied to the Sector Association, setting out:

11.3.1 whether or not it has decided to vary the target; and

11.3.2 any revised target (as varied) for the target unit.

12. ADDITION OF SECTOR COMMITMENT FOR TARGET PERIOD 5

12.1 In accordance with clause 3.3, the Secretary of State may issue a direction to the Administrator that the new sector commitment for target period 5 be added to this Agreement. The Administrator must then serve a variation notice on the Sector Association.

12.2 The variation notice must state:

12.2.1 the agreed variation; and

12.2.2 the date from which the agreed variation will take effect.

12.3 The Sector Association must, within 20 working days of receipt of a variation notice, serve notice on the Administrator setting out the proposed distribution of the new target period 5 sector commitment between each target unit under the umbrella agreement.

12.4 The Administrator must:

12.4.1 agree to the proposed distribution and vary the targets of each target unit accordingly;

12.4.2 request further information in relation to the proposed distribution; or

12.4.3 refuse the proposed distribution and propose an alternative distribution, giving reasons for the decision.

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13. RIGHT OF APPEAL

13.1 If the Administrator:

13.1.1 decides not to certify a facility or to vary a certificate which has been issued;

13.1.2 serves a notice imposing a buy-out fee under Rule 7 upon determining that a target unit has failed to meet its target; or

13.1.3 decides to vary or not to vary the target for a target unit,

the Operator may appeal to the Tribunal against the decision.

13.2 In respect of an Operator which enters into an agreement after 1 April 2013, the Operator may appeal to the Tribunal against the target that has been set for the target unit by the Administrator.

13.3 For the purposes of Rule 13.2, the date on which notice of the decision is deemed to have been sent to the Operator is the later of the date the agreement is entered into or the date the Administrator sends notice to the Operator of the target for the target unit.

13.4 The grounds on which an Operator may appeal under Rule 13.1 and 13.2 are:

13.4.1 that the decision was based on an error of fact;

13.4.2 that the decision was wrong in law;

13.4.3 that the decision was unreasonable;

13.4.4 any other reason.

13.5 The bringing of an appeal suspends the effect of the decision pending final determination by the Tribunal of the appeal or its withdrawal.

13.6 On determining an appeal under these Rules the Tribunal must either:

13.6.1 affirm the decision;

13.6.2 quash the decision; or

13.6.3 vary the decision.

14. RECORDS AND INFORMATION

14.1 A Sector Association and an Operator must retain records of all information required to be supplied to the Administrator under these Rules.

14.2 In particular, an Operator must retain:

14.2.1 sufficient records to allow the Administrator to verify whether a target unit has met its target, including sufficient records to allow the accurate verification of throughput and annual consumption of energy of a target unit; and

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14.2.2 records of energy saving actions and measures implemented during each target period.

14.3 A Sector Association and an Operator must make all records which it is required to retain under these Rules available for inspection by the Administrator or a person appointed by the Administrator and must provide copies of such records in response to a request by the date specified in the request.

14.4 All records required to be retained under these Rules must be retained throughout the duration of an agreement and for a period of four years following the termination of an agreement.

15. PUBLICATION AND DISCLOSURE OF INFORMATION

15.1 The Administrator must publish such information as required under the Regulations.

15.2 In respect of the disclosure of information other than disclosure of information required to be published under the Regulations, information supplied by a Sector Association or an Operator to the Administrator or the Secretary of State, to any agent of the Administrator or the Secretary of State, or to any person appointed by the Administrator or Secretary of State to carry out an independent audit, may be disclosed without the consent of the Sector Association or Operator, where such disclosure is:

15.2.1 by the Administrator to the Secretary of State, for any purpose connected with the functions of the Secretary of State;

15.2.2 by the Secretary of State to the Administrator, for any purpose connected with the functions of the Administrator;

15.2.3 to a relevant authority, for any purpose connected with the functions of the relevant authority;

15.2.4 to any person appointed by the Administrator or the Secretary of State to carry out an independent audit;

15.2.5 to an adjudicator appointed under these Rules;

15.2.6 to any person appointed by the Administrator or the Secretary of State to act as agent, consultant, adviser or contractor to the Administrator or the Secretary of State, in connection with the functions of the Administrator or the Secretary of State;

15.2.7 necessary for the purpose of or in connection with any legal proceedings, including the obtaining of legal advice;

15.2.8 required to comply with any Act of Parliament or subordinate legislation made under an Act of Parliament, including requests made under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004; or

15.2.9 required to meet any obligation to the European Union.

15.3 A relevant authority referred to in this Rule means:

15.3.1 either House of Parliament including any committee of either or both Houses;

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15.3.2 any Government department;

15.3.3 the European Commission;

15.3.4 the Committee on Climate Change;

15.3.5 the Commissioners of Her Majesty's Revenue and Customs;

15.3.6 a person or body prescribed by or appointed under Part I of the Environmental Protection Act 1990 or regulations made under section 2 of the Pollution Prevention and Control Act 1999 or any corresponding legislation for Northern Ireland;

15.3.7 any regulator appointed under section 54 of the Competition Act 1998; or

15.3.8 any other public body, regulatory agency or government advisory body, where in the absolute discretion of the Administrator or the Secretary of State, as appropriate, the Administrator or Secretary of State considers that it would be obliged to disclose such information in response to a request for information under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004, if such a request were made.

16. COLLECTION OF CHARGES

16.1 A Sector Association may request the consent of the Administrator to collect charges due from Operators to the Administrator in respect of facilities under the charging scheme.

16.2 If a Sector Association wishes to collect charges due from an Operator to the Administrator under the charging scheme, the Sector Association may serve a notice in writing on the Administrator by the last working day in February in the calendar year in which the charges fall due.

16.3 A notice served under Rule 16.2 must specify the facilities in respect of which the Sector Association intends to collect charges, being not fewer than 50% of the facilities covered by an umbrella agreement.

16.4 Following receipt of the notice, the Administrator must:

16.4.1 consent to the Sector Association collecting charges; or

16.4.2 refuse consent to the Sector Association collecting charges, giving reasons for the decision.

16.5 If the Administrator consents to the Sector Association collecting charges the Sector Association must:

16.5.1 itemise charges separately in any invoices that it issues in respect of charges;

16.5.2 collect and remit all charges collected to the Administrator without deduction or set off by the last working day in September in each year;

16.5.3 prepare an annual report to the Administrator by the last working day in October in the year in which it has collected charges setting out which Operators it has collected

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charges from and which Operators have failed to pay charges due to the Sector Association.

- 16.6 A Sector Association must not actively pursue any outstanding charges after the last working day in September in any year in which they fall due. If a Sector Association receives charges after this date the Sector Association must accept the payment and remit this to the Environment Agency along with information identifying the Operator making the payment.
- 16.7 If a Sector Association fails to comply with any of its obligations under this Rule the Administrator may serve a notice on the Sector Association that consent to the Sector Association continuing to collect charges is withdrawn at the expiry of 20 working days from the date of the notice.

17. SERVICE OF NOTICES

- 17.1 Any notice served under these Rules must be in writing and may be served by sending it by post or electronically.

- 17.2 The address for the service of all notices on the Administrator is:

Postal: Environment Agency
 Richard Fairclough House
 Knutsford Road, Latchford,
 Warrington,
 Cheshire, WA4 1HT

Electronic: CCA-operations@environment-agency.gov.uk

- 17.3 The address for the service of all notices on the Sector Association is the address of the person set out in Schedule 2 to the umbrella agreement.

- 17.4 The address for the service of all notices on the Operator is the address of the responsible person.

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SCHEDULE 2
THE SECTOR ASSOCIATION

Information Technology Telecommunications and Electronics Association (techUK)
Which represents facilities that belong to the Data Centres sector.

Whose address for service of all notices under this Agreement is

By post:
10 St Bride Street
London
EC4A 4AD

Electronically:
emma.fryer@techuk.org

SCHEDULE 3
THE SECTOR

ACTIVITIES UNDERTAKEN BY A FACILITY FALLING WITHIN THE SECTOR

The business activity is the leasing or licensing of a data facility which is being used as a data centre.

“data facility” means a room, or rooms sharing the same electricity supply circuit, occupied mainly or exclusively by computer equipment which is enabled to transfer data electronically, and where in respect of the room or rooms—

- (a) the temperature and humidity is regulated in connection with the operation of the computer equipment;
- (b) the electricity supply is at least 200kW; and
- (c) electricity is supplied by a back-up electricity supply when the mains supply is interrupted.

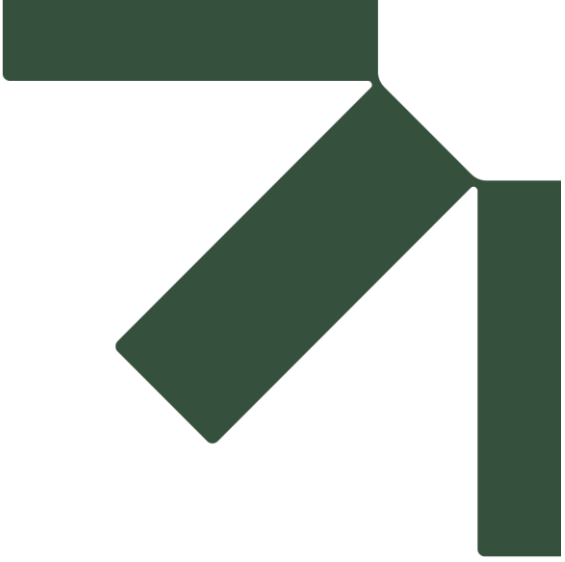
UMBRELLA CLIMATE CHANGE AGREEMENT FOR THE DATA CENTRES SECTOR
Agreement dated 14 February 2022

SCHEDULE 4
LIST OF FACILITIES

SCHEDULE 5
THE SECTOR COMMITMENT

Sector Commitment:

Target Period	Sector Commitment (percentage reduction from base year)
1 January 2013 to 31 December 2014	1.000%
1 January 2015 to 31 December 2016	8.333%
1 January 2017 to 31 December 2018	13.750%
1 January 2019 to 31 December 2020	15.000%
1 January 2021 to 31 December 2022	4.539%



Appendix E Fuel Delivery and Storage Procedure

Environmental Permit Application

Best Available Techniques and Operating Techniques

IRON MOUNTAIN

SLR Project No.: 410.066934.00001

Fuel Delivery and Storage

Application	This operational control and any associated documents are based on Health, Safety and Environmental best practice. It is introduced as a supplement to company procedure where additional guidelines are required or local arrangements need to be more specific, of a higher standard, or differ significantly from company procedure. Operational Controls must be approved by the responsible QHSE Director.
Purpose	The intent of this operational control is to give direction and inform employees of their local obligations and the processes to follow in relation to protecting health, safety or the environment from the impact of work related activities. The objective is to ensure that risks associated with fuel delivery and storage are mitigated.
Scope	Guidance for fuel delivery at LON-1
Associated documents	Emergency spill control document Emergency contact list (Red Folder in BMS Room)
Summary of Changes	Issue no. 1: Rev 1 For Slough DC 09/07/2020 - Rebranded - Dean Partridge 17/02/2022 - New diesel storage and plant added - Stored quantities confirmed and updated - Dean Partridge 29/10/2025 - Diesel sprinkler pump, diesel tank added (1200L) - Lee Sheldon 29/10/2025 - Closure of DCD's added as point 4.7 "The DCD's (Drain Closure Device) must be closed during refueling. The main control panel is located in the generator compound pump room, the closure switch will close all the DCD's on site." - Lee Sheldon 31/10/2025 - Section 4.4 updated with correct sump location "Generator compound - Within Bulk Tank A & B bunded area" - Lee Sheldon 31/10/2025 - Section 5.0 updated - Removed the procedure as it conflicts with the pollution prevention response plan: https://docs.google.com/document/d/1aXSVIIMDmk-uyNQIziUVFMQ4NuoLtUe/edit#heading=h.gierxf6xp5ci Lee Sheldon

Table of Contents

1.0. Overview

2.0. Competence

3.0. Integrity of Systems

4.0. Fuel Delivery Procedures

5.0. Spillage Leakage Action

6.0. Health Checks

7.0. Disposal of hazardous waste

8.0. Fuel Storage Inspection Log

1.0. Overview

This procedure must be brought to the attention of all local employees and to the attention of any supplier at the time of placing an order. Summary Information must be placed at refuel points for reference.

2.0. Competence

All personnel involved in the management of fuel must have read the site escalation procedure, and received appropriate training.

All suppliers must be 'approved' and must have satisfied the procurement department's vetting procedures - Must be on Safe Contractor.

Fuel delivery is initiated by weekly checks carried out by site staff who are responsible for managing the delivery process. All suppliers must provide site-specific risk assessments and methods of working, including action to be taken in the event of a leak or spill. Such documentation is to be reviewed prior to the supplier arriving on site.

A Hazardous Substance Assessment and Safety Data Sheet must be available for the products supplied.

Suppliers will receive an appropriate site induction and where required be issued with an 'Authorisation to Work' or 'Permit to Work'.

3.0. Integrity of Systems

The Fuel Storage Inspection log has initially been completed and is held < on the shared drive and in Logbook 6 . Visual inspections will be carried out daily in accordance with the PPM Planner to confirm the integrity of storage tanks /bunds, spill prevention and protection equipment, and to identify any unsafe conditions. Where there are any changes the Fuel Storage Inspection Log will be updated.

4.0. Fuel Delivery Procedures

Following a refill request the following safe system of work will be invoked:

4.1 A trained member of the team will take a gauge reading and cross-reference this with the Monthly Log/BMS System. Where accuracy is in doubt a dipstick reading will be taken.

4.2 All personnel must be aware of the maximum capacity of the generator tanks:

Generators 1-6 day tanks: within the generator compound = 4000 Litres per tank
Bulk tanks 1 and 2 : Located south road - Generator compound = 80,000 Litres each
Generator R - Located south road - Generator compound - 'Belly' tank = 44500 Litres
Generator 4 - Located south road - Generator compound - 'Belly' tank = 44500 Litres
Generator 5 - Located West Roof - 'Day' tank = 1056 Litres
Generator 6 - Located West Roof - 'Day' tank = 1000 Litres
Generator 7- Located West Roof - 'Day' tank = 1000 Litres
Bulk tank 5 - Located Roadway WEST = 44500 Litres
Bulk tank 6 - Located Roadway WEST = 45626 Litres
Bulk tank 7 - Located Roadway WEST = 45626 Litres
Diesel Sprinkler pump tank - Located Sprinkler Room = 1200 Litres

4.3 The tanks must not be filled more than 95% of their capacity. The supplier must be given an accurate reading. Any concerns over the accuracy of the readings must be reported to the site manager or supervisor and then to the client.

4.4 As a precaution sump pumps should be switched off by manual controls:
- Generator compound - Within Bulk Tank A & B bunded area.

4.5 Security should be informed and access keys collected. Shift staff informed and ATW (Authority to Work) completed.

4.6 Where necessary the local area will be appropriately cordoned off using barriers and cones around the roadway and fuel fill point. The Tanker must be supervised at all times.

4.7 The DCD's (Drain Closure Device) must be closed during refueling. The main control panel is located in the generator compound pump room, the closure switch will close all the DCD's on site.

4.8 Any 'at risk' drains must be covered to prevent any illegal discharges and spill protection must be positioned for ease of access if required. Any concerns over the quality of the spill kits or drain covers must be reported to the site manager/supervisor and the customer. Delivery of fuel must not be carried out until any remedial actions are conducted. Add any site-specific requirement here. E.g. Ensure you cover surface drains directly below the fuel fill point grill.

Fuel Delivery and Storage

- 4.9 All combustible materials, flammables, naked lights must be removed and mobile phones switched off within the loading area and immediate vicinity during delivery.
- 4.10 All employees must ensure that they wear the correct level of PPE as defined in the risk assessments for this activity, including hi-visibility jackets/tabards, hard hats and safety footwear. Rubber gauntlet gloves, safety goggles and disposable respiratory protection must also be available and worn in the event of a spillage .
- 4.11 All deliveries of fuel must be supervised by a member of the IMDC site team and the tanker driver. Add other arrangements for your site. For example where there is significant risk an Authority to Work Pass and the General Permit to Work procedure will apply .

5.0. Spillage Leakage Action

In the event of a leak or spill of fuel the following procedures must be invoked:

See the pollution prevention response plan for actions:

<https://docs.google.com/document/d/1aXSVIIMDmk-uyNQUiZiUVFMQ4NuoLtUe/edit#heading=h.gierxf6xp5ci>

6.0. Health Checks

Any person who has been exposed to a hazardous substance should report the occurrence to their line manager / supervisor. Any person showing symptoms following exposure should seek medical attention.

7.0. Disposal of hazardous waste

Following the containment of leak/spill material, < the site manager, in conjunction with the clients procedure > will arrange for a controlled clean up and disposal, including any remaining substances, its packaging and any absorbent medium used in the containment and clean-up process.

It is essential that the hazardous substances / materials are disposed of via contractors who are licensed under local waste management and other relevant licensing regulations. Refer to Environmental Protection & Waste Management Procedures.

8.0. Fuel Storage Inspection Log

Tanks checked during daily checks & OFTEC Carried out and recorded

All boxes must be filled in with correct information: Unsafe conditions should be marked with * and referenced separately.

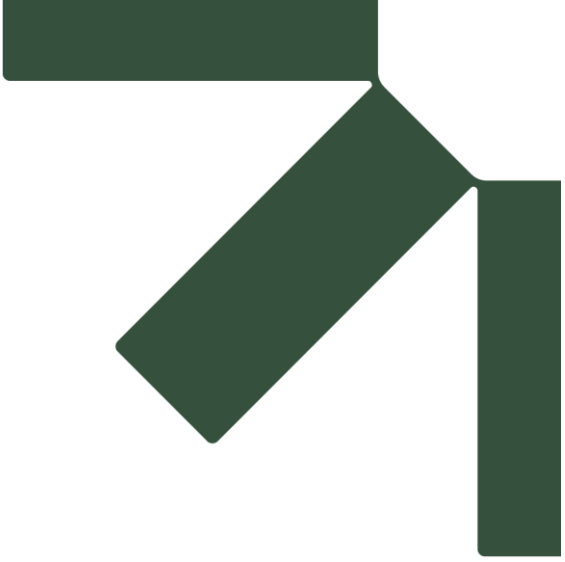
STORAGE / INSTALLATION :	< name of specific storage tank / installation >
Tank Type and Material?	
Manufacturer?	
Model?	
Capacity?	
Location?	
Is tank securely fixed?	
Fuel type?	
Bund capacity?	
Bund Condition?	
Tank Condition?	
Tank sludge drained off?	
Vent pipe/sight gauges	
Clearances for fire protection or Environmental hazard acceptable? (reference local standard)	
Flexible line condition?	
Fuel line condition?	
Fuel filter make and size?	
Fuel filter replaced /cleaned?	
Drop valve system condition?	
Knock off button operate?	
Fire extinguishers OK? Type? Test date?	
Is installation fit for continued use?	
Comments (Include alarm systems, access and any other relevant information):	

***An unsafe situation has been identified: Yes / No**

I confirm that the inspection detailed above has been carried out in accordance with the current regulations, industry standards and procedures and details of any unsafe situation have been reported in accordance with procedure:

Name	Date:

In accordance with the site-specific operational control for Fuel delivery and Storage this document will be updated periodically



Appendix F ISO14001 Certificate

Environmental Permit Application

Best Available Techniques and Operating Techniques

IRON MOUNTAIN

SLR Project No.: 410.066934.00001



ISO 14001 Certification

Iron Mountain Data Center

1137 Branchton Rd., Boyers, PA, 16020, US

SCOPE OF CERTIFICATION:

Colocation Services.

BOUNDARIES:

See site list.

Having been examined in detail for conformance to the requirements of ISO 14001:2015, and having been determined by Advanced Waste Management Systems, Incorporated, the Certification Body, to be in conformance with all provisions of this standard, the Environmental Management System of the organization is hereby certified to ISO 14001:2015. The scope of this certification includes all operations and activities of the organization as specified above. This document is subject to the terms and conditions of AWM Rights and Duties document.

Initial Certification

October 2, 2020

Current Certification

October 2, 2023

Certification Expiration

October 2, 2026

In witness whereof this
Certification is granted and the
Mark of Certification and our
signatures are hereunto affixed.



Robert A. Ellis
President

Advanced Waste Management
Systems, Inc.
6430 Hixson Pike
Hixson, TN 37343
423-843-2206



Certificate # 273 E

Last Revised: October 1, 2025

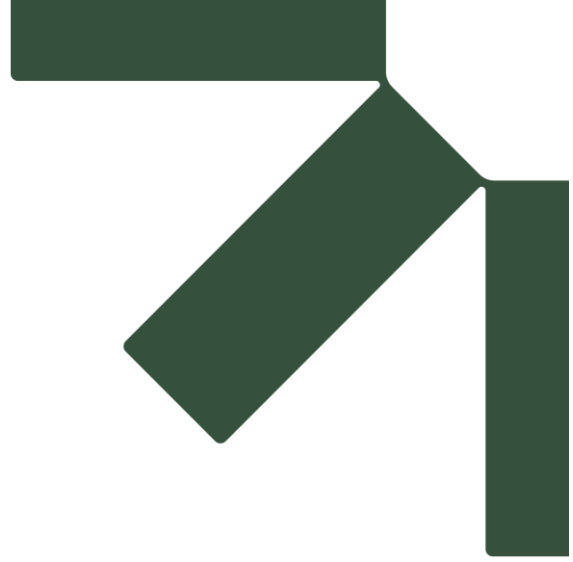
Iron Mountain Data Center

Number of sites: 19

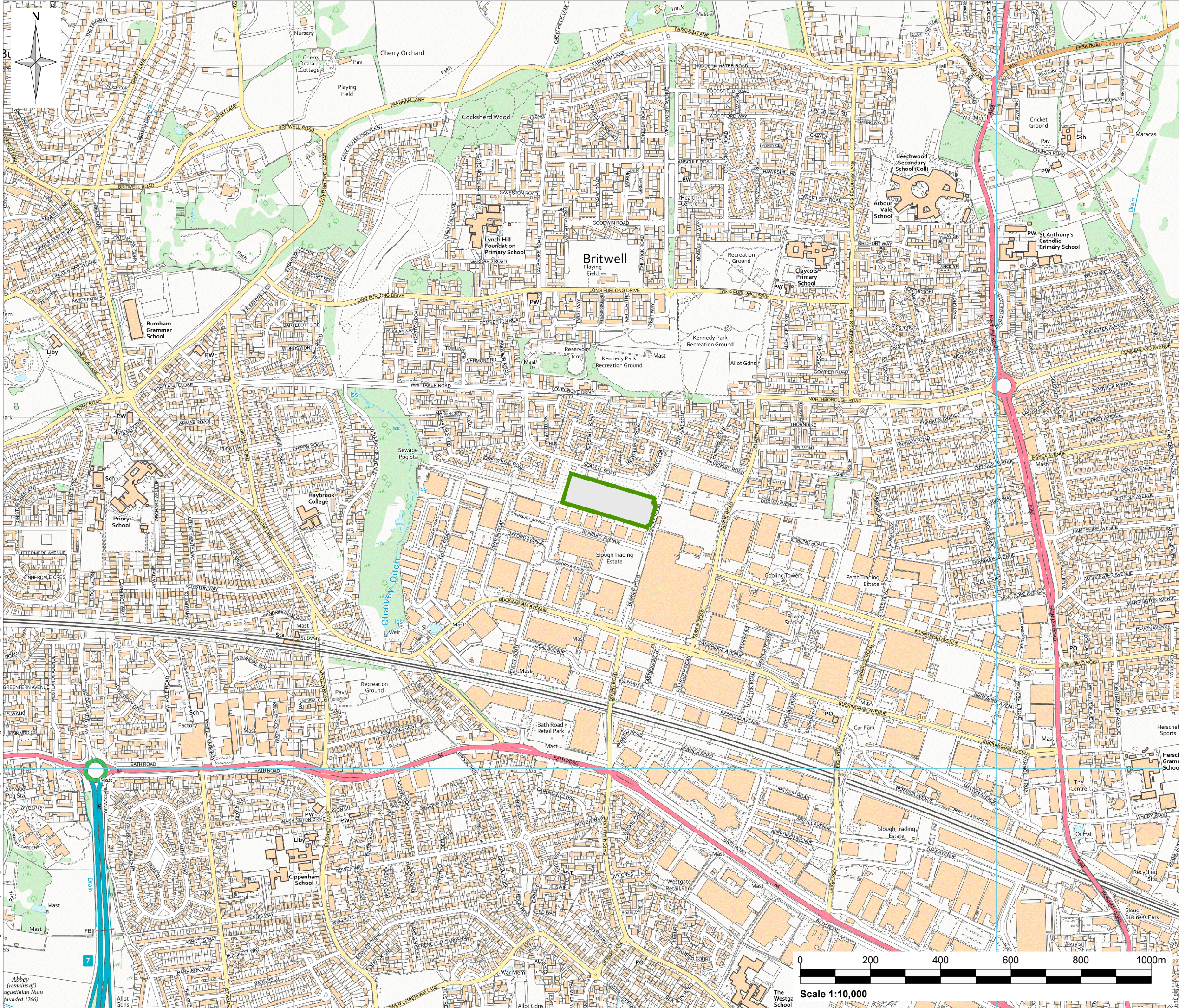
Site ID	Site Name	Address	Scope	Boundaries
273.01	Iron Mountain Data Center - AMS-1	J.W. Lucasweg 35, 2031, BE Haarlem, , , NL	Colocation Services.	Entire above ground facility inclusive.
273.02	Iron Mountain Data Center - AZP-1	615 North 48th St., Phoenix, AZ, 85008, US	Colocation Services.	Entire above ground facility inclusive.
273.03	Iron Mountain Data Center - AZP-2	4802 E Van Buren, Phoenix, AZ, 85008, US	Colocation Services.	Entire above ground facility inclusive.
273.04	Iron Mountain Data Center - AZS-1	8521 East Princess Dr. #100, Scottsdale, AZ, 85255, US	Colocation Services.	Entire above ground facility inclusive.
273.05	Iron Mountain Data Center - BOS-1	171 Bearfoot Rd., Northborough, MA, 01532, US	Colocation Services.	Entire above ground facility inclusive.
273.06	Iron Mountain Data Center - DEN-1	4300 Brighton Blvd., Denver, CO, 80216, US	Colocation Services.	Entire above ground facility inclusive.
273.07	Iron Mountain Data Center - KCM-1	6301 Winchester Ave., Suite 817, Kansas City, MO, 64133, US	Colocation Services.	Secure Compute Areas 1-3 and supporting office, conference and storage space.
273.08	Iron Mountain Data Center - LON-1	724-729 Dundee Road, Slough, , , GB	Colocation Services.	Entire above ground facility inclusive.
273.09	Iron Mountain Data Center - NJE-1	3003 Woodbridge Ave., Edison, NJ, 08837, US	Colocation Services.	Entire above ground facility inclusive.
273.10	Iron Mountain Data Center - OHS-1	3366 South Tech Blvd., Miamisburg, OH, 45342, US	Colocation Services.	Entire above ground facility inclusive.
273.11	Iron Mountain Data Center - SIN-1	Serangoon North Avenue 6, Singapore, , 554502, SG	Colocation Services.	Entire above ground facility inclusive.
273.12	Iron Mountain Data Center - VA-1	11650 Hayden Rd. (VA-1 building 4), Manassas, VA, 20109, US	Colocation Services.	Entire above ground facility inclusive.
273.13	Iron Mountain Data Center - VA-2	11650 Hayden Rd. (VA-2 building 3), Manassas, VA, 20109, US	Colocation Services.	Entire above ground facility inclusive.
273.14	Iron Mountain Data Center - WPA-1	1137 Branchton Rd., Boyers, PA, 16020, US	Colocation Services.	Secure Compute Areas 1-15, office space in Room 46, Conference Rooms in SC1-5, SC8-9 and Room 47, and storage area in Room 6.
273.15	Iron Mountain Data Center - FRA-2	Heinrich Lanz Allee 47, Hessen, , 60437, DE	Colocation Services.	Entire above ground facility inclusive.
273.16	Iron Mountain Data Center - MAD-1	Calle Mar Egeo, 4 San Fernando de Henares, Madrid, , 28830, ES	Colocation Services.	Entire above ground facility inclusive.
273.17	Iron Mountain Data Center - VA-3	11650 Hayden Rd. (VA-3 building 2), Manassas , VA, 20109, US	Colocation Services.	Entire above ground facility inclusive.
273.18	Iron Mountain Data Center - VA-6	7745 Wellington Rd., Manassas , VA, 20109, US	Colocation Services.	Entire above ground facility inclusive.
273.19	Iron Mountain Data Center - VA-7	8330 Bethlehem Rd., Manassas , VA, 20109, US	Colocation Services.	Entire above ground facility inclusive.

Certificate # 273

Last Revised: October 1, 2025



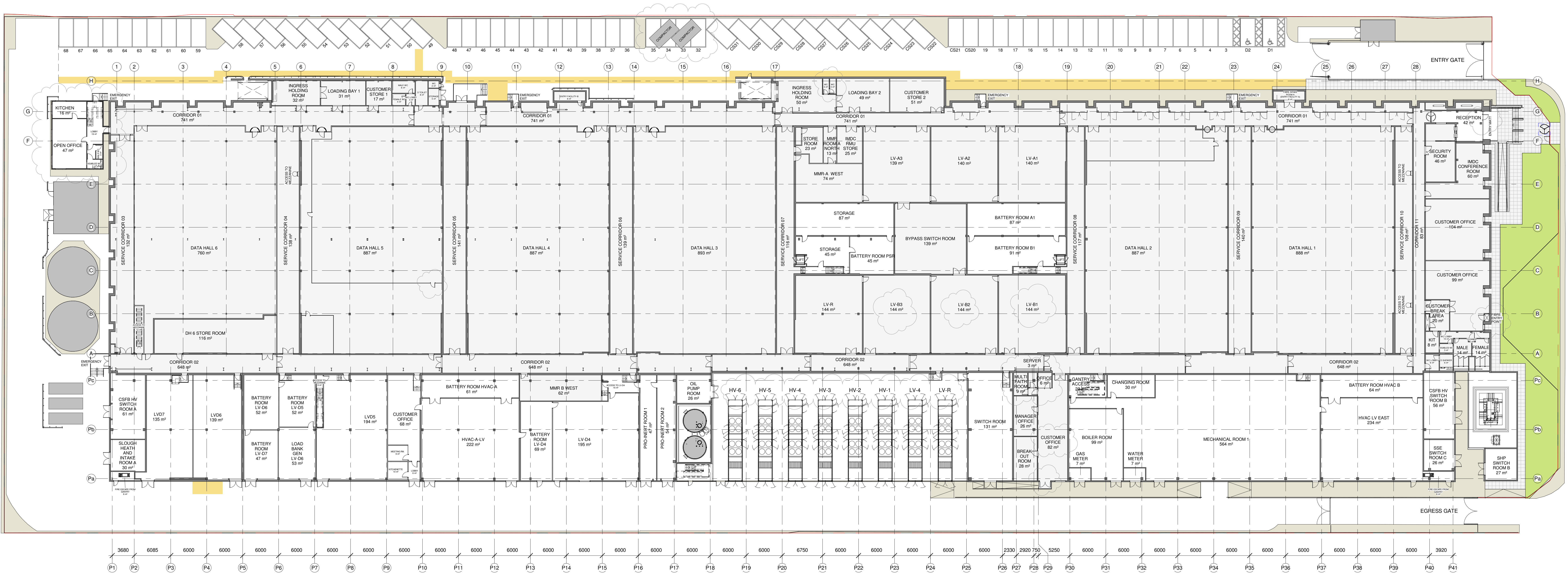
DRAWINGS



Legend:

Environmental Permit Boundary

Rev	Amendments	Date	By	Chk	Auth
 SLR www.slrconsulting.com					
Client Iron Mountain (UK) Data Centre Limited					
Project Slough Data Centre Environmental Permit Application					
Figure Title Figure 001 Site Location Plan					
Scale 1:10,000 @ A3		SLR Project No. 410.066934.00001			
Designed	Drawn	Checked	Authorised		
Date	Date	Date	Date		
Figure Number SDC-SLR-XX-XX-D-EM-000001					Rev. P01

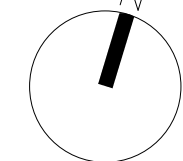


1 GROUND FLOOR PLAN
1 : 250

DO NOT SCALE FROM THIS DRAWING
IF IN DOUBT ASK

Notes:

Key Plan



Rev: Date: Description:
P01 20/06/23 ISSUED FOR APPROVAL
P02 27/07/23 ISSUED FOR APPROVAL

Chk: IFA
Architect:

TPARCHITECTS

Client:

IRON MOUNTAIN

Project:
LON 1 SURVEY
Title:
GROUND FLOOR PLAN

Status:
Project Status

Model File Number:
C1099-TPA-22-ZZ-M5-A-0001

Drawn By: SF

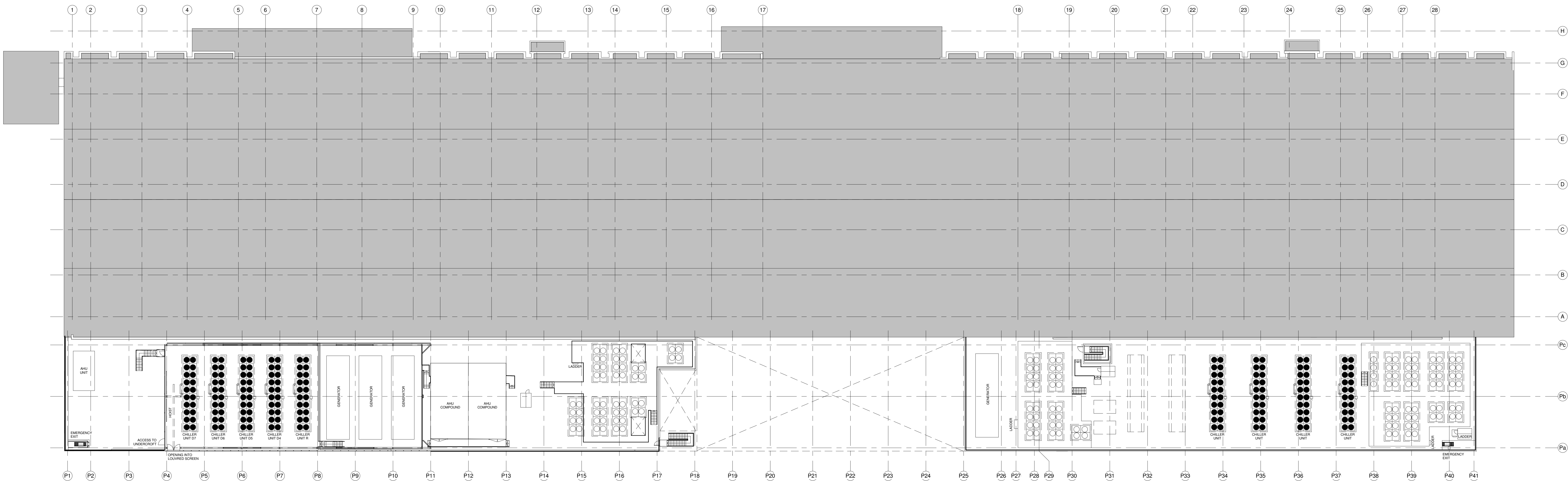
Checked By: PT

Drawing Number:
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Revision:
P02

Scale:
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Revision:

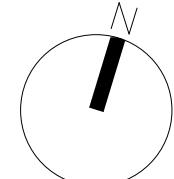


1 ROOF PLAN
1 : 250

DO NOT SCALE FROM THIS DRAWING
IF IN DOUBT ASK

Notes:

Key Plan:



Rev: Date: Description:
P01 20/06/23 ISSUED FOR APPROVAL

Chkd: TPA

Architect:

TPARCHITECTS

Client:



Project:
LON 1 SURVEY
Title:
ROOF FLOOR PLAN

Status:
Project Status

Model File Number:
C1099-TPA-ZZ-ZZ-M5-A-0001

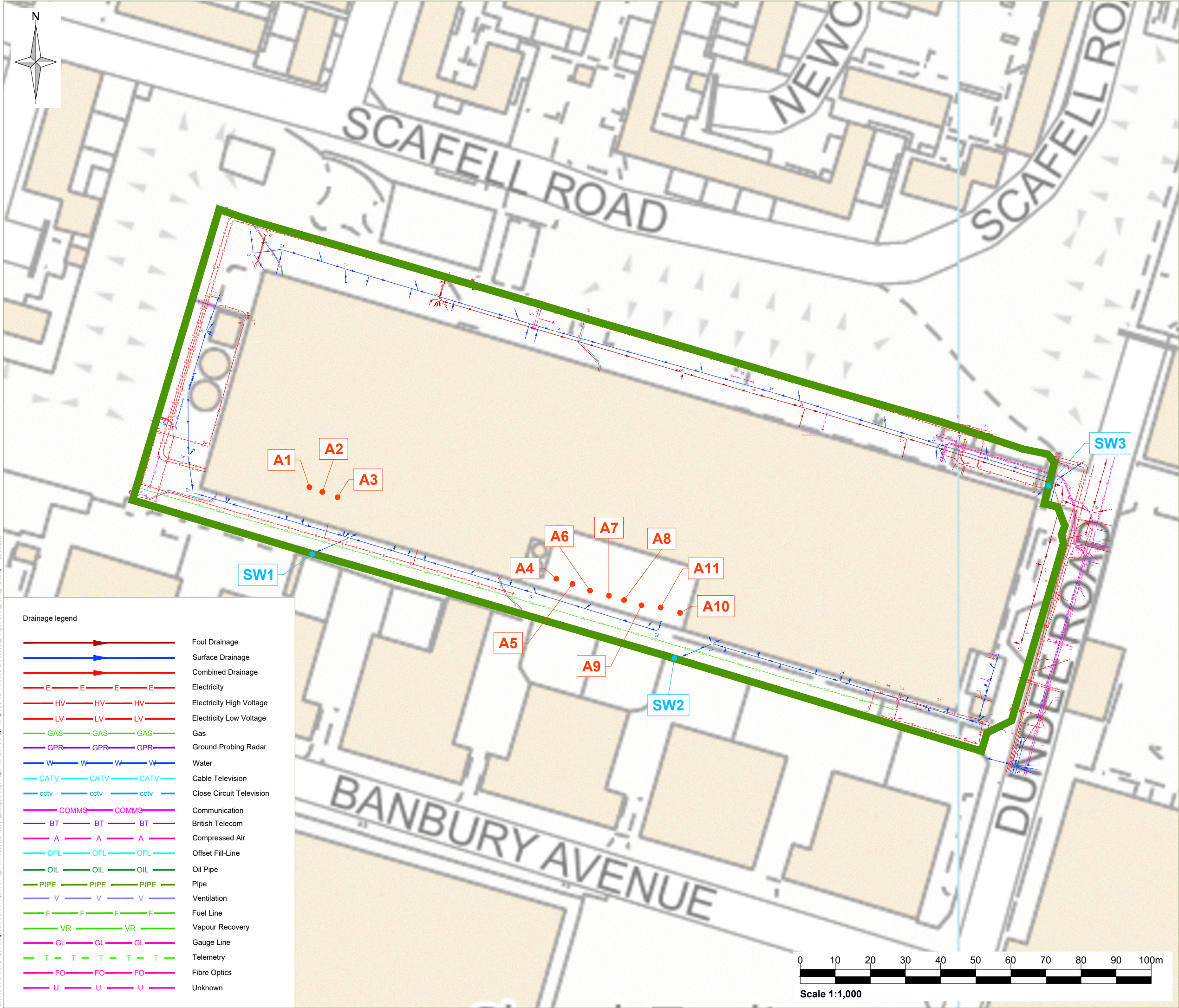
Drawn By: SF

Checked By: PT

Drawing Number:
2947-TPA-MF-RF-DR-A-20002

Scale:
1 : 250@A0

Revision:
P01



Legend:

Environmental Permit Boundary

A1

Air Emission Point Source

SW1

Emission Point to Water

Rev	Amendments	Date	By	Chk	Auth
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www.slrconsulting.com

Client

Iron Mountain (UK) Data Centre Limited

Project

Slough Data Centre
Environmental Permit Application

Figure Title

Figure 005
Emission Points Plan

Scale	1:1,000	@ A3	SLR Project No.	410.066934.00001
Designed	Drawn	Checked	Authorised	
Date	Date	Date	Date	

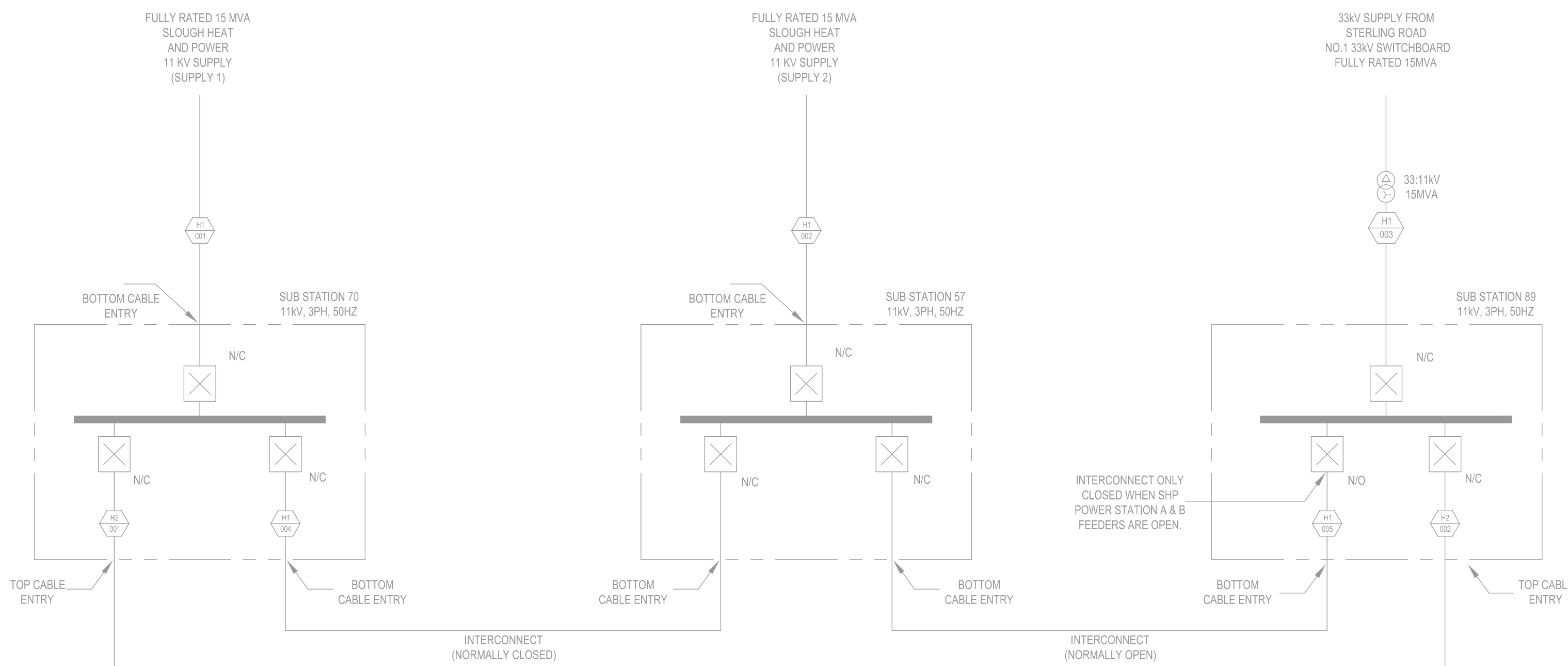
Figure Number

SDC-SLR-XX-XX-D-EM-000005

Rev.

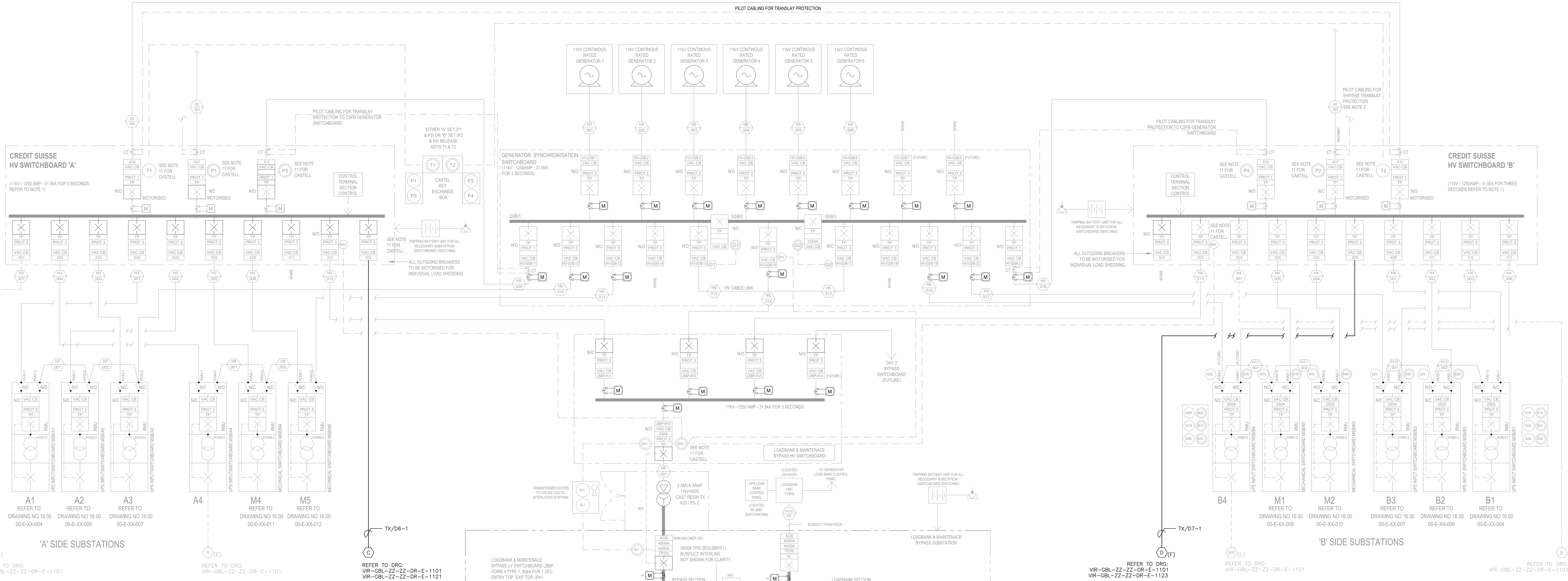
P01

SLOUGH HEAT & POWER EQUIPMENT AND INSTALLATION



SITE 11kV DISTRIBUTION NETWORK

CREDIT SUISSE MANUAL HV INTERCONNECT
PILOT CABLING FOR TRANSLAY PROTECTION



EXISTING NOTES

1. SWITCHGEAR HAS A TRANSIENT PROTECTION UNIT WHICH 415V CONNECTED TO A 63A TPN MCCB. THE UNIT HAS BEEN INTEGRATED WITH THE SWITCHGEAR WITH A CLEAR VIEWING WINDOW INSTALLED AS NEAR AS POSSIBLE TO THE MAIN INCOMING ACB.
2. MCCB FEEDING ACTING HARMONIC FILTER HAS 200A RATED FRAME COPPER CONNECTORS FITTED WITH 100A RATED DEVICE. THE DEVICE FEEDING THE ACTIVE HARMONIC FILTER HAS BEEN POSITIONED AS CLOSE AS POSSIBLE TO THE INCOMING ACB WITH CTS POSITIONED BOTH UP STREAM AND DOWN STREAM OF THE DEVICE.
3. SWITCHGEAR IS PROVIDED WITH THERMAL IMAGING CAPABILITY TO MONITOR THE MAIN BUSBAR JOINTS FOR HOT SPOTS.
4. MAIN SWITCHGEAR & UPS FORM 4 TYPE 7 TOP ENTRY, TOP/BOTTOM EXIT, RATED AT 80KA FOR 1 SECONDS.
5. UPS ARE FITTED WITH MULTI-INTERFACE RELAY BOARD TO PROVIDE VOLT FREE CONTACTS AND ALARM CONDITIONS - MAINS FAIL, LOW BATTERY, UPS ON BY PASS AND UPS RUNNING SIGNALS FOR CONNECTION TO BMS SYSTEM.
6. CASTELL KEYS TO BE REMOVED FROM THE HV CIRCUIT BREAKERS TO ENABLE ACCESS TO TRANSFORMER HOUSING.
7. ALL OUTGOING DEVICES FROM MAIN SWITCHGEAR ARE ADJUSTABLE ELECTRONIC MCCBs, RATED FOR REQUIRED SHORT CIRCUIT WITHSTAND VALUES SHOWN IN SHORT CIRCUIT SCHEDULE.
8. ALL ACBs AND MCCBs HAVE FULLY WITHDRAWABLE 'HOT PLUGGABLE' (I.E. CAN BE REPLACED WITHOUT SHUTTING DOWN THE RELEVANT PANEL) ENCLOSURES.
9. THE A GROUP OF UPS MODULES ARE BUS SYNCHED TOGETHER TO ENSURE SYNCHRONOUS OPERATION. THE B GROUP UPS ARE BUS SYNCHED TO EACH OTHER IN THE SAME FASHION.
10. CASTELL KEYS OPERATE WALL MOUNTED SOLENOIDS
11. FOR CASTELL SEQUENCE PLEASE REFER TO ABB O&M MANUAL 1 SECTION 10

TERMINOLOGY

- TPN - THREE PHASE AND UNSWITCHED NEUTRAL
- TPON - THREE PHASE AND UNSWITCHED DOUBLE NEUTRAL
- TPNN - THREE PHASE AND SWITCHED NEUTRAL
- NON - BREAKER NOT FITTED WITH PROTECTION UNIT

PROTECTION TYPE

- PROT 1 - HV BREAKER COMPLETE WITH IDMT OVERCURRENT, EARTH FAULT, REVERSE POWER, UNDER FREQUENCY & OVER FREQUENCY CHECK SYNCH, UNDER VOLTAGE OVER VOLTAGE PROTECTION
- PROT 3 - HV BREAKER COMPLETE WITH IDMT OVERCURRENT AND EARTH FAULT PROTECTION
- PROT 4 - HV BREAKER COMPLETE WITH TRANSLAY UNIT PROTECTION
- PROT 5 - HV BREAKER COMPLETE WITH IDMT OVERCURRENT, EARTH FAULT PROTECTION

FOR BREAKER RATINGS REFER TO ABB O&M MANUALS SECTION 4

LEGEND

- DIGITAL MULTI-METER (KVA, KVA, AMP, VOLTAGE, FREQUENCY, KWH PULSE AND POWER FACTOR) COMPLETE WITH C.T.S AND CABLEING
- HV DENOTES THE INCLUSION OF A SUITABLE HARMONICS MONITORING FACILITY
- ALL MULTI-METERS INCORPORATE THE FACILITY TO MONITOR FROM THE BMS. A RADIAL DATA LINK CONNECTING ALL METERS TO THE BMS IS SUPPLIED
- CABLE REFERENCE TAG (REFER TO CABLE SCHEDULES)
- TPN ISOLATOR ('X' DENOTES RATING IN AMPS)

KEY REF

- CASTELL KEY SOCKET (KEY VACUITY)
- CASTELL KEY SOCKET (KEY CAPTIVE)
- CASTELL KEY EXCHANGE BOX
- ABB SWITCH REFERENCE
- PROTECTION TYPE (REFER TO KEY) NO. OF POLES
- NON - REFERS TO NON AUTOMATIC SWITCH DISCONNECTOR WITH NO PROTECTION RELAY DEVICE

NOTES

1. THE ELECTRICAL INSTALLATION IS TO BE INSTALLED IN ACCORDANCE WITH BS7671 "REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, IET WIRING REGULATIONS".
2. ALL ELECTRICAL EQUIPMENT SHOWN ON THIS DRAWING IS PART OF THE ELECTRICAL WORKS UNLESS INDICATED OTHERWISE.
3. GREYED OUT SERVICES DENOTES EXISTING SERVICES.
4. BOLD DENOTES NEW WORKS
5. TRANSFORMER STATUS CONTACT TO BE WIRED TO BMS/PMS FOR REMOTE MONITORING TO INCLUDE:
 - 1) HIGH TEMP ALARM
 - 2) HIGH HIGH TEMP ALARM

Rev	Date	Description
R01	04/03/21	CONSTRUCTION RECORD

Client
PROJECT VIRGO

Drawing Title
MVM SCHEMATIC

GBL Project No. GB7531	GBTS Project No. 8143
Checked by MVM	Checked Date RD
Approved by DR	Approval Date Scale N.T.S @A0

Reason for Issue
RECORD

Drawing No.
VIR-GBL-ZZ-ZZ-DR-E-1002

Revision
R01

GRATTE BROTHERS LIMITED

2 Regents Wharf
All Saints Street
London N1 9RL
Tel: 020 7837 6433
Fax: 020 7320 8100
email: info@gratte.com

Building services
engineers

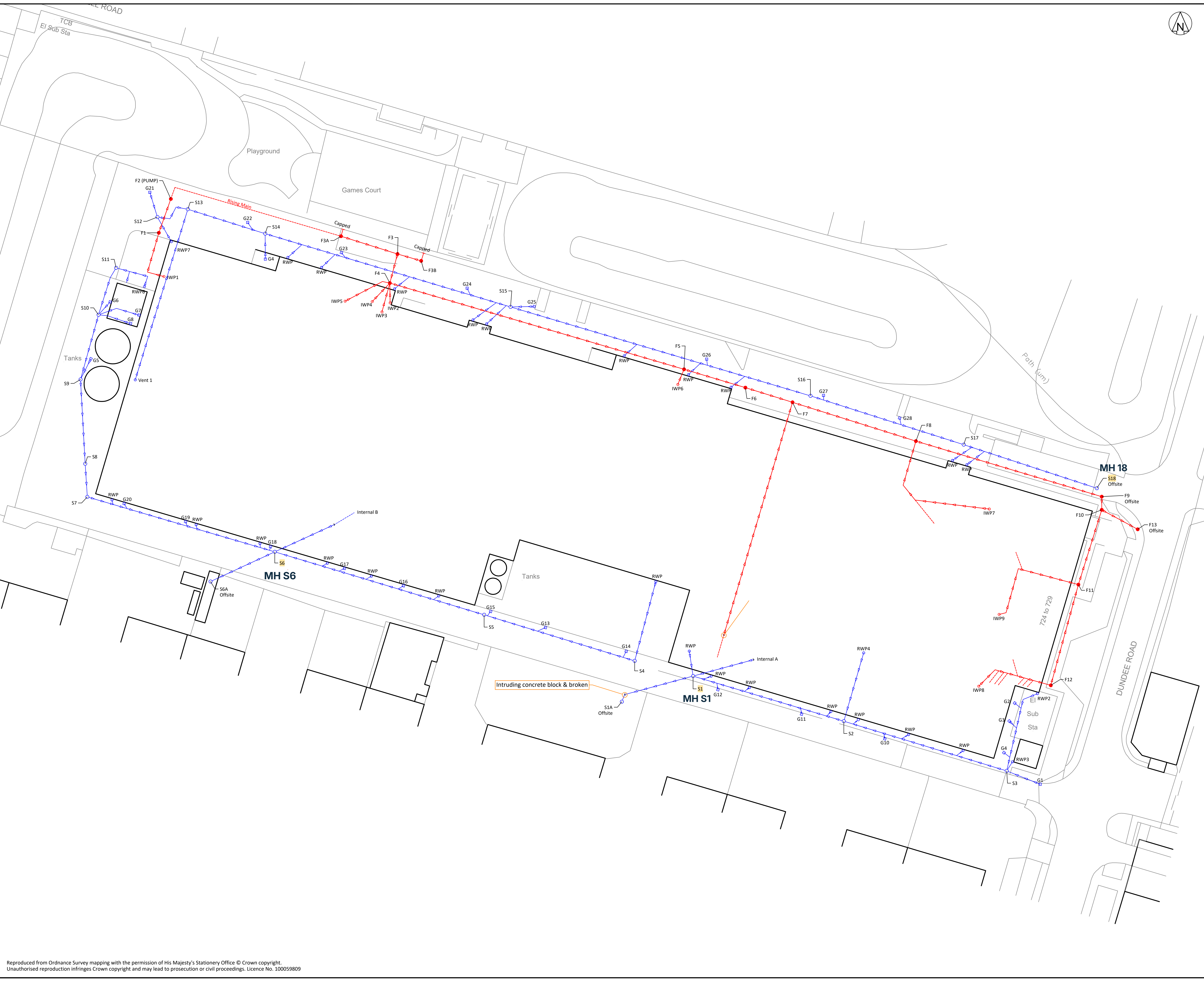
ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

ISO 9001:2015

File name: FJ_288213 Iron Mountain (UK).02.dwg
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LEGEND

Approx. Boundary Line

Private

:Foul MH

:Combined MH

:Surface Water MH

:Interceptor

:Foul Drain

:Combined Drain

:Surface Water Drain

:ACO Drain

Public

:Manhole Foul

:Manhole Surface

:Foul Drain

:Combined Drain

:Surface Water Drain

ABBREVIATIONS

AR	Assumed Route	RG	Road Gully
CP	Catch Pit	S/A	Soakaway
D/C	Drainage Channel	SP	Soil Pipe
DP	Down Pipe	SVP	Soil Vent Pipe
G	Gully	UTL	Unable to Locate
G/R	Gully Run	UTR	Unable to Raise
IC	Inspection Cover	UTS	Unable to Survey
INT	Interceptor	UTT	Unable to Trace
MH	Manhole Cover	VR	Vapour Recovery
NRV	Non Return Valve	VP	Vent Pipe
NPV	No Pipes Visible	WP	Waste Pipe
RWP	Rain Water Pipe	YG	Yard Gully
RE	Rodding Eye	Ø	Pipe Diameter

Project:

IRON MOUNTAIN (UK)

Drawing Title:

DRAINAGE & CONNECTIVITY

Job Number:

FJ_288213

Scale:	Drawn by:	Date:	Consultant:	Phase:	Revision:
NTS	AMP	25/07/2023	SM	n/a	1

Oneline

Adler & Allan

ENVIRONMENTAL RISK REDUCTION

Adler & Allan
16 Victoria Avenue, Harrogate
North Yorkshire HG1 1ED

0800 592 827
www.adlerandallan.co.uk



Making Sustainability Happen