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Attachment-1-2-Non Technical Summary

EPA Industrial Emissions Licence Application

CLIENT

SDC-EN Meath I
Limited

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Signature		
Name	Truc Vo	Teri Hayes
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1. INTRODUCTION

SDC-EN Meath I Limited ("SDC" or 'the Applicant') is applying to the Environmental Protection Agency ('the Agency' or 'the EPA') for an Industrial Emissions (IE) Licence for its data storage facility (the 'Installation') located at Bracetown & Gunnocks, to the North of Clonee, Co. Meath. The Applicant submitted an initial application for the IE licence on 11 November 2025. Owing to changes in the planned phasing for site development, this application was subsequently withdrawn and replaced with the current application.

The location of the subject site and its IE boundary are shown on Drawing Ref. 25_059-CSE-00-XX-DR-C-001 (Site Ownership Plan), which is included with this application. The application area covers c. 22.8 ha in total (hereafter referred to as the 'site'). It is noted that the licence boundary is smaller than the boundary outlined in the Planning/Environmental Impact Assessment Report, which includes a substation and is provided in Section 6 of this IE application.

1.1 Licensable Activity

The development is divided into three phases:

Phase 1:

In Phase 1, two data centres (DC), DC1 and DC3, will be operational but not yet connected to the transmission grid.

To support operations, 18 continuous-rated generators will be installed at the DC2 location, collectively referred to as the Temporary Power Generation (TPG) DC2 (TPG DC2) system. A further 18 continuous-rated generators will be installed at the DC4 location, referred to as the TPG DC4 system.

During this phase, power to DC1 and DC3 can be provided from the TPG systems associated with either DC2 or DC4, allowing flexible power distribution depending on operational requirements. The 18 generators located at DC1 and the 18 generators located at DC3 will function solely as backup generators.

The TPG is not a permanent power solution. It will operate only for a limited period of time from commissioning until final connection to the transmission grid. This phase is temporary pending final connection to the transmission grid. The precise duration is uncertain, but temporary.

Phase 2:

In Phase 2, DC1 and DC3 will be connected to the electrical grid. Once the grid connection is established, the 36 previously installed TPG DC2 and TPG DC4 generators will be repurposed to provide dispatchable power to the grid when required.

These TPG generators will operate in response to grid demand.

Phase 3:

In Phase 3, DC2 and DC4 will be constructed and brought into operation. At this stage:

- ▶ The 36 TPG generators will be reconfigured to operate solely as backup generators.
- ▶ The site will comprise four data centres (DC1, DC2, DC3, and DC4).

72 generators across the site in this phase will function exclusively as backup power sources.

Each DC area includes ancillary rooms to serve the data halls, office, and welfare facilities. In each DC, there are 18 emergency generators, each with a thermal rated capacity of 8.01 MWth.

Similarly, each TPG area also comprises 18 generators, each with a thermal rated capacity of 7.06MWth. As part of Phase 3 of the development, the generators in the TPG areas will be upgraded so that each has an increased heat output capacity of 8.01 MWth, matching those installed in the main data centres.

The combined thermal input of the Installation is 543.64 megawatt thermal (MWth) in Phases 1 and 2 and 577.84 MWth in Phase 3.

These amounts are well above the 50 MW threshold specified in Class 2.1 of the First Schedule of the EPA Act 1992, which means the site must apply for an IE Licence under Activity Class 2.1.

Class 2.1: Combustion of fuels in installations with a total rated thermal input of 50 MW or more.

Although the total power is high, each generator is under 8.01 MWth, which means the site is not subject to the Large Combustion Plant regulations.

1.2 Other Required Permits

The site will also need to obtain a Greenhouse Gas (GHG) Emissions Permit due to the type of fuel used and the emissions produced.

The site is not classed as a SEVESO site, which applies to locations storing large amounts of dangerous substances. The only substance stored on site that is controlled under the COMAH regulations will be petroleum products and alternative fuels for on-site emergency use. The generators will operate on HVO fuel under normal conditions and switch to conventional diesel only in *force majeure circumstances*, where HVO supplies are temporarily unavailable. HVO and diesel fuel would be stored simultaneously/interchangeably in the same fuel tanks. The storage of diesel and HVO is an alternative maximum; they are not cumulative.

There are no hazard phrases associated with HVO that fall under Schedule 1 of the COMAH Regulations 2015. Therefore, HVO is a non-COMAH substance and is not considered in the COMAH calculation for the Installation.

The Applicant will establish and maintain Standard Operating Procedures to control diesel storage volumes, ensuring that the maximum quantity held onsite at any time remains below 2,960 m³. This is below the lower-tier threshold of 2,500 tonnes specified under the COMAH Regulations. Consequently, the Installation is not classified as a COMAH establishment

1.3 Planning Status and Environmental Impact Assessment

The Installation received Final Grant of planning permission from Meath County Council (MCC) and An Bord Pleanála (ABP) for the development of four data centres (DC1, DC2, DC3 and DC4) at the site:

- ▶ Board Order ABP-307546- granted 24th June 2021
- ▶ MCC Reg. Ref.: RA/191593 granted 17th June 2020. Planning was approved following a Further Information (FI) response, which included the omission of the energy centre from the proposed development. The FI included an Addendum to the EIAR (August 2020).

Due to the current delay in connection to the National Grid for power supply, it was decided to operate two data centres (DC1 and DC3) powered by two temporary power generation units by

operating the generators of DC2 and DC4. This is referred to as the Temporary Power Generation (TPG) in the licence application.

An Appropriate Assessment Screening (AA) has been completed for this application.

A determination was made by MCC under Section 5 of the Planning & Development Act, 2000 (as amended) for an exemption "for the use of the backup generators at TPG area (permitted under ABP ref:307546-2- (MCC Reg. ref: RA191593) on a temporary basis using renewable HVO to support the early operation of DC1 pending connection to the transmission grid". This declaration was made on 04th September 2025 (MCC Ref.RS525093).

Another determination was made by MCC under Section 5 of the Planning & Development Act, 2000 (as amended) for an exemption "for the use of the backup generators adjacent to Data Storage Facility 2 and Data Storage Facility 4 (permitted under ABP ref: 307546-20 (MCC Reg. ref: RA191593) on a temporary basis using renewable HVO to support the early operation of Data Storage Facility 1 and Data Storage Facility 3 pending connection to the transmission grid on a site located at Bracetown and Gunnocks, north of Clonee, to the west of the R147 Regional Road, and to the southeast of Bracetown Business Park, Co. Meath". This declaration was made on 23rd June 2026 (MCC Ref.RS52607.0).

The Installation exceeds the limit, quantity, or threshold set out in Class 10(a) - Industrial estate development projects, where the area exceeds 15 hectares; therefore, an Environmental Impact Assessment (EIA) is mandatory.

AWN Consulting prepared the Environmental Impact Assessment Reports relating to this activity, which were previously submitted to Meath County Council, and are included with this IE License application as Attachment-6-3-6-EIAR-Planning-Jul 2021-p1 to p3.

1.4 Application Drawings

The application is accompanied by drawings of the site location, main facility buildings and ancillary areas, and underground services at the Installation. These drawings provide a visual guide for understanding the physical layout and operational aspects of the Installation. The drawings included with the application include:

Three Phases:

- ▶ 25_059-CSE-00-XX-DR-C-001 - Site Location Map
- ▶ 25_059-AWN-00-XX-DR-C-006 - Noise Monitoring Locations

Phase 1 and Phase 2:

- ▶ 25_059-CSE-00-XX-DR-C-002 Site layout plan.
- ▶ 25_059-CSE-00-XX-DR-C-003 Stormwater Drainage Plan
- ▶ 25_059-CSE-00-XX-DR-C-004 Foul Drainage Plan
- ▶ 25_059-CSE-00-XX-DR-C-005 Air Monitoring Locations

Phase 3:

- ▶ 25_059-CSE-00-XX-DR-C-1002 Site layout plan
- ▶ 25_059-CSE-00-XX-DR-C-1003 Stormwater Drainage Plan
- ▶ 25_059-CSE-00-XX-DR-C-1004 Foul Drainage Plan
- ▶ 25_059-CSE-00-XX-DR-C-1005 Air Monitoring Locations

This non-technical summary provides, in non-technical language, a summary of the information provided in the IE Licence Review Application. The following sections reflect the requirements of the EPA Guidance¹

¹ [Licence-Application-Form-Guidance---Version-2.1.pdf](#)

2. FACILITY DESCRIPTION

An overview of the projected timelines is provided in Table 2-1 below.

Table 2-1 Estimated Development Timeline

Development	Estimated Ready for Operational Commencement
Phase 1: DC1 & DC3, and TPG DC2 and TPG DC4.	Q3/Q4 2028
Phase 2: DC1 and DC3 connected to the grid; 36 TPG DC generators exporting power to the grid.	Upon completion of the grid connection for DC1 and DC3.
Phase 3: All 4 DCs connected to the grid with generators providing back-up power only.	Upon completion of the grid connection for DC2 and DC4.

It is proposed to operate the TPG pending final connection to the transmission grid. The precise duration is uncertain, but temporary.

Under Irish and European law, electricity system operators are required to provide non-discriminatory access to the grid. Current regulatory developments, including a December 2025 decision by the Commission for Regulation of Utilities and a January 2026 Government Action Plan on large energy users, confirm that a grid connection is expected in due course.

The overall development, including the data centre and associated transmission infrastructure, has already received planning approval from Meath County Council and An Coimisiún Pleanála, and legal challenges to these permissions have been dismissed. In September 2025 and June 2026, the Council also confirmed that no additional planning permission was needed for the temporary TPGs arrangement, on the basis that it would operate only until the grid connection is in place.

Environmental assessments, supported by detailed modelling, show that the temporary operation of the TPG will comply with established noise and air quality limits.

In summary, the TPGs are a short-term, compliant solution that will operate only until permanent grid connection is operational.

2.1 Data Storage Centre

Data storage centres (DC) are large-scale, centralised systems that contain extensive arrays of computer servers, typically arranged in systemised racks containing hundreds or thousands of server units. The operation of a data centre – particularly the IT servers and supporting cooling infrastructure - requires a continuous and highly reliable power supply to ensure uninterrupted server availability and to maintain stable environmental conditions essential for optimal performance.

The site is expected to operate 24 hours a day, 7 days a week.

Each DC building comprises two main building zones:

- ▶ Admin Block
- ▶ Data Storage

There are three main components within the DC:

- ▶ Cooling Corridor (fan walls and cooling distribution units (CDU) behind a mesh wall).

- ▶ Data Halls.
- ▶ Electrical rooms (including Static Transfer Switches (STS) corridor, battery rooms and transformer rooms).

Each DC Building and TPG DC has its own fuel-unloading bay within the service yard. Storm drainage from the fuel unloading bay will discharge through an oil interceptor to the foul sewer system.

Each service yard will have two bunded HVO receiver double-walled tanks, distribution pumps, and an overground delivery pipeline to the belly tanks for the HVO/diesel -fired generators. A firewater sprinkler tank and one diesel fuel tank serving the two sprinkler pumps are also located in all service yards.

All bunds will be capable of containing 110% of the volume of the largest drum/tank within the bund or 25% of the total volume of the substance stored and will be designed in accordance with the EPA's guidelines for the storage and transfer of materials for scheduled activities (EPA, 2004).

The DC Building will have an office building that comprises the following main components:

- ▶ Reception Area;
- ▶ General Office Areas for staff and management;
- ▶ Offices space for clients and project teams;
- ▶ Canteen;
- ▶ Welfare Facilities, and;
- ▶ Conference Rooms/Meeting Room

2.2 Generators

Each generator is integrated with a belly tank that contains HVO, a lubricating oil tank, and a urea tank. Each generator stack has a Selective Catalytic Reduction (SCR) abatement system. A network of pumping systems will manage the transfer of fuel, urea, lubricating oil, clean oil, and waste oil between the storage areas and the generators.

Temporary Power Generation's Generators

A total 36 no. permitted gas oil engine generators (operating on HVO/diesel fuel), each with a thermal rated capacity of 7.06MWth, are located across two TPG areas (DC2 and DC4). All 36 generators shall be running at any one time and for a 24/7 period, to provide primary power to DC1 and DC3 in Phase 1. In Phase 2, these generators will continue to run as needed to supply electricity to the grid as required.

A Continuous Emissions Monitoring System (CEMS) will be installed on the stack of each of the 36 generators. TPG's generators will be in continuous operation (Emission Points: A2-19 to A2-36 and A2-55 to A2-72).

DC Emergency Generators

A total of 18 no. permitted gas oil generators, each with a thermal rated capacity of 8.01 MWth, located at each DC (DC1 and DC3 for Phases 1 and 2, and all four DCs in Phase 3), will be designated for use as emergency power for each DC. Emergency generators will be tested

routinely. Emergency generators will only be activated in the event of a TPG generator's failure at the Installation site.

2.3 Fuel (HVO/Diesel²) Filling Component

Fuel contribution for TPGs and DCs will include the following components:

- Two no. double-walled receiver tanks, with fill cabinets.
- One no. fuel distribution pump per tank, which is located in an external pump house.

HVO and diesel fuel could be stored simultaneously/interchangeably in the same fuel tanks.

Each DC/TPG has its own fuel unloading bay with two 25 m³ receiver tanks. The TPG DC4 generators will be supplied from four receiver tanks to allow for simultaneous filling: two located within TPG DC4, with the remaining two shared from DC3 receiver tanks. The fuel unloading bay surface will be impermeable (e.g., concrete or tarmac) to prevent leaks from discharging to the underlying soil. Drainage from each of the unloading bays is directed to a hydrocarbon interceptor before being discharged to the foul sewer.

The proposed primary fuel fill strategy for the TPGs and DCs is identical. From the receiver tanks, the fuel is pumped to the belly tanks that are located under each generator engine container. Each belly tank is fitted with an automated valve, so when the fuel level switch reads that the belly tank is full, the associated control valve on the belly tank closes.

It is noted that the DC1 building has a loading bay area, which will be used for delivery vehicles dropping off goods for the building. Drainage from this area will flow into the stormwater drainage system.

2.4 Cooling and Heating System

Each DC will be cooled by air-cooled chillers through a centralised chilled water system, which includes various components like pumps, fan wall units, and cooling units. The system can operate in free-cooling mode and uses a 25% propylene glycol-water mix to prevent freezing. It only uses primary pumps, with no secondary pumps.

The office air conditioning will be served by a four-pipe system, which has separate heating and cooling lines. This system can heat or cool the space, or do both at the same time, while also controlling humidity.

A humidifier will be located in the DC building. The humidifier will be most active in winter when the air is at its driest. The water used by the humidifier is filtered through a carbon filter, softener, and reverse osmosis (RO) system. The carbon filter and softener will occasionally flush water to clean their filters. The RO system will slowly release excess water into the drain while producing water for the humidifier. Only salt, not chemicals, is added to the softener. Water discharge to the sewer happens intermittently, depending on the weather. There is no ongoing discharge for the closed-loop cooling system.

² Force majeure only

2.5 Water, Sewer, and Stormwater Drainage System

2.5.1 Water

Potable water will be required on site for domestic purposes (drinking and sanitation), humidifier operation and firefighting. The closed-loop cooling system will require filling during commissioning; therefore, the overall water consumption is expected to be much lower compared to similar facilities in Ireland.

2.5.2 Sewer Drainage System

The foul water from the Installation, which comprises domestic sewage generated from staff welfare facilities, runoff from fuel unloading bays, as well as minor incidental inputs from the humidification process, will be directed to the foul drainage system and discharged from the site at emission point SE1 to the public foul sewer system, which ultimately discharges to the Ringsend Wastewater Treatment Plant (WWTP). An automatic shut-off valve will be installed on the discharge pipe from the unloading and receiver tank bund areas to the on-site foul water system. Neither the humidifier discharge nor the unloading bay run-off is likely to contain any contaminants. The humidifier uses potable water, which has been treated through an RO system (with slightly elevated conductivity for the addition of a softener as required). The run-off for the unloading bay should be rainwater only.

There will be four monitoring points for industrial wastewater (SE1-1; SE1-2; SE1-3 and SE1-4), as shown on Drawings 25_059-CSE-00-XX-DR-C-004 and 25_059-CSE-00-XX-DR-C-1004.

2.5.3 Stormwater Drainage System

Rainwater runoff from building roofs, asphalt roads, site concrete pavements, parking areas, and other hardstanding surfaces will be collected via the newly constructed stormwater drainage network. This network will convey flows to the three on-site stormwater attenuation systems prior to controlled discharge at three stormwater emission points (SW1, SW2 and SW3) to the Pace Stream. The attenuation ponds are impermeable, and automatic shut-off valves that are linked to a fire alarm will be installed at the three discharging points.

Outflows from the Installation will be restricted using hydrobrake flow control devices at each emission point. Multiple petrol interceptors (also known as hydrocarbon separators) will be installed onsite to capture and separate hydrocarbons from stormwater runoff, preventing contaminants like diesel, HVO, and oil from being discharged off-site.

All interceptors are equipped with high-level alarms that trigger when the oil storage capacity is reached. These alarms are installed, tested, commissioned, and routinely maintained by qualified technicians.

In accordance with the manufacturer's guidelines, all petrol interceptors will be inspected and, if necessary, cleaned every six months. Any collected oil or fuel remains contained within the interceptor until it is removed by a licensed waste contractor and taken off-site for appropriate treatment.

2.6 Ancillary Infrastructure

A range of ancillary infrastructure and utilities will support the installation's operation, ensuring it functions safely, efficiently, and continuously. There will be landscaped areas around the periphery of the site. Key elements include: electrical infrastructure, fire protection systems, underground services, utility ducting and cabling, internal road network, packaged plant room, and Admin area.

3. RAW MATERIALS, ENERGY, AND WASTES

Details of the raw materials, ancillary materials, fuels, and energy used at the Installation are provided in Sections 4–6 of this IE Licence application. Attachment 4-6-1 outlines the annual water and energy consumption associated with the Installation's operation, while Attachment 4-6-2 lists all raw materials in use. The generators will operate on HVO fuel under normal conditions and switch to conventional diesel only in force majeure circumstances, where HVO supplies are temporarily unavailable. HVO and diesel fuel could be stored simultaneously/interchangeably in the same fuel tanks. The storage of Diesel and HVO is an alternative maximum; they are not cumulative.

Each generator is integrated with a belly tank that contains HVO, a lubricating oil tank, and a urea tank. There are two receiver tanks for each 18 DC/TPG generators. All the tanks that contain raw materials are double-skinned; the secondary containment is designed to contain 110% of the design capacity in line with the EPA's Guidance on the Storage and Transfer of Materials for Scheduled Activities (2013).

There are no intermediates or products produced as part of the site operations.

The electricity for the office, security, administration spaces and lights will be supplied via a connection to the national electricity grid.

The Installation is expected to generate only small amounts of solid waste. The majority of this waste will consist of domestic and kitchen waste, packaging materials, non-hazardous waste, electrical and electronic equipment (WEEE), e-waste, and spent batteries. Further details on the specific types of waste and the associated management practices can be found in Section 8 of this IE Licence application. Hazardous waste - such as waste oils, oily rags, and used filters - will primarily be generated during planned maintenance activities and will be managed directly by trained maintenance contractors. Hazardous Waste Electrical and Electronic Equipment (WEEE), including batteries, circuit boards, and other components containing hazardous substances, will be collected in dedicated receptacles used internally as needed during equipment change-out, rather than being stored in dedicated waste storage areas/rooms. Oil and hydrocarbon residues accumulated in the hydrocarbon interceptors within the underground drainage system are retained in the interceptor tanks until removed as waste by a qualified specialist contractor.

RED III Directive and Waste Framework Directive Compliance

The Installation will source HVO from suppliers that can provide Proof of Sustainability (PoS) in accordance with the Renewable Energy Directive (RED III) Voluntary Scheme systems. Currently, there is no significant commercial production of HVO in Ireland. All HVO used on-site will be imported as a finished fuel product. As such, its use is not subject to the Waste Framework Directive, since it is not a waste material.

4. BEST AVAILABLE TECHNIQUES ASSESSMENT

The consideration of BAT (Best Available Techniques) evaluates the Installation against the relevant European Commission documents that outline the practical and advanced techniques available for the specific industry or activity. This includes consideration against the relevant industry commissioning implementing decision (CID), BAT conclusions documents, and BAT reference documents (BREFs).

This consideration ensures that the proposed methods and technologies align with the best practices recommended for minimising environmental impact. The combustion plant associated with the Installation has been evaluated in accordance with the applicable BAT Reference Document for Large Combustion Plants (LCP) and confirmed that the Installation is not an LCP activity (see Attachment 4-7-1-CID– Large Combustion Plants). However, during a preapplication consultation with the EPA, the EPA informed the applicant that, due to the continuous operation of TPG DC2 and TPG DC4 generators (A2-19 to A2-36 and A2-55 to A2-72), it would seek to apply BAT 4 monitoring requirements to these Medium Combustion Plants in continuous operation.

The relevant industry or activity BAT is related to the Installation are:

- ▶ Attachment-4-7-2-BREF–Energy Efficiency
- ▶ Attachment-4-7-3-BREF-Emissions from Storage
- ▶ Attachment-4-7-4- BREF-Industrial Cooling Systems

The BAT assessment has confirmed that the Installation will meet all applicable BAT Conclusion requirements outlined in the relevant Commission Implementing Decision (CID). It will also adhere to guidance provided in other relevant BREF documents and national BAT notes.

It is expected that the relevant emission limits outlined in Schedule 2, Part 2, Table 2 of the Medium Combustion Plant Regulations will apply to the continuous operating generators (A2-19 to A2-36 and A2-55 to A2-72).

The monitoring schedule in BAT 4 of the LCP BAT will only be applied to the parameters listed in Schedule 2, Part 2, Table 2 of the Medium Combustion Plant Regulations.

The fire sprinkler pumps are < 1MW_{th}; thus, their emissions are not regulated by the MCP Regulations.

5. EMISSIONS SOURCES AND ABATEMENT TREATMENT SYSTEMS

5.1 Air Emissions to Air

5.1.1 Emissions

AWN conducted air emissions modelling for the site to evaluate concentrations of nitrogen dioxide (NO₂), ammonia (NH₃), carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), sulphur dioxide (SO₂), nitrogen and acid deposition at multiple locations beyond the site boundary. This assessment considered both the site's emissions alone and in combination with emissions from other nearby facilities holding Industrial Emissions licences or planning permissions. The modelling results demonstrate that predicted ambient ground-level concentrations of all pollutants comply with the applicable air quality standards under all operational scenarios assessed, as detailed in Attachment 7-1-3-2 – Air Emissions Impact.

The air assessment has also considered the impact on habitat requirements at ecological receptors.

Full details of the air emission points, including coordinates and descriptions, are provided in Attachment-7-4-1–Emissions to Air Main and Fugitive and in Attachment-7-4-2–Emissions to Air Minor and Potential (refer to Drawings 25_059-CSE-00-XX-DR-C-005 and 25_059-CSE-00-XX-DR-C-1006). Table 5-1 provides the air emissions to air from the Installation:

Table 5-1: Summary of Emissions to Air

Emissions Type	Emission Points	Emission Source
Phases 1 and 2		
Main Emissions to Air	A2-19 to A2-36 and A2-55 to A2-72	Continuous Operating Generators (HVO/diesel fuels)
Minor Emissions to Air	A3-1 to A3-18 and A3-37 to A3-54	Emergency Generators (HVO/diesel fuel)
Potential Emissions to Air	A4-1 to A4-8	Pumps (diesel fuel)
Phase 3		
Minor Emissions to Air	A3-1 to A3-72	Emergency Generator (HVO/diesel fuel)
Potential Emissions to Air	A4-1 to A4-8	Pumps (diesel fuel)

5.1.2 Treatment and Abatement Systems

Main and Minor Emissions to Atmosphere

All generators (i.e. both main emission points and minor emission points) will be equipped with SCR abatement systems.

SCR system is an emissions control technology that's often fitted to modern diesel generators (especially large standby or continuous-duty units like those used in data centres).

SCR is an advanced emissions control technology designed to significantly reduce nitrogen oxides (NO_x) in diesel engine exhaust. The SCR is also effective for engines using alternative fuels, such as HVO, and is therefore being used for this Installation.

Ammonia slip mitigation is incorporated into the SCR design to reduce ammonia emissions to less than 4 mg/Nm³.

Potential Emissions to Atmosphere

No abatement or treatment systems are proposed or required for the fire sprinkler pumps (A4-1 to A4-8) due to their limited size and operational requirements.

Fugitive Emissions to Atmosphere

There are no fugitive emissions (principal polluting substances) expected from the Installation. No abatement or treatment systems are proposed or required.

5.1.3 Control and Monitoring

CEMS will be installed on the stack of each generator in continuous operation (A2-19 to A2-36 and A2-55 to A2-72). All data is recorded digitally and stored on a main board, where the data will be collated/viewed. The CEMS will monitor flow, oxygen content, temperature, pressure, water vapour content (as required), SO₂, Nitrogen Oxides (as NO₂), CO, Dust and Ammonia (NH₃). All data is recorded digitally, stored locally, and accessible via a network connection to the control room, where it can be viewed live and used to generate reports.

5.2 Wastewater Emissions

The foul discharge from the Installation to the sewer will comprise domestic sewage generated from staff welfare facilities, stormwater runoff from fuel loading bays, receiver tank bunds, as well as minor incidental inputs from the humidification process. There is no expected condensate discharge as the cooling system is a closed system.

The Installation will include one primary emission to the sewer, SE1. Wastewater will be treated off-site at the Ringsend WWTP (Reg No. D0034-02). Emissions to sewer are described in Attachment 7-3-1 and Equivalent Protection Sewer Attachment 7-3-2.

Rainwater and condensate from all generator exhaust stacks will be captured and safely disposed of by a licenced waste contractor. It will not be discharged to the foul drain.

5.2.1 Treatment and Abatement Systems

Wastewater Emissions to Foul Sewer

There is no requirement for on-site treatment or abatement for the humidifier water produced, as it is essentially clean, potable water that has been treated through a softener with salt addition as required. Runoff water from the loading bays will be filtered through an oil interceptor prior to discharge to the sewer. There is no requirement for further onsite treatment or abatement for this run-off water; it is essentially rainwater.

An automatic shut-off valve will be installed on the discharge pipe from the unloading and receiver tank bund areas to the on-site foul wastewater system.

Wastewater will be treated off-site at the Ringsend WWTP.

Wastewater Drainage to Holding Tanks

Rainwater and condensate collected in all the generators' stacks will be handled as a liquid waste; there is no onsite abatement or treatment.

5.2.2 Control and Monitoring

Wastewater Emissions to Foul Sewer

There are four monitoring points (SE1-1 to SE1-4) allowing for the inspection of process water quality. These are presented on: Drawing Ref. 25_059-CSE-00-XX-DR-C-004 and 25_059-CSE-00-XX-DR-C-1004. Visual inspection and measurement of pH and Conductivity (by hand-held field meter) only is proposed based on the characteristics of the discharges.

Wastewater Drainage to Holding Tanks

Rainwater and condensate from the fuel stack, which will be stored in IBCs or drums, will be handled as a liquid waste and recorded in line with waste management practices.

5.3 Stormwater Emissions

5.3.1 Emissions

The surface water, including rainwater from building roofs, yards, carpark and the road network, will be discharged to the stormwater network located to the south of the site, at Emission Points SW1, SW2, and SW3. These stormwater emission points are shown in the drawing ref. 25_059-CSE-00-XX-DR-C-003 and 25_059-CSE-00-XX-DR-1003. This is a new facility, and foul wastewater is separated from all stormwater. There are no direct discharges to surface water, and no planned discharges of contaminated waters.

5.3.2 Treatment and Abatement Systems

Class 1 bypass petrol interceptors are installed to capture hydrocarbons such as HVO, diesel, and lubricating oils before stormwater is discharged off-site. The locations of these interceptors are shown on Drawing Ref. 25_059-CSE-00-XX-DR-C-003 and 25_059-CSE-00-XX-DR-1003 with further technical descriptions provided in Section 3.2.5.3 of the Operational Report. The attenuation ponds are impermeable, and automatic shut-off valves linked to a fire alarm will be installed at the three discharging points.

Hydrocarbon interceptors will have high-level alarms that trigger when they are full. These alarms are installed, tested, and maintained by qualified technicians for reliable operation. The interceptors will be inspected and cleaned every six months, in accordance with the manufacturer's guidelines. Hydrocarbon waste collected in the system will be kept in the interceptors until a licensed contractor removes it. Regular tests will be conducted to verify the interceptor's structural integrity and leak resistance, in accordance with EPA guidelines.

The interceptors act as a backup, offering extra treatment if hydrocarbons enter the stormwater system. Preventative measures will be in place to avoid spills and accidents, with proper management of raw materials and waste according to site procedures.

5.3.3 Control and Monitoring

Stormwater network controls include:

- ▶ Flow restriction using Hydrobrake flow control devices to maintain discharges at greenfield QBAR rates.
- ▶ An automatic shut off valve will be installed at each stormwater emission point.

The Stormwater Monitoring Program will include the following elements:

- ▶ **Sampling Locations:** Routine sampling will be undertaken at monitoring points set out in Attachment-7-7-Storm Water Discharges.
- ▶ **Frequency of Sampling:** No online (continuous) monitoring is currently proposed. Weekly grab sampling is proposed for this Installation.
- ▶ **Parameter Testing:** Weekly stormwater samples will be tested for pH, Total Organic Carbon (TOC), temperature, and conductivity. Daily visual assessment will also be undertaken to detect any obvious signs of contamination such as odour, sheen or discoloration.

Following the commencement of stormwater monitoring, site-specific trigger levels will be established in accordance with EPA licence requirements.

5.4 Noise Emissions

5.4.1 Emissions

In the operational context of the facility, various sources contribute to outward noise emissions. The primary sources of outward noise have been identified as follows:

Building Services Noise: Equipment such as heating, ventilation, air conditioning, and electrical systems within the building can generate noise during normal operation.

Plant Noise: Generators used for power are major noise sources due to engine operation and combustion.

Vehicle Traffic Noise: The movement of staff, equipment, and supplies in and out of the site generates noise on nearby public roads, particularly during peak periods.

To ensure compliance with environmental regulations and best practices, a baseline assessment has been undertaken, and a comprehensive assessment of the noise emission impacts has been conducted. The results of the noise impact assessment are detailed in Attachment-7-1-3-2 (Noise Impact Assessment).

5.4.2 Treatment and Abatement Systems

To further control noise emissions, the following measures will be implemented:

- ▶ **Temporary Power and Emergency Generators:** Each generator is enclosed within an acoustic container designed to effectively dampen the noise produced during operation;
- ▶ **Chillers:** The 29 no. Chillers serving the data hall of each DC include a bespoke 'acoustic pack' which reduces noise emissions, and
- ▶ **Weather Louvres:** Installed on the data storage facility rooftops. These structures allow airflow while providing a minimum noise transmission reduction to the surrounding environment.

5.4.3 Control And Monitoring

To sustain the effectiveness of the noise control measures over time, a comprehensive maintenance and inspection schedule will be implemented. This includes regular checks of the acoustic enclosure, ventilation system, and vibration isolation mounts to identify and address any potential issues that could impact noise reduction.

Annual daytime, evening and nighttime monitoring will be undertaken in accordance with the IE licence requirements. Three locations for monitoring are proposed as outlined in Attachment 7-5- Noise Emission and drawing 25_059-AWN-00-XX-DR-C-0006 Noise Monitoring Locations.

5.5 Emissions to Ground

There are no process emissions to the ground from the Installation.

6. MANAGEMENT AND PROCESS CONTROL SYSTEMS

6.1 Environmental Management Systems

An Environmental Management System (EMS) will be developed for the Installation once the site is operational and the IE License is granted. The EMS will align with the principles of ISO14001. This EMS will aim to ensure comprehensive environmental management and continuous improvement in performance across the Installation's lifecycle.

6.2 Energy Efficiency Management System

The Energy Efficiency Management System (EnEMS) for the Installation will be developed once the site is operational and the IE License is granted. The EnEMS forms part of the EMS.

6.3 Building Management System and Electrical Power Monitoring System

The Installation will utilise a Building Management System (BMS) and an Electrical Power Monitoring System (EPMS) for control, monitoring, data collection, and alarm/reporting across the site's air handling and mechanical utility systems.

6.4 Accident Prevention Procedure

The Accident Prevention Procedure (APP) for the Installation will be developed once the site is operational and the IE License is granted. The APP will include an initial environmental risk assessment, and a scoping exercise will be undertaken in order to encompass all likely accident scenarios specific to the site. The primary objective of the APP is to proactively mitigate on-site hazards before they escalate into accidents or emergencies.

The APP will be designed to ensure that all staff members have a clear understanding of the prevention measures in place on site and the standard operating procedures related to high risk activities. It will be structured to facilitate ongoing review, improvement, and refinement. Provision of digital and physical copies of the APP will be available to guarantee its accessibility at all times.

6.5 Emergency Response Procedure

The Emergency Response Procedure (ERP) for the Installation will be developed once the site is operational and the IE License is granted. The ERP will serve as a comprehensive guide outlining the necessary steps and protocols to effectively address emergency situations. It will provide a comprehensive guide for addressing emergencies and incidents, covering scenarios like fire, spills, floods, etc. The ERP will be designed to ensure that all staff members are equipped to respond effectively and efficiently to any potential emergency situation. It will be structured to facilitate ongoing improvement and refinement, aligning with best practices in emergency response management. Provision of digital and physical copies of the ERP will be available to guarantee its accessibility at all times.

6.6 Standard Operating Procedures

Standard Operating Procedures (SOPs) will be developed for the Installation and will be continually reviewed and updated in alignment with the EMS.

The SOPs address all relevant environmental aspects of the site, including, but not limited to:

- ▶ Limiting the total quantity of diesel stored on site to less than 2,500 tonnes (2960 m³)

- ▶ Spill prevention and response procedures
- ▶ Pollution prevention and control measures
- ▶ Waste management practices
- ▶ Fuel delivery protocols
- ▶ Emergency power supply and changeover procedures

These SOPs are integral to ensuring consistent environmental compliance and operational best practices across the facility.

7. CESSATION OF ACTIVITY

7.1 Site Closure

A certain amount of environmental risk is associated with the cessation of any licensable activity (site closure). An outline Site Closure report (Attachment 9-2-3 Site Closure) has been provided in Section 9 of this application.

The basis of the closure plan is to ensure that, upon completion of implementation of the plan, the Installation would be in a suitable state for future industrial use and would not pose a risk to public health and safety or the environment.

It is anticipated that the EPA will impose suitable Conditions to the IE Licence once granted to ensure the proper closure of the activity with the aim of protecting the environment.

7.2 Baseline Report

A Complete Baseline Report (Attachment 4-8-3 Complete Baseline Report) for the site has been produced and included in Section 4 of this application. The complete baseline report provides conditions of the site as it existed prior to the construction and operation of the Installation. There is no evidence of any historical soil contamination.

8. ALTERNATIVES

AWN prepared the Environmental Impact Assessment Report (EIAR) for the site. Chapter 4 of the EIAR (November 2019) and its addendum (to remove the energy centre from the planning application) (August 2020), included in the licence documentation, outline the reasonable alternatives considered by the Applicant in developing the data centre project.

It discusses the main types of alternatives: the 'Do-Nothing' scenario, alternative project locations, alternative layouts, designs, alternative processes/technologies and alternative mitigations.

The applicant's preferred location for these facilities is Meath, primarily due to the presence of appropriately zoned land, minimal environmental impact, and the ready availability of fibre-optic connectivity, and other essential utilities. The site's proximity to existing data storage facilities also offers clustering benefits, supporting operational efficiency and technological synergies.

The layout chosen was done so as to minimise any environmental and landscape effects. The data storage facilities were oriented to maximise land use and minimise noise impact at the site boundaries for sensitive receptors.

Alternative technologies are considered on an ongoing basis as a part of each of its designs based on many factors, including technical feasibility, environmental impact, efficiency, security, reliability and cost.

Environmental specialists assessed each aspect of the environment by evaluating existing conditions, potential impacts, and feasible mitigation measures. They selected the most appropriate measures based on site-specific conditions, relevant legislation, and guidance.