

## Attachment-7-1-3-1 – Emissions Compliance Report

### 1.0 INTRODUCTION

This section includes an assessment of the proposed emissions in terms of compliance with current Emission Limit Values (ELVs) and statutory instruments. The following instruments have been considered when assessing the compliance of all potential emissions:

- Emissions to Air: Medium Combustion Plant (MCP) Directive, European Union (EU) 2015/2193 on the limitation of emissions of certain pollutants into the air from medium combustion plants (see Attachment 7-4-2).
- Stormwater Emissions: Consideration of European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI 272 of 2009) as amended in 2012, 2015, and 2019.
- Noise Emissions: Environmental Protection Agency (EPA) publication Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) 2016.
- Protection of Groundwater: European Communities Environmental Objectives (Groundwater) (Amendment) Regulations, 2016 (Statutory Instrument No. 366 of 2016) and 2010 (Statutory Instrument No. 9 of 2010), i.e. GTV, and the Environmental Protection Agency (EPA) Draft Interim Guidelines Values (IGVs) for the Protection of Groundwater, 2003.

### 2.0 EMISSIONS TO AIR

There are no major air emissions proposed. There will be a total of 70 Minor air emission points at the site, 70 no. 6.49 MW<sub>th</sub> diesel powered emergency back-up generators; 2 no. 2.19 MW<sub>th</sub> diesel powered emergency back-up generators, and 2 no. 0.520 MW<sub>th</sub> diesel powered fire sprinkler pumps.

The emissions of CO<sub>2</sub> from these generations are and will be controlled under the Greenhouse Gas Permit for the installation (IE-GHG197-10524-1).

The stack heights of the emergency back-up generators for the site have been designed in an iterative fashion to ensure that an adequate height was selected to aid dispersion of the emissions and achieve compliance with the EU ambient air quality standards at all off-site locations (including background concentrations).

Predictive air dispersion modelling, undertaken as part of this application, is presented in Attachment-7-1-3-2-Air Emissions Impact. Attachment-7-1-3-2-Air Emissions Impact has demonstrated that there would be no breach of the air quality standard for NO<sub>x</sub> resulting from the three plausible scenarios modelled for the installation (i.e. emergency operations scenario, and cumulative impact scenario).

There are no emission limit values (ELVs) proposed for the emergency generators as they will be designated minor air emission points; there are also no statutory emission limits applicable under the Medium Combustion Plant Directive. Regulation 13(3) of the European Union (Medium Combustion Plants) Regulations 2017 states that:

*new medium combustion plants which do not operate more than 500 operating hours per year, as a rolling average over a period of three years, shall not be*

*required to comply with the emission limit values set out in Part 2 of Schedule 2 but, where they burn solid fuels, shall comply with an emission limit value for dust of 100mg/Nm<sup>3</sup>.*

In accordance with Regulation 13(3), the hours of use for the generators will be under the threshold limit and as such the emission limit values do not apply.

### 3.0 STORMWATER EMISSIONS

Details of the proposed stormwater drainage is presented in Attachment-4-8-1 (Operational Report). The site stormwater network conveys the stormwater to 1 no. stormwater attenuation basin constructed on the Site. The discharge from the attenuation systems will have a controlled release rate.

This network will convey the stormwater collected from buildings and roads via hydrocarbon interceptors to 2 no. offline stormwater detention basins and 1 no. online stormwater detention basin (See Drawing 21\_123H-CSE-00-XX-DR -C-1100). The attenuated stormwater discharges offsite at 1 no. Emission Points (SW1) at greenfield runoff rates. Prior to the site stormwater network entering the detention basins, the stormwater passes through hydrocarbon interceptors, prior to discharge from the site the stormwater passes through hydrodynamic solid separators, and stormwater flow control devices to ensure the removal of debris and to control to the maximum permissible discharge flow rate off site.

In accordance with BAT, clean stormwater will be kept separate from contaminated wastewater and there will be no inherent risk of cross-contamination.

The only chemical hazardous to the environment stored onsite is diesel. Diesel will be prevented from entering the attenuation basin by the hydrocarbon interceptors. The interceptors have level alarms that will be triggered if the interceptor is overloaded or malfunctions.

An Environmental Management System (EMS) will be in place to ensure compliance with licencing requirements. This will include full and adequate containment and management of potential contaminants. Site-specific emergency response measures are in place and all relevant personnel will be trained accordingly. Additional measures to minimise any impact on the groundwater or soil from material spillages will be implemented as outlined in the Operational Report (Attachment 4-8-1) including integrally bunded fuel tanks, impervious loading areas, double lined fuel delivery lines (underground), and the use of interceptors on stormwater pipelines.

It is intended to install a penstock on the outfall prior to the discharge into the stormwater main (Emission Point SW1). Once installed, the penstock will allow the outfall of the stormwater system to be closed off to inhibit the outflow in the event of a large spill or a fire.

The emission to storm sewer consists of stormwater runoff from building roofs, yards and the road network. Residual cooling water, associated with evaporative cooling in the data centres is also discharged to the storm sewer.

Due to the nature of the stormwater run-off (stormwater from buildings and roads) and the inclusion of hydrocarbon interceptors, the proposed discharge is unlikely to contain more than trace hydrocarbons and metals. It is not anticipated that the surface water quality will exceed the Environmental Quality Standards as set out in the European

Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

Stormwater run-off will be from buildings and car parks only and therefore there is no expectation to undertake regular sampling of the stormwater prior to discharge. Weekly visual inspections will be undertaken at the outfall from the site (Monitoring Point SW1-1 and SW1-2) to monitor the quality of the discharge.

Further detail on the storm water network and emissions is set out in Attachment 4-8-1 Operational Report.

#### 4.0 FOUL WATER EMISSIONS

Domestic effluent arising from occupation of the Site, including the transformer compound and control building will be discharged to the public foul sewer (at Emission Point SE1). Refer to Drawing 21\_123H-CSE-00-XX-DR-C-1200 for the foul drainage layout. The foul water connection to the public foul sewer is in accordance with the FCC Planning Ref. FW17A/0025 and FW19A/0087 and ABP Ref. L06F.248544.

A gravity piped foul drainage network comprising 225 mm uPVC pipes conveys effluent from internal sanitary locations and outfall into the external 375mm FCC foul network. The outfall into the existing foul network will be at one location, SE1.

Drainage of rainwater from the top up tank bunds and unloading bay at Building A is directed to foul sewer and connects to the foul main at emission point SE1. The drainage sump contains a hydrocarbon detector which automatically shut off drainage from these sumps if diesel is detected in the sump, preventing any contaminated stormwater from exiting the bund. These probes are also connected to the BMS/EPMS critical alarm.

There is one transformer compound onsite located at the Cruiserath Substation, the drainage from the transformer compound is directed to foul sewer and connects to the foul main to discharge at emission point SE1.

Drainage from the GIS Substation transformer compound is equipped with hydrocarbon interceptors. The location of these is illustrated on Drawing 21\_123H-CSE-00-XX-DR-C-1200. The hydrocarbon interceptors are equipped with an oil warning system which is connected to the BMS to alert EOTs to warn of high hydrocarbon, liquid and silt levels in the separator.

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The foul network ultimately discharges into a regional pumping station before final treatment and disposal at Ringsend Wastewater Treatment Plant (WWTP).

#### 5.0 NOISE EMISSIONS

Reference has been made to the EPA publication *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) 2016*, as the proposed facility will be licenced by the EPA. This guidance is used to set operational noise limits from activities under the control of the EPA (manufacturing,

industrial, waste management etc.). This document sets out a procedure for applying appropriate operational noise limits from this type of facility at the nearest noise sensitive receptors taking account of the background noise environment.

The baseline receiving environment has been defined by surveys. The results of these surveys are presented in the Emissions Impact Assessment Attachment Attachment-7-1-3-2-Noise Emissions Impact Assessment (Section 3).

The surveys were conducted in general accordance with ISO 1996-2:2017 *Acoustics - Description, Measurement and Assessment of Environmental Noise*.

Based on the EPA NG4 Guidance the following Noise Criteria are appropriate at the nearest NSL's to the facility:

- Daytime (07:00 to 19:00) 55dB L<sub>Ar</sub> (15mins)
- Evening (19:00 to 23:00) 50dB L<sub>Ar</sub> (15mins)
- Night time (23:00 to 07:00 hrs) 45dB L<sub>Ar</sub> (15mins)

The predicted noise levels at all noise sensitive locations are below the day, evening and night-time noise criteria. This is presented in the Emissions Impact Assessment Attachment-7-1-3-2-Noise Emissions Impact Assessment (Section 5).

It is proposed that annual noise monitoring be carried out once the facility is licenced (see Attachment 7-5).

## 6.0 PROTECTION OF GROUNDWATER QUALITY

There will be no direct discharges of contaminated water to groundwater or to the soil environment during the operation of the installation.

As part of this assessment, consideration has been given to EU Council Directive 2006/118/EC in relation to the protection of groundwater. The 2006 Directive establishes specific measures as provided for in EU Council Directive 2000/60/EC in order to prevent and control groundwater pollution. The Directive also complements the provisions for preventing or limiting inputs of pollutants into groundwater already contained in Directive 2000/60/EC and aims to prevent the deterioration of the status of all bodies of groundwater<sup>1</sup>.

Under the 2006 Directive, Member States must give consideration to the water quality standards in the Directive as well as establishing threshold values or 'trigger values' which warn of potential breaches of water quality standards but are not water quality standards themselves. The relevant Groundwater Threshold Values (GTVs) for Ireland are outlined in the Environmental Objectives (Groundwater) (Amendment) Regulations 2016 (S.I. No. 366 of 2016). These Regulations give effect to the EU Directive 2014/80/EU of 20 June 2014, which amends Annex II to Directive 2006/118/EC.

The results of the recent groundwater sampling rounds are presented in Section 8 *Stage 7 – Site investigation* of the Baseline Report (Attachment-4-8-3). The site was used as agricultural land up to 2019 and there are no previous uses that could lead to historical contamination at the site. Site specific soil and water quality data show no evidence of any historical contamination at the site.

<sup>1</sup> Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration

On the basis of the results from the Baseline Report, and the proposed activities at the installation, it is considered that operations at the facility are unlikely to cause an exceedance of the EPA IGVs<sup>2</sup> or the relevant Groundwater Regulations<sup>3</sup>.

An Environmental Management System (EMS) will be in place to ensure compliance with licencing requirements. This will include full and adequate containment and management of potential contaminants. Site-specific emergency response measures are in place and all relevant personnel will be trained accordingly. Additional measures to minimise any impact on the groundwater or soil from material spillages will be implemented as outlined in the Operational Report (Attachment 4-8-1) including integrally banded fuel tanks, impervious loading areas, double lined fuel delivery lines (underground), and the use of interceptors on stormwater pipelines.

The only relevant bulk hazardous substances (substances stored or used onsite and which are classified as hazardous by the EPA under the Groundwater Regulations and contained in bulk storage) is diesel for backup generators. Further detail on the diesel storage is set out in Attachment 4-8-1 Operational Report.

The site stormwater network conveys the stormwater from yards and the road network via Class 1 hydrocarbon interceptors to capture any hydrocarbons prior to outfall. These hydrocarbon interceptors are located upgradient of the each of the 3 no. stormwater attenuation basins, and they ensure the quality of stormwater prior to entry attenuation basin and outfall to the FCC stormwater network. The hydrocarbon interceptors are equipped with level detection sensors which sends an alarm signal to the BMS to alert EOTs to warn of high hydrocarbon, liquid and silt levels in the separator.

Additional onsite control and mitigation measures are in place including:

- Double skinned day tanks, with high- and low-level alarms;
- Banded diesel top up tank with high- and low-level alarms;
- Bulk diesel top up tank bund and delivery bay is equipped with a pumping system that discriminates between hydrocarbons and water. The sump pump activates as required to remove only water from the bund; while retaining hydrocarbons within the sump.
- Hydrocarbon interceptors with level alarms; and
- Standard operating procedures for fuel delivery.

Further detail on the diesel storage, management, and control features are set out in Attachment 4-8-1 Operational Report.

## 7.0 REFERENCES

Environmental Protection Agency (EPA). EPA Maps. Available at: <https://gis.epa.ie/EPAMaps/> (Accessed: March 2022).

Geological Survey of Ireland; Available at: <http://www.gsi.ie> (Accessed: March 2022).

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<sup>2</sup> Environmental Protection Agency (EPA) Draft Interim Guidelines Values (IGVs) for the Protection of Groundwater, 2003  
<sup>3</sup> European Communities Environmental Objectives (Groundwater) (Amendment) Regulations, 2016 (Statutory Instrument No. 366 of 2016) and 2010 (Statutory Instrument No. 9 of 2010),