Report for the purposes of Appropriate Assessment Screening

Amazon Data Services Ireland Ltd.

EPA Licence Review P1186-02

Prepared by: Moore Group – Environmental Services

4 April 2025

On behalf of ADSIL

Project Proponent	ADSIL
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Moore Archaeological and Environmental Services Limited				

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Abbreviations

AA	Appropriate Assessment
ABP	An Bord Pleanála
CEMP	Construction Environmental Management Plan
EEC	European Economic Community
EPA	Environmental Protection Agency
EU	European Union
FWPM	Freshwater Pearl Mussel
GIS	Geographical Information System
LAP	Local Area Plan
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OSI	Ordnance Survey Ireland
pNHA	proposed Natural Heritage Area
SAC	Special Area of Conservation
SPA	Special Protection Area
SuDS	Sustainable Drainage System
UÉ	Uisce Éireann
WFD	Water Framework Directive

1. Introduction

1.1. General Introduction

This report for the purposes of Appropriate Assessment (AA) Screening contains information required for the competent authority to undertake screening for Appropriate Assessment (AA) in respect of the operation of the Amazon Data Services Ireland Ltd. ("ADSIL" or 'the applicant') data storage facility (the subject 'installation' under the licence review application) located at Clonshaugh Business & Technology Park, Dublin 17 (hereafter referred to as the Project) to determine whether it is likely individually or in combination with other plans or projects to have a significant effect on any European sites, in light of best scientific knowledge.

Having regard to the provisions of the Planning and Development Act 2000, as amended (the "Planning Acts") (section 177U), the purpose of a screening exercise under section 177U of the PDA 2000 is to assess, in view of best scientific knowledge, if the Project, individually or in combination with other plans or projects is likely to have a significant effect on a European site.

If it cannot be *excluded* on the basis of objective information that the Project, individually or in combination with other plans or projects, will have a significant effect on a European site then it is necessary to carry out a Stage 2 appropriate assessment under section 177V of the Planning Acts.

When screening the project, there are two possible outcomes:

- the project poses no potential for the possibility of a significant effect and as such requires no Stage 2 assessment; or
- the project has potential to have a significant effect (or this is uncertain and therefore cannot be excluded) and therefore a Stage 2 Appropriate Assessment of the project is necessary.

This report has been prepared by Moore Group - Environmental Services to enable the competent authority to carry out AA screening in relation to the Project. The report was compiled by Ger O'Donohoe B.Sc. Applied Aquatic Sciences (ATU Galway, 1993) & M.Sc. Environmental Sciences (TCD, 1999) who has over 30 years' experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements on terrestrial and aquatic habitats for various development types.

Data on Air Quality predictions an assessment are provided by Dr. Edward Porter Director (Air Quality & Climate) and Jonathan Gauntlett Principal Environmental Consultant with AWN Consulting.

1.2. Legislative Background - The Habitats and Birds Directives

Article 6(3) and 6(4) of the Habitats Directive are transposed into Irish Law inter alia by the Part XAB of the Planning Acts (in particular section 177U and 177V) which governs the requirement to carry out appropriate assessment screening and appropriate assessment, where required, per Section 1.1 above.

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the European Union (EU). Under the Habitats Directive, Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a EU context.

The Birds Directive (Council Directive 2009/147/EC on the conservation of wild birds), transposed into Irish law by the Bird and Natural Habitats Regulations 2011 as amended, and the Wildlife Act 1976, as amended, is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Birds Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

SACs designated under the Habitats Directive and SPAs, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. These sites are also referred to as European sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to have a significant effect on Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out an appropriate assessment if required (Appropriate Assessment (AA)).

> ***Article 6(3):*** *"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to an appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."*

Article 6(4) establishes requirements in cases of imperative reasons of overriding public interest.

2. Methodology

The Commission's methodological guidance (EC, 2002, 2018, 2021 see Section 2.1 below) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1 and 2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

Stage 1 Screening: This stage examines the likely effects of a project either alone or in combination with other plans and projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. In order to screen out a project, it must be excluded, on the basis of objective information, that the Project, individually or in combination with other plans or projects, will have a significant effect on a European site.

Stage 2 Appropriate Assessment: This stage examines whether it is likely that the project, either alone or in combination with other projects or plans, will have a significant effect upon the integrity of a European site. In order to 'screen out' a project (i.e. in order to conclude that it is not necessary to move to the 'Stage 2' appropriate assessment stage (see immediately below), the possibility that the Project (individually or in combination with other plans or projects), will have a significant effect on the integrity of a European site must be excluded on the basis of objective information.

Stage 3 Assessment of Alternative Solutions: This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to enable the competent authority to carry out AA screening in relation to the Project to determine whether it can be excluded, on the basis of objective information, that the Project, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

2.1. Guidance

This report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC, 2018).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021).
- Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021).
- Office of the Planning Regulator (OPR) Practice Note PN01 Appropriate Assessment Screening for Development Management (OPR, 2021).
- Natura Impact Statement Sustainable Residential Development and Compact Settlement Guidelines for Planning Authorities (NPWS, 2024).

2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
    - National Parks & Wildlife (NPWS) protected site boundary data;
    - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
    - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
    - Digital Elevation Model over Europe (EU-DEM);
    - Google Earth and Bing aerial photography 1995-2025;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie including:
    - Natura 2000 - Standard Data Form;
    - Conservation Objectives;
    - Site Synopses;
- National Biodiversity Data Centre records;
    - Online database of rare, threatened and protected species;
    - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans and Reports;
    - Dublin City Development Plan 2022-2028
    - Air Emissions Impact Assessment ADSIL Clonshaugh Business & Technology Park, Dublin 17

3. Description of the Project

Amazon Data Services Ireland Ltd. ("ADSIL" or 'the applicant') is applying to the Environmental Protection Agency ('the Agency') for a review of an Industrial Emissions (IE) Licence (EPA Licence Ref P1186-01) for the data storage facility (hereafter referred to as the 'Installation') located in Clonshaugh Business and Technology Park, Clonshaugh, Dublin 17. The Installation provides secure data storage services, and distribution of information to individuals, businesses and organisations. The application relates to the overall Installation, which includes the existing licensed Installation ((Buildings W, X and Y) and the extension to the Installation (Buildings U and V) and covers 9.963 hectares (ha) in total.

The applicant is applying to the Environmental Protection Agency (EPA) for an Industrial Emissions (IE) Licence principally relating to the operation of diesel-powered emergency generators under Activity Class 2.1.

The review application is for the combined existing Installation and the extended Installation. Specifically to 'Provide updated information regarding appropriate assessment of potential noise and air impacts from the overall development (to include existing and Project) and potential in-combination effects with other developments'.

Figure 1 shows the Project location and Figure 2 shows a detailed view of the Project boundary on recent aerial photography. Figure 3 shows the layout of the Project.

Stormwater Drainage Systems

Rainwater runoff from impermeable areas of the existing Installation is collected via the onsite storm water drainage network in accordance with DCC Planning Ref. 2979/13, 2688/13 and 3534/11. This network conveys the stormwater to one of 2 no. stormwater attenuation systems (See Drawing 21_123F-CSE-00-XX-DR-C-1100-Surface Water Layout Plan) before the attenuated stormwater discharges offsite at 2 no. emission points (SW1 and SW2).

There are 2 no. Attenuation Storm Cells located on site for the existing Installation that are designed to attenuate storm waters:

- Attenuation Storm cell 1 (170 m^3 capacity) is located to the south of the site. From there, the stormwater is discharged at emission point SW1, which connects to the existing 450 mm business park storm sewer located to the south of the existing Installation and subsequently to the Santry River.
- Attenuation Storm cell 2 (1,351 m^3 capacity) is located to the south of Building Y. From there, the stormwater is discharged at emission point SW2 which connects to the existing 900 mm business park storm sewer located to the east of the existing Installation that flows north to south, and subsequently to the Santry River.

For the extended Installation, rainwater runoff from impermeable areas is collected via the onsite storm water drainage network in accordance with DCC Planning Ref. 3461/21. This network conveys the stormwater to an attenuation system via hydrocarbon interceptors to ensure that the quality of the stormwater discharge is controlled (See Drawing 21_123F-CSE-00-XX-DR-C-1100-Surface Water Layout Plan). The attenuated stormwater discharges offsite at emission point SW3.

There is 1 no. Attenuation Storm cell for the extended Installation that is designed to attenuate storm waters:

- Attenuation Storm cell 3 (800 m^3 capacity) at the north east corner of the extended part of the site, close to Building U. From there, the stormwater is discharged at emission point SW3, which connects to the 900mm diameter storm sewer running north to south beneath the entrance road to the Business Park and subsequently to the Santry River.

These storm sewer outfalls into the Santry River that is located to the south of the Site; the Santry River flows 5.15 km east, to the North Bull Island transitional water body, and ultimately Dublin Bay.

Cooling Water Drain down

Run-off from cooling systems discharge to the stormwater network. The evaporative cooling (humidified) water is used when atmospheric temperatures are above the setpoint to cool components within the facility. This is recirculated mains water that has been through the AHUs only. There is no addition of water treatment chemicals.

The recirculated evaporative cooling water in the humidified water storage tanks is drained down typically every 7 days to the storm water drainage network to prevent legionella growth in the system. The regular replenishment of the evaporative cooling water prevents legionella growth. A conductivity probe is in the AHU sump is used to determine the level of salts build up – there is no water treatment or water softeners added.

In the event that conductivity exceeds 1,500 µS/cm, water is bled off constantly when 1,500 µS/cm is reached, the sump is not drained fully as that would impede the evaporative system. Water is bled off until conductivity drops below 1,500 µS/cm and the drain valve is closed.

Cleaning of the water-based cooling systems including all AHUs and pipelines with hydrogen peroxide solution is only undertaken if positive legionella samples have been detected in the unit. In accordance with ADSIL legionella management procedure, every cooling system is sampled annually for legionella bacteria. If a result exceeds 1000CFU/L, the air handling unit is disinfected with a hydrogen peroxide solution. Based on past experience, disinfection is required on approximately 10% of systems annually. During the disinfection process, 50 ml of hydrogen peroxide solution is dosed into the air handling unit and water is recirculated through the cooling system. The disinfected water is discharged to the cooling system drain and ultimately to the storm network. Any residual hydrogen peroxide is oxidised by organics in the onsite storm drainage network and converted to water and oxygen prior to discharge via storm sewer.

Foul Water Emissions

Domestic effluent arising from occupation of the Site, including the transformer compound and control building will be discharged the public foul sewer (at Emission Points SE1 through SE4 for the existing Installation and at Emission Point SE5 for the extended Installation). Refer to Drawing 21_123F-00-XX-DR-C-1200 for the foul drainage layout. The foul water connection to the public foul sewer is in accordance with the DCC Planning Ref. 2979/13, 2688/13 and 3534/11 for the existing Installation and DCC Planning Ref. 3461/21 for the extended Installation.

Domestic Effluent

For the existing Installation, a gravity piped foul drainage network comprising 225 mm uPVC pipes conveys effluent from internal sanitary locations and outfall into the external foul network. The outfall into the existing foul network is at four locations: SE1, SE2, SE3 and SE4. Refer to Drawing 21_123F-00-XX-DR-C-1200-Foul Water Layout Plan for the foul drainage layout.

Domestic effluent arising from the extended Installation, i.e. Buildings U and V, is discharged to the public foul sewer via a gravity piped foul drainage network, comprising 100mm diameter pipes (at emission point SE5).

All internal foul drainage networks were designed in accordance with the relevant guidance including Irish Waters Code of Practice for Wastewater Infrastructure, National Building Regulations Technical Guidance Document H – Drainage & Waste Disposal.

The foul network ultimately coveys the wastewater for final treatment and disposal at Ringsend Wastewater Treatment Plant (WWTP) in Dublin.

Fuel Tank Farm(s)

Drainage of stormwater from the fuel tank farm and associated fuel unloading bays to the south of the Site (Building W) is directed to foul sewer and connects to the foul main at emission point SE2 and SE3. The stormwater drainage from the fuel tank farm and associated fuel unloading bays to the north of the existing Installation (Building X and Y) is directed to foul sewer and connects to the foul main at emission point SE1.

The stormwater drainage sumps at the fuel unloading bays and in the bulk tank concrete bunds contain hydrocarbon detectors 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.

Drainage from these bulk tank farms are equipped with hydrocarbon interceptor(s). The location of these are illustrated on 21_123F-00-XX-DR-C-1200. The hydrocarbon interceptors are equipped with an oil warning system which is connected to the BMS/EPMS critical alarm. The potential for stormwater runoff from high-risk areas

(tank farms, unloading bays and transformer compounds) to contain hydrocarbons arises only in unplanned or emergency scenarios, such as a significant failure of primary containment combined with the simultaneous failure of the downstream hydrocarbon interceptor. Contaminated runoff from tank farms, unloading bays and transformer compound is not a routine or continuous discharge but an exceptional event with multiple layers of prevention control in place.

Transformer Compound

There is one transformer compound onsite at the existing Installation, located at Newbury GIS Substation, the stormwater 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 are illustrated on Drawing 21_123F-00-XX-DR-C-1200. The hydrocarbon interceptors are equipped with an oil warning system which is connected to the BMS/EPMS critical alarm.

Stormwater runoff from the tank farm and unloading bays and transformer compound from Building U and V is directed to stormwater via a hydrocarbon interceptor. The new substation at Building U and V is a building that contains switchboards and UPS, switchgear and a small oil-filled transformer inside the building. There is an externally located transformer adjacent to Building V. Stormwater from these areas is directed to the stormwater network, and ultimately passes through a hydrocarbon interceptor before discharging to the stormwater network.

Air Emissions

There are no main air emissions proposed.

Minor emissions

The following is a list of the minor air emission points from each of the emergency back-up generators on the Site. These emission points are shown in Drawing No. 21_123F-00-XX-DR-C-2000 Air Emission Layout Plan.

Existing Installation

- Building W: 13 no. 5.44 MW_{th} emergency back-up generator stacks with a minimum height of 6 m above ground level.
- Building X: 20 no. 5.44 MW_{th} emergency back-up generator stacks with a minimum height of 16 m above ground level.
- Building Y: 7 no. 5.44 MW_{th} emergency back-up generator stacks with a minimum height of 16 m above ground level.

Extended Installation

- Building U: 10 no. 6.49 MWth emergency back-up generator stacks with a minimum height of 20 m above ground level.
- Building U: 1 no. 2.19 MWth emergency house generator stack with a minimum height of 20 m above ground level.
- Building V: 1 no. 3.6 MWth emergency back-up generator stack with a minimum height of 16 m above ground level.

The environmental impacts of these minor emissions are set out in Section 7, Attachment-7-1-3-2-Air Emissions Impact of this license application.

Potential Emissions

The following is a list of the potential; air emission points. These are emissions which only operate under abnormal process conditions. Typical examples include bursting discs, pressure relief valves, and emergency generators.

- 8 no. Fuel Tank Emergency Breather Vents (1 per each top-up/bulk tank);
- Sprinkler Pumphouse associated with Building W: 2 no. 0.337 MWth diesel powered emergency back-up fire sprinkler pumps; and
- Sprinkler Pumphouse associated with Building X and Y: 2 no. 0.423 MWth diesel powered emergency back-up fire sprinkler pumps.

Fugitive Emissions

Fugitive emissions are defined as low level diffuse emissions, mainly of volatile organic compounds, that occur when either gaseous or liquid process fluids escape from plant equipment. There are no such emissions anticipated from the installation. External pipelines containing diesel will have flange guards to prevent fugitive emissions.

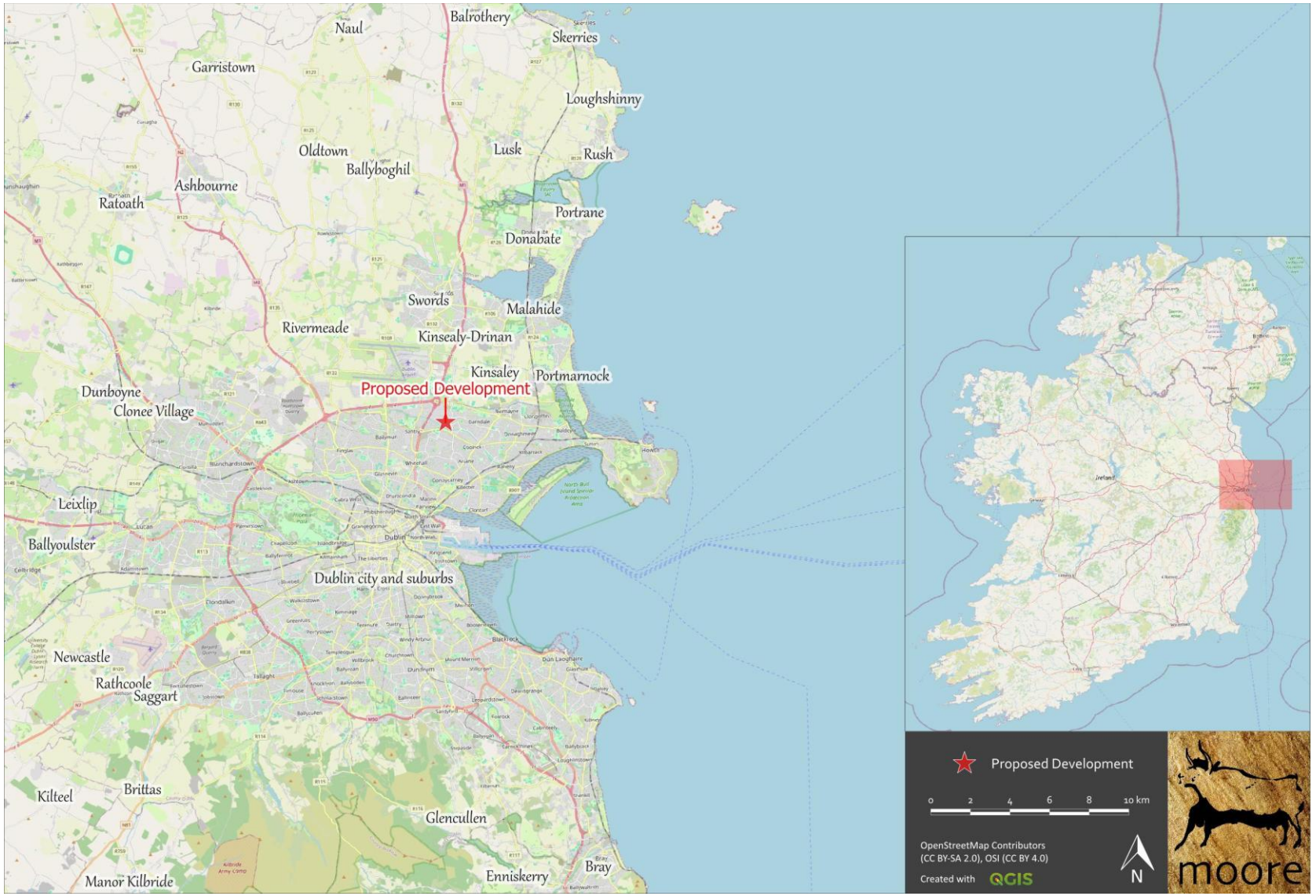

Figure 1. Showing the Project location at Clonshaugh, Dublin.

Figure 2. Showing the Project boundary on recent aerial photography.

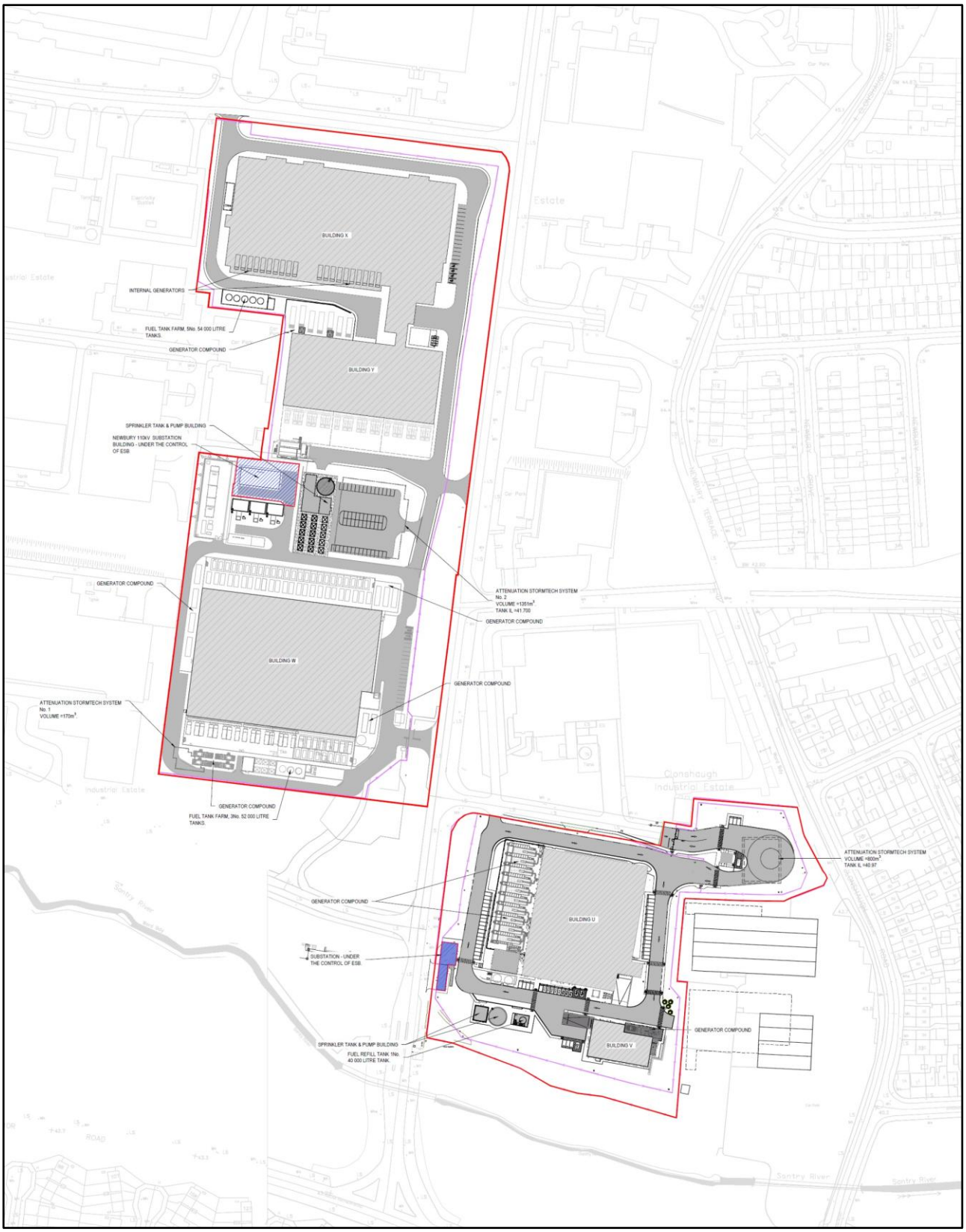

Figure 3. Plan of the Project areas in Clonshaugh.

4. Identification of Natura 2000 Sites

4.1. Description of Natura Sites Potentially Significantly Affected

A Zone of Influence (ZoI) of a Project is the geographical area over which it could affect the receiving environment in a way that could have significant effects on the Qualifying Interests of a European site. In accordance with the OPR Practice Note (2021), PN01, the ZoI should be established on a case-by-case basis using the Source- Pathway-Receptor framework.

The European Commission's "*Assessment of plans and projects in relation to Natura 2000 sites guidance on Article 6(3) and (4) of the Methodological Habitats Directive 92/43/EEC*" published 28 September 2021 states at section 3.1.3, that:

"Identifying the Natura 2000 sites that may be affected should be done by taking into consideration all aspects of the plan or project that could have potential effects on any Natura 2000 sites located within the zone of influence of the plan or project. This should take into account all of the designating features (species, habitat types) that are significantly present on the sites and their conservation objectives. In particular, it should identify:

- *any Natura 2000 sites geographically overlapping with any of the actions or aspects of the plan or project in any of its phases, or adjacent to them;*
- *any Natura 2000 sites within the likely zone of influence of the plan or project Natura 2000 sites located in the surroundings of the plan or project (or at some distance) that could still be indirectly affected by aspects of the project, including as regards the use of natural resources (e.g. water) and various types of waste, discharge or emissions of substances or energy;*
- *Natura 2000 sites in the surroundings of the plan or project (or at some distance) which host fauna that can move to the project area and then suffer mortality or other impacts (e.g. loss of feeding areas, reduction of home range);*
- *Natura 2000 sites whose connectivity or ecological continuity can be affected by the plan or project".*

The range of Natura 2000 sites to be assessed, i.e. the zone in which impacts from the plan or project may arise, will depend on the nature of the plan or project and the distance at which effects may occur. For Natura 2000 sites located downstream along rivers or wetlands fed by aquifers, it may be that a plan or project can affect water flows, fish migration and so forth, even at a great distance. Emissions of pollutants may also have effects over a long distance. Some projects or plans that do not directly affect Natura 2000 sites may still have a significant impact on them if they cause a barrier effect or prevent ecological linkages. This may happen, for example, when plans affect features of the landscape that connect Natura 2000 sites or that may obstruct the

movements of species or disrupt the continuity of a fluvial or woodland ecosystem. To determine the possible effects of the plan or project on Natura 2000 sites, it is necessary to identify not only the relevant sites but also the habitats and species that are significantly present within them, as well as the site objectives.

The Zone of Influence may be determined by considering the Project's potential connectivity with European sites, in terms of:

- Nature, scale, timing and duration of all aspects of the proposed works and possible impacts, including the nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of potential pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Location of ecological features and their sensitivity to the possible impacts.

The potential for source pathway receptor connectivity is firstly identified through GIS interrogation and detailed information is then provided on sites with connectivity. European sites that are located within a potential Zone of Influence of the Project are listed in Table 1 and presented in Figures 4 and 5, below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website (www.npws.ie) on 28 March 2025. This data was interrogated using GIS analysis to provide mapping, distances, locations and pathways to all sites of conservation concern including pNHAs, NHA and European sites.

The nearest European sites to the Project are the South Dublin Bay and River Tolka Estuary SPA (Site Code 004024), 3.92km to the south, the North Dublin Bay SAC (Site Code 000206), 4.38km to the southeast and the North Bull Island SPA (Site Code 004024), 4.36km to the southeast.

The Project is located within the hydrological catchment of the Santry River, approximately 30m to the north of the River, in Clonshaugh Business Park. The Santry River flows into Dublin Bay at Dollymount downstream. A review of aerial photography, Ordnance Survey Ireland (OSI) mapping and OSI Geographical Information System (GIS) data for rivers and streams indicates that there are no notable surface water features onsite and no direct hydrological pathways to offsite surface water bodies.

The Air Emissions Impact Assessment prepared by AWN (April 2025) was consulted in terms of air quality and technical data on emissions and sensitive receptors. The following excerpts contribute to the determination of the Zone of Influence of the Project. For the purposes of the assessment set out in Attachment-7-1-3-2-Air Emissions Impact Assessment-REV1, the licenced operational scenario is a worst-case assessment which assumes that all of the emergency back-up generators operate for 150 hours per year. However, in reality, it is likely that they will be in operation for only a few hours in any one year for testing and maintenance.

AWN has conducted a geospatial search to identify the nearest potentially sensitive ecological receptors within 10 km of the site, including designated conservation areas such as Special Areas of Conservation (SACs), Special Protection Areas (SPAs), and Natural Heritage Areas (NHAs), and proposed Natural Heritage Areas (pNHAs). SACs

and SPAs are protected under the EU Habitats Directive (92/43/EEC), and EU Birds Directive (2009/147/EC) respectively. NHAs are designated under the Wildlife (Amendment) Act 2000, and pNHAs were identified as sites of conservation interest in the 1990s but have not since been statutorily proposed or designated. 10km has been selected as an appropriate distance to model as the process contribution from the facility reduces to below 1% of all appropriate critical levels within this distance.

The nearest European sites to the Installation relevant to the air impact (Attachment-7-1-3-2-Air Emissions Impact Assessment-REV1) are the South Dublin Bay SAC and South Dublin Bay (Site Code 000210) and River Tolka Estuary SPA (Site Code 004024), and the most impacted (in terms of Process Contributions) Baldoyle Bay SAC (Site Code 000199). The list of sites within 10km of the facility is shown below.

Table 1 European Sites located within the potential Zone of Influence of the Project.

Site Code	Site name	Distance (km)
000178	Santry Demesne pNHA	1.5
000210	South Dublin Bay SAC	3.9
004024	South Dublin Bay and River Tolka Estuary SPA	3.9
001208	Feltrim Hill pNHA	4.1
000206	North Dublin Bay pNHA	4.4
000206	North Dublin Bay SAC	4.4
004006	North Bull Island SPA	4.4
002103	Royal Canal pNHA	4.8
000199	Baldoyle Bay pNHA	4.9
000199	Baldoyle Bay SAC	4.9
001763	Sluice River Marsh pNHA (considered under Baldoyle Bay SAC)	5.1
004016	Baldoyle Bay SPA	5.2
002104	Grand Canal pNHA	6.2
000205	Malahide Estuary SAC	6.6
004025	Malahide Estuary SPA	6.6
000205	Malahide Estuary pNHA	6.6
000210	South Dublin Bay pNHA	6.8
000210	South Dublin Bay SAC	6.8
004236	North-West Irish Sea SPA	6.9
000202	Howth Head pNHA	8.4
000202	Howth Head SAC	8.4
003000	Rockabill to Dalkey Island SAC	9.3
000203	Ireland's Eye pNHA	9.9
002193	Ireland's Eye SAC	9.9
004117	Ireland's Eye SPA	9.9

Emissions of NO_X have the potential to impact vegetation and sensitive plant species. Directive 2008/50/EC has set limit values for vegetation effects as per Table 1 of Attachment-7-1-3-2-Air Emissions Impact Assessment-REV1. As such it is typical to assess the impact of NO_X emissions from a facility on any nearby sensitive ecological areas in close proximity to the site. There are no European sites within 1 km of the subject site as noted above.

An annual limit value of 30 µg/m^3 for NO_X and 20 µg/m^3 for SO_2 is specified within EU Directive 2008/50/EC for the protection of ecosystems. The NO_X limit value is applicable only in highly rural areas away from major sources of NO_X such as large conurbations, factories and high road vehicle activity such as a dual carriageway or motorway. Annex III of EU Directive 2008/50/EC identifies that monitoring to demonstrate compliance with the NO_X limit value for the protection of vegetation should be carried out distances greater than:

- 5 km from the nearest motorway or dual carriageway;
- 5 km from the nearest major industrial installation;
- 20 km from a major urban conurbation.

There are sections of ecological receptors which are near the facility that are close to industrial facilities, so the limit value for NO_X for the protection of ecosystems is not technically applicable at these sites. Regardless, the annual average concentrations for NO_X from all emission points at the facility were predicted at receptors within the designated sites for all five years of meteorological data modelled (2018 – 2022). With receptor spacing of 500 m, 1,777 discrete receptors were modelled in total within the sensitive ecosystems.

Dispersion modelling of NO_X emissions from the installation has been conducted within the Santry Demesne pNHA to determine the potential impact to vegetation as a result of emissions from the back-up generators on site. Emissions from the back-up generators are not predicted to be significant at this distance from the installation as emission concentrations peak at the site boundary and fall off rapidly with increasing distance from the installation.

In terms of impacts in the nearby ecologically sensitive areas, the closest and most impacted (in terms of process contributions (PC)) is the Santry Demesne pNHA (000178); c. 1.5km west of the facility. The site comprises the remnants of a former demesne woodland.

In order to consider the effects of nitrogen and acid deposition owing to emissions from the facility on the designated receptors, the maximum annual mean NO_2, NH_3 and SO_2 predicted environmental concentrations must be converted firstly into a dry deposition flux using the equation below which is taken from UK Environment Agency publication "AGTAG06 – Technical Guidance On Detailed Modelling Approach For An Appropriate Assessment For Emissions To Air"[1].

Critical loads

[1] UK Environment Agency (2014) AGTAG06 – Technical Guidance On Detailed Modelling Approach For An Appropriate Assessment For Emissions To Air

A 'Critical Load' is defined by the United Nations Economic Commission for Europe (UNECE) as *"a quantitative estimate of an exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge"*[2].

Critical loads for N deposition and acid deposition were derived from the Air Pollution Information System (APIS) website(4) and are reproduced in Table 3 of the Attachment-7-1-3-2-Air Emissions Impact Assessment-REV1 prepared by AWN (April 2025) These are only available for internationally designated habitats (Special Protection Area (SPA) and Special Area of Conservation (SAC)), and for nationally designated Natural Heritage Areas (NHA).

Critical loads for Natura 2000 Sites

The critical loads from AIPS and used for the assessment are detailed in Table 3 of the Attachment-7-1-3-2-Attachment-7-1-3-2-Air Emissions Impact Assessment-REV1 for the Natura 2000 sites identified as relevant by the modelling assessment. In order to determine the appropriate critical load, the EPA publication "Research 390: *Nitrogen-Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitats*" (EPA, 2021) was consulted. In Table 3.2 of the publication empirical critical loads of nutrient nitrogen are outlined with a worst-case range of 5-10 kgN/ha/yr for most habitat types.

In addition, for most habitat types, the EPA publication recommends the midpoint is used to define the critical load (e.g. 7.5 kgN/ha/yr). Thus, the mid-range critical load for the worst-case habitat type within the relevant sites have been used to compare process contributions.

Critical loads for proposed Natural Heritage Areas (pNHAs)

Critical loads for proposed Natural Heritage Areas (pNHAs) are not defined on the Air Pollution Information System (APIS) website. In the absence of defined critical loads, varying interpretations exist regarding the appropriate thresholds. To address this, AWN requested the project ecologist (Moore Group) to review the Santry Demesne pNHA (Site Code: 000178) and identify the potential critical load for nitrogen (N) deposition and acid deposition.

The National Parks and Wildlife Service (NPWS) Site Synopsis for the Santry Demesne pNHA (site code: 000178) states *"The primary importance of this site is that it contains a legally protected plant species. The woodland, however, is of general ecological interest as it occurs in an area where little has survived of the original vegetation."* The woodland mix can be interpreted as the Fossitt (2000) habitat type of WD1 Mixed Broadleaved Woodland, this is not Annex I habitat under the Habitats Directive.

[2] (United Nations Economic Commission for Europe (UNECE) (2003). Critical Loads for Nitrogen Expert Workshop 2002

According to the National Woodlands Survey 2002–2008 (Perrin et al. 2008, Vol. 3), the site is classified as the Fossitt (2000) habitat type WD1 Mixed Broadleaved Woodland. Two sections of woodland within the demesne were included in the survey:

- *The north-western section comprises woodland along the course of a river. The canopy here includes ash (Fraxinus excelsior), beech (Fagus sylvatica), sycamore (Acer pseudoplatanus) and wild cherry (Prunus avium) with hazel (Corylus avellana) and wych elm (Ulmus glabra) in the understorey. The ground flora includes Heracleum sphondylium, Geum urbanum, Geranium robertianum and Phyllitis scolopendrium in the shadier parts. A tarmacadam footpath fragments this section.*

- *The second area in the east has an ash canopy with a well developed understorey of hazel and sycamore. The ground flora was dominated by Allium ursinum and Galium aparine. The relevé was located here as it is the least fragmented section. The area around the ornamental pond was excluded due to the area of water. Much of the ground flora here is mown and therefore fragmented. The ground flora of most of the southern section has been removed by levelling the site with a digger. The rare plants previously recorded here were not observed during this survey.*

Fossitt (2000) recognises seven types of semi-natural woodland, some of which may correspond to or contain Annex I habitats. However, Mixed Broadleaved Woodland falls under the lower-tier category of 'Highly Modified/Non-native Woodland'. The only comparable Annex I semi-natural woodland type with an established critical load for N deposition and acid deposition in the Air Pollution Information System (APIS) website / EPA *Research Report 390: Nitrogen–Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitat* is 'Old Sessile Oak Woods with *Ilex* and *Blechnum*' (Annex I code 91A0; EUNIS code G1), though this classification is made by exclusion, as the other semi-natural woodlands with an established critical load /level are typically associated with wetlands, rivers, or bogs and are therefore not comparable with the Santry Demesne pNHA.

Given these findings, Santry Demesne pNHA (site code:000178) should be considered a general ecological receptor rather than a habitat of high conservation significance.

In the absence of an established critical load level for the Santry Demesne pNHA, there is no definitive threshold available for assessment. Given this, and based on EPA *Report No.390: Nitrogen–Sulfur Critical Loads: Assessment of the Impacts of Air Pollution on Habitat*, AWN has determined a conservative critical load level for the purpose of this assessment as 7.5 kg N ha^{-1} yr^{-1} (this is the conservative critical load based on the midrange of the worst-case critical loads outlined in Table 3.2 of Report 390).

Although other ecologically sensitive sites are located within 10km of the facility, the assessment has focused on the Santry Demense pNHA (Site Code 000178), South Dublin Bay SAC (Site Code 000210) and South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) as these sites will be most impacted by the facility both in terms of process contribution (PC) and in terms of predicted environmental concentration (PEC).

Thus, these sites have been brough forward for further assessment in this AA Screening.

The Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the European sites in the Zone of influence of the Project are provided in Table 2 below.

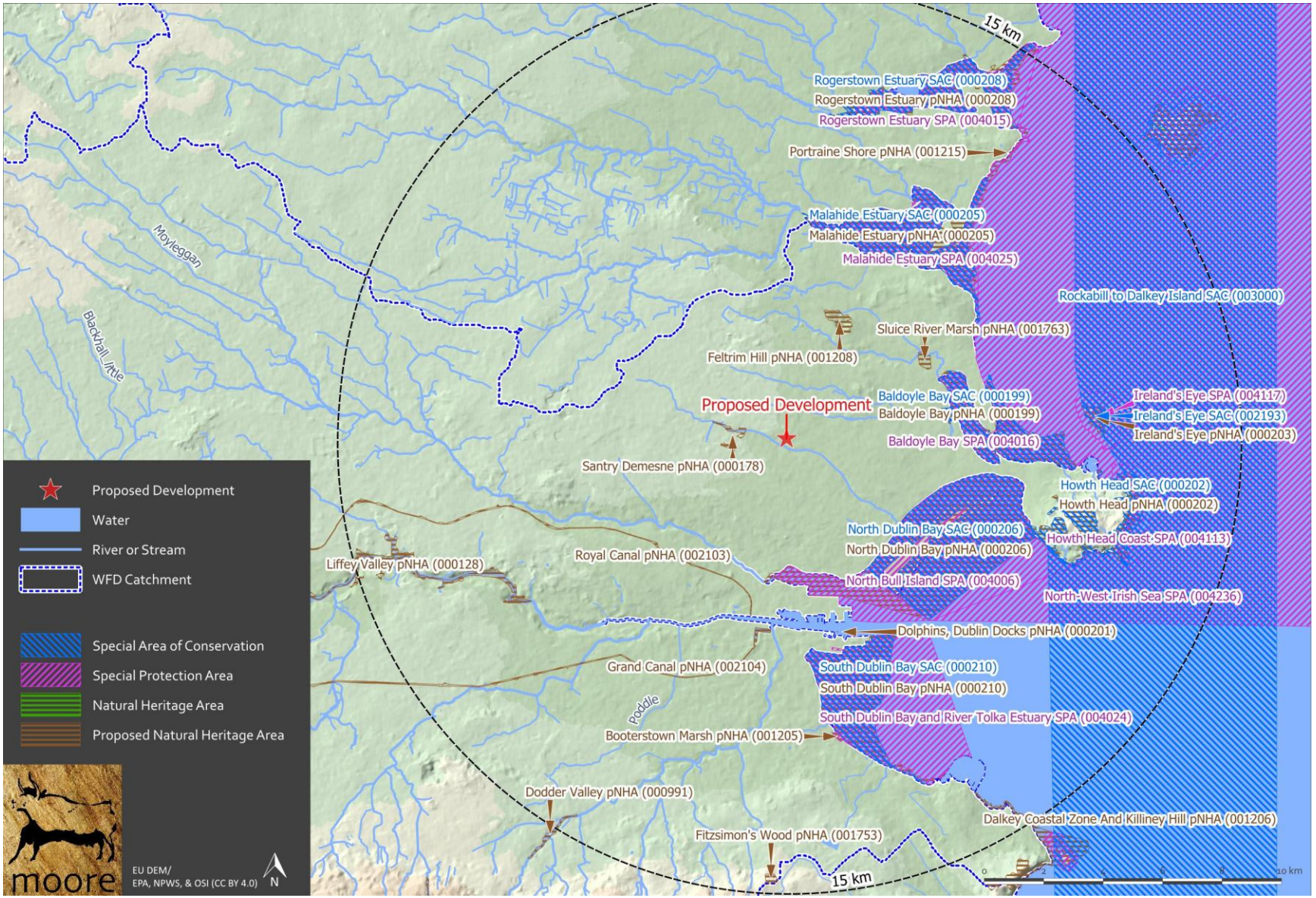

Figure 4. Showing European sites and NHAs/pNHAs within the wider Potential Zone of Influence of the Project.

*Table 2 Identification of relevant European sites using Source-Pathway-Receptor model and compilation of information on QIs and conservation objectives. *Priority Habitats*

European Site name, Site code and Conservation Objectives	Location Relative to the Project Site	Connectivity – Source-Pathway-Receptor	Considered further in Screening – Y/N
Baldoyle Bay SAC (000199) The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: 1140 Mudflats and sandflats not covered by seawater at low tide 1310 *Salicornia* and other annuals colonizing mud and sand 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	4.9 km to the east of the Project	There are no direct pathways or connectivity to the habitats and/or species of this site. It is considered further in terms of Air Quality.	Yes, see Table 3 below.
South Dublin Bay SAC (000210) The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: 1140 Mudflats and sandflats not covered by seawater at low tide NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	3.9km to the south of the Project	There are no direct pathways or connectivity to the habitats and/or species of this site. It is considered further in terms of Air Quality.	Yes, see Table 3 below.
Baldoyle Bay SPA (004016) The overall aim of the Birds Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: A046 Brent Goose *Branta bernicla hrota* A048 Shelduck *Tadorna tadorna* A137 Ringed Plover *Charadrius hiaticula* A140 Golden Plover *Pluvialis apricaria* A141 Grey Plover *Pluvialis squatarola*	4.9 km to the east of the Project	There are no direct pathways or connectivity to the habitats and/or species of this site. It is considered further in terms of Air Quality.	Yes, see Table 3 below.

European Site name, Site code and Conservation Objectives	Location Relative to the Project Site	Connectivity – Source-Pathway-Receptor	Considered further in Screening – Y/N
A157 Bar-tailed Godwit *Limosa lapponica* A999 Wetlands NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.			
South Dublin Bay and River Tolka Estuary SPA (004024) The overall aim of the Birds Directive is to maintain or restore the favourable conservation status of habitats and species of community interest: A046 Light-bellied Brent Goose *Branta bernicla hrota* A130 Oystercatcher *Haematopus ostralegus* A137 Ringed Plover *Charadrius hiaticula* A141 Grey Plover *Pluvialis squatarola* A143 Knot *Calidris canutus* A144 Sanderling *Calidris alba* A149 Dunlin *Calidris alpina alpina* A157 Bar-tailed Godwit *Limosa lapponica* A162 Redshank *Tringa totanus* A179 Black-headed Gull *Chroicocephalus ridibundus* A192 Roseate Tern *Sterna dougallii* A193 Common Tern *Sterna hirundo* A194 Arctic Tern *Sterna paradisaea* A999 Wetlands NPWS (2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	3.9km to the south of the Project	There are no direct pathways or connectivity to the habitats and/or species of this site. It is considered further in terms of Air Quality.	Yes, see Table 3 below.

4.2. Ecological Network Supporting Natura 2000 Sites

A concurrent GIS analysis of the proposed Natural Heritage Areas (pNHA) and designated Natural Heritage Areas (NHA) in terms of their role in supporting the species using Natura 2000 sites was undertaken along with GIS

investigation of European sites. These supporting roles mainly relate to mobile fauna such as mammals and birds which may use pNHAs and NHAs as ecological corridors or "stepping stones" between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account in the decision process and during the preparation of this AA Screening report.

The majority of NHAs and pNHAs identified in Figure 4 are located outside the Zone of Influence, with the exception of those which share the boundaries of the European sites listed above; these are considered under their higher conservation status as European sites.

Critical loads for proposed Natural Heritage Areas (pNHAs) are not defined on the Air Pollution Information System (APIS) website. In the absence of defined critical loads, varying interpretations exist regarding the appropriate thresholds.

Santry Demesne pNHA (site code: 000178) is considered a general ecological receptor rather than a habitat of high conservation significance. However, it may be excluded from the AA process at this stage as it does not support Article 10 supporting habitat for any of the European sites considered in this assessment.

5. Identification of Potential Impacts & Assessment of Significance

The Project is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

5.1. Assessment of Likely Significant Effects

The consideration of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the Project and the results of Air Quality Assessment are presented in Table 3.

Table 3 Assessment of Likely Significant Effects.

Identification of all potential direct and indirect impacts that may result in significant effects on the conservation objectives of a European site, taking into account the size and scale of the project.	
Impacts:	**Significance of Impacts:**
Construction phase	N/A The Project site is operational and there are no construction emissions to be considered.
Operational phase e.g. Direct emission to air and water Surface water runoff containing contaminant or sediment Lighting disturbance Noise/vibration Changes to water/groundwater due to drainage or abstraction Presence of people, vehicles and activities Physical presence of structures (e.g. collision risks)	The Project is operational and there are no emissions to surface water that could have a negative effect on ecologically sensitive areas. All foul and stormwater runoff is contained on site and discharged to urban drainage systems. Storm water outfalls into the Santry River that is located to the south of the Site; the Santry River flows 5.15 km east, to the North Bull Island transitional water body, and ultimately Dublin Bay. The evaporative cooling water discharge from the Installation is discharged to the Santry River, AWN have undertaken a conservative numerical analysis (Technical Note: Stormwater Impact Assessment; Clonshaugh, Dublin 17, Ref: 257501.0094TR01 Stormwater Impact Assessment Technical), based on the existing assimilative capacity of the surface water body. This has been assessed for two hydrological conditions: dry weather (95%ile) and mean condition (50%ile). The discharge of evaporative cooling water from the Installation is not anticipated to have a noticeable impact on the receiving water status in Santry River. There are multiple design features such as attenuation systems via Hydrocarbon Interceptors to ensure that the quality of the stormwater discharge is controlled, recirculation of cooling water and concrete bunds contain hydrocarbon detectors for the control of Diesel Tanks. Drainage from the GIS Substation transformer compound is equipped with hydrocarbon interceptors equipped with an oil warning system which is connected to the BMS/EPMS critical alarm. These design features are all acceptable at Stage 1 AA Screening. The Attachment-7-1-3-2 Noise Impact Assessment for the EPA Licence Review Application evaluates noise from the project. The assessment concludes that, due to the separation distance between the facility and the

	nearest ecologically sensitive area and European site, it is highly unlikely that noise from the facility would have any impact under any scenario. As a result, noise impacts on ecologically sensitive areas have been scoped out of further assessment. Air Emissions Impact Assessment prepared by AWN (April 2025) consider the impacts for emissions to air on ecological receptors from the installation in relation to NO_X, NH_3 and SO_2 , nitrogen and acid deposition . The NO_X, NH_3 ,SO_2 , nitrogen and acid deposition (including background provided on the Air Pollution Information System (APIS) website, in line with UKEA and UK Defra guidance) can then be considered for the most impacted modelled designated habitats, Baldoyle Bay SAC (Site Code 000199), South Dublin Bay SAC (Site Code: 000210), South Dublin Bay and River Tolka Estuary SPA (Site Code 004024). <u>Baldoyle Bay SAC</u> Regarding the most impacted (in terms of Process Contributions) Natura 2000 receptor, the Baldoyle Bay SAC, operations will lead to ambient NO_X, NH_3 and SO_2 concentrations (including background) which are in compliance with the relevant limit values, reaching at most 14%, 50% and 5% respectively of the annual limit value. The process contribution (PC) NO_X, NH_3 and SO_2 concentrations is at most 0.9%, 0.02% and 0.04% of the annual limit value over the five years of meteorological data modelled. The nitrogen deposition flux for the worst-case year is 6.038 kg/ha/yr and is below the midpoint critical load of 7.5 kg/ha/yr for the most sensitive feature “Atlantic salt meadows (*Glauco-Puccinellietalia* maritimae)” (feature code: H1330) located in the Baldoyle Bay SAC, indicating that the effects of nitrogen deposition on designated sites due to the facility are not significant. The process contribution (PC) nitrogen deposition (as N) is at most 0.63% of the annual limit value over the five years of meteorological data modelled. The total acid deposition (as N and S) flux for the worst-case year is 0.504 keq/ha/yr and is below the worst case maximum critical load range of 0.714 – 4.927 keq/ha/yr for the most sensitive feature “Fixed coastal dunes with herbaceous vegetation (“grey dunes”)” (feature code: H2130) in the North Dublin Bay SAC (there is no data for acid deposition critical loads in the Baldoyle Bay SAC and thus North Dublin Bay SAC has been referenced), indicating that the effects of acid deposition (as N and S) on designated sites due to the facility are not significant. The process contribution (PC) total acid deposition (as N

	and S) flux is at most 0.71% of the annual limit value over the five years of meteorological data modelled. <u>South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA</u> Regarding the closest (and most impacted in terms of Predicted Environmental Concentration (PEC)) Natura 2000 receptor (South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA), at the worst-case location, operations will lead to ambient NO_X, NH_3 and SO_2 concentrations (including background) which are in compliance with the relevant limit values, reaching at most 99%, 42% and 37% respectively of the annual limit value. The process contribution (PC) NO_X, NH_3 and SO_2 concentrations is at most 0.2%, 0.004% and 0.046% of the annual limit value over the five years of meteorological data modelled. Within the closest (and most impacted in terms of Predicted Environmental Concentration (PEC)) Natura 2000 receptor (South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA), at the worst-case location, the nitrogen deposition flux for the worst-case year is 6.807 kg/ha/yr. This is below the midrange critical load of 7.5 kg/ha/yr[(2)] for the most sensitive feature "*Tringa totanus* (Eastern Atlantic - wintering)" (feature code: A162), indicating that the effects of nitrogen deposition on designated sites due to the facility are not significant. The process contribution (PC) nitrogen deposition (as N) is at most 0.11% of the annual limit value over the five years of meteorological data modelled. Within the closest (and most impacted in terms of PEC) Natura 2000 receptor (South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA), at the worst-case location, the total acid deposition (as N and S) flux for the worst-case year is 0.591 keq/ha/yr. This is below the worst case maximum critical load range of 0.714 – 4.927 keq/ha/yr for the most sensitive feature "*Sterna hirundo* (Northern/Eastern Europe - breeding)" (feature code: A193), indicating that the effects of acid deposition (as N and S) on designated sites due to the facility are not significant. The process contribution (PC) total acid deposition (as N and S) flux is at most 0.12% of the annual limit value over the five years of meteorological data modelled.
Describe any likely changes to the European site:	
Examples of the type of changes to give consideration to include:	None. The Project site is not located adjacent or within a European site, therefore there is no risk of habitat loss

Reduction or fragmentation of habitat area Disturbance to QI species Habitat or species fragmentation Reduction or fragmentation in species density Changes in key indicators of conservation status value (water quality etc.) Changes to areas of sensitivity or threats to QI Interference with the key relationships that define the structure or ecological function of the site Climate change	or fragmentation or any effects on QI habitats or species directly or ex-situ. There is no risk of contaminated surface water reaching European sites. There is no risk of contaminated air reaching European sites.

5.2. Assessment of Potential In-Combination Effects

In-combination effects are changes in the environment that result from numerous human-induced alterations. In-combination effects can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the Project, other relevant plans and projects in the area must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination effects of the Project with other such plans and projects on European sites.

Potential In-Combination Effects - Air Quality

In combination or cumulative effects are firstly considered under Air Quality. The cumulative air impact assessment includes this installation, the operators installation located in the business park (P1171-01) and two additional data centres identified within the study area: the Dataplex data centre, and the Digital Realty data centre.

Baldoyle Bay SAC

Regarding the most impacted (in terms of process contributions) Natura 2000 designated receptor, the Baldoyle Bay SAC, cumulative operations will lead to ambient NO_X, NH_3 and SO_2 concentrations (including background) which are in compliance with the relevant limit values, reaching at most 38%, 50% and 9% respectively of the annual limit value. The cumulative process contribution (PC) NO_X, NH_3 and SO_2 concentrations is at most 1.9%, 0.02% and 0.08% of the annual limit value over the five years of meteorological data modelled.

The nitrogen deposition flux for the worst-case year is 6.077 kg/ha/yr and is below the midpoint critical load of 7.5 kg/ha/yr for the habitat type "Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)" (feature code: H1330) in the Baldoyle Bay SAC, indicating that the effects of nitrogen deposition on designated sites due to the facility and other nearby facilities are not significant. The cumulative process contribution (PC) nitrogen deposition (as N) is at most 1.3% of the annual limit value over the five years of meteorological data modelled.

The total acid deposition (as N and S) flux for the worst-case year is 0.507 keq/ha/yr and is below the worst case maximum critical load range of 0.714 – 4.927 keq/ha/yr for the habitat type "Fixed coastal dunes with herbaceous vegetation ("grey dunes")" (feature code: H2130) in the North Dublin Bay SAC (there is no data for acid deposition critical loads in the Baldoyle Bay SAC and thus North Dublin Bay SAC has been referenced), indicating that the effects of acid deposition (as N and S) on designated sites due to the facility and other nearby facilities are not significant. The cumulative process contribution (PC) total acid deposition (as N and S) flux is at most 2.9% of the annual limit value over the five years of meteorological data modelled.

South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA

At the South Dublin Bay SAC and South Dublin Bay & River Tolka Estuary SPA), at the worst-case location, cumulative operations will lead to ambient NOX, NH3 and SO2 concentrations (including background) which are in compliance with the relevant limit values, reaching at most 99.7%, 42% and 37% respectively of the annual limit value. The process contribution (PC) NOX, NH3 and SO2 concentrations is at most 0.35%, 0.004% and 0.010% of the annual limit value over the five years of meteorological data modelled.

The cumulative nitrogen deposition flux for the worst-case year is 6.812 kg/ha/yr. This is below the midrange critical load of 7.5 kg/ha/yr(2) for the feature "Tringa totanus (Eastern Atlantic - wintering)" (feature code: A162), indicating that the effects of nitrogen deposition on designated sites due to the facility and other nearby facilities are not significant. The process contribution (PC) nitrogen deposition (as N) is at most 0.21% of the annual limit value over the five years of meteorological data modelled.

The total acid deposition (as N and S) flux for the worst-case year is 0.591 keq/ha/yr. This is below the worst case maximum critical load range of 0.714 – 4.927 keq/ha/yr for the feature "Sterna hirundo (Northern/Eastern Europe - breeding)" (feature code: A193), indicating that the effects of acid deposition (as N and S) on designated sites due to the facility and other nearby facilities are not significant. The cumulative process contribution (PC) total acid deposition (as N and S) flux is at most 0.23% of the annual limit value over the five years of meteorological data modelled.

Potential In-Combination Effects- Granted permissions in the Vicinity of the Project

A review of the National Planning Application Database was undertaken. The database was then queried for developments granted planning permission within 300m of the Project within the last three years, these are presented in Table 4 below.

The Dublin City Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same potential Zone of Influence of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the Project area and surrounding townlands in which the Project site is located, would be avoided.

The listed developments have been granted permission in most cases with conditions relating to sustainable development by the consenting authority in compliance with the relevant Local Authority Development Plan and in compliance with the Local Authority requirement with regard to the Habitats Directive. The development cannot have received planning permission without having met the consenting authority requirement in this regard.

There are no predicted in-combination effects given that it is predicted that the Project will have no effect on any European site.

Any new applications for the Project area will be assessed on a case by case basis *initially* by Dublin City Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

Table 4. Planning applications granted permission in the vicinity of the Project.

Planning Ref.	Description of development	Comments
3931/21	Planning permission is sought for the change of use of existing commercial/warehouse in Unit 1 to shared office use as an expansion of the adjoining business at Office 21, with works to include the insertion of a mezzanine floor, amendments to facades on east and west elevations to include new combined entrance location, addition fenestration at ground and first floor level, revised signage and ancillary site works.	Due to the nature, scale, of this permitted development there is no possibility of in-combination effects with regards to emissions to air, water or noise. There is no potential for in-combination effects given the Project will have no significant effect on any European site.
4026/21	The development will consist of the construction of a part single storey extension, containing an assisted user WC, and a part three storey passenger lift extension, adjoining and located to the rear of the existing three storey school building and the provision of a new ramp and steps approach, together with all associated site works.	Due to the nature, scale, of this permitted development there is no possibility of in-combination effects with regards to emissions to air, water or noise. There is no potential for in-combination effects given the Project will have no significant effect on any European site.

Planning Ref.	Description of development	Comments
WEB5066/21	The development will consist of a permanent detached portacabin sized 54 square meters and 3.20 meters high, completed with paving and security fence, located to the east of the existing building.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
WEB5067/21	Installation of RTO Equipment 15m (L) x 5.5m (W) x 11m (H), to the north side of the B1 Building, including a ground level pipe rack and associated works at Clonshaugh Business and Technology Park, Dublin 17, D17 E400. The site activity is subject of an Industrial Emissions Licence No. P0306-03.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3159/22	Planning permission for the development will comprise the change of use of existing floor area) within the existing building from warehousing/storage/light industry to office use with associated internal revisions to the building layout. Associated external works including to the existing southern elevation to facilitate a new building entrance, provision of additional car and cycle parking, alterations to internal road layout and walkways, provision of rooflights, removal of existing plant/storage and provision of new plant at ground and roof levels, provision of signage and all associated site works and demolitions, landscaping and services provision required to facilitate the development.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3170/22	The extension of the existing retail unit by 782sqms. The increase of internal net sales space of the overall extended unit by 802 sqms; the change of use of the rear yard to a garden centre (228sqms) installation of sprinkler tanks and ancillary mechanical plant compound; new 3metre fence and gate to control access to the service yard; reconfiguration of parking area to the east of the store and new crossing points and curbing; relocation of the main customer entrance to the south east corner of the store; new cladding treatment on the east and south elevations to screen the portal frame structure; illuminated retailer signage; extend the pedestrian connections to the south east of the store; all works to complete the development.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3230/22	The development consists of: (1) The change of use of the ground floor only for use as a catering kitchen (dark kitchen not open to the public) from that of existing light industrial/warehouse. (2) Internal ground floor alterations from existing layout. (3) Placement of internal storage mezzanine area. (4) Placement of cooking extractor and ventilation ducting through roof area. (5) Complete all ancillary site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3351/22	Planning permission at: property adjacent and generally south of "The Range" store, Clonshaugh Road, Coolock, Dublin 17, for amendments to the permitted, licensed, foodstore as granted under ABP reference ABP-310695-21 (Dublin City Council Reference 3865/20). The amendments include: a revised car parking layout with spaces reduced from 78 to 70 spaces to accommodate a relocated trolley bay and one of the cycle parking areas to positions within the car park area. . There are also some minor changes to the water supply, foul and surface water drainage network within the site and an increased attenuation area. The proposal includes all works to facilitate the completion of the development subject to the above amendments.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3584/22	Permission for the demolition of existing single story sub-standard side extension to existing end of terrace two storey house, permission for the construction of an attic conversion with permission to construct a dormer	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result

Planning Ref.	Description of development	Comments
	side and rear window, permission to enlarge existing vehicular entrance and all associated site works.	of emissions to air, water or noise.
3811/22	The development will consist of: (i) construction of 2 no. two-storey buildings (total of 4,260sq.m), providing 3 no. separate warehouse units with ancillary office accommodation; (ii) provision of 3 no. parking bays comprising a total of 41 no. car parking spaces and 25 no. bicycle parking spaces; (iii) relocation of existing vehicular entrance via Clonshaugh Business & Technology Park and creation of new vehicular entrance via Clonshaugh Business & Technology Park; and, (iv) all associated site development works, including landscaping, boundary treatment and SuDS drainage works, necessary to facilitate the development.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3898/22	Planning permission for internal alterations to first floor of existing school for the provision of SEN accommodation, consisting of 2 classroom SEN base, including central activities space, multi-activity room, daily living skills, practical activity room, linen/sluice room, para-educational room, office, toilets and stores, together with associated miscellaneous internal revisions. Planning permission is also sought for the provision of multi-sensory garden and soft play area to south east of subject site, all together with associated site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4275/22	The development will consist of : (a) change of use of ancillary storage area to retail area and the subsequent 25m2 increase in net retail area from 2046m2 to 2071m2; (b) elevation changes to Supervalu unit internal mall elevation and to the northwest elevation including additional glazing; (c) provision of new Supervalu signage (10.82m2) on the southwest elevation; (d) proposed alterations to southwest elevation lean-to roof in yard area by raising of the eaves level by 1m over new bakery area.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4348/22	The development will consist of the modification of the existing eastern elevation of the building by the installation of new air conditioning equipment supported from a steel access platform suspended from the existing building structure. In addition, a new opes shall be made in the existing fire escape stair cladding to facilitate access to same.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4786/22	The development will consist/consists of new branding/advert signs to the south west, south east and north-west elevations including new signage lighting to match existing; new corporate signs with backlit metal and translucent polyurethane letters to replace obsolete existing signs at the 3 existing pedestrian entrances; new freestanding metal glazed canopy (approximately 15.70 sqm) at the Oscar Traynor Road entrance including concealed surface water drainage to be connected to existing system; new freestanding metal glazed canopy (approximately 18.82 sqm) at the Barryscourt Road entrance including concealed surface water drainage to be connected to existing system, partial re-paint of the two existing signage totems with colour scheme matching the existing; removal of the vertical lettering on the east corner of the building.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
5013/22	RETENTION: Retention permission for existing attic conversion as constructed including dormer extensions to the rear and side of the attic conversion and all associated site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
5079/22	Planning permission for ancillary garden centre located to the south and west of the existing building and associated boundary fencing; new connecting door on south elevation of the unit connecting the garden centre to the existing, internal sales space and redesigned front entrance	No potential for in-combination effects given the Project will have no significant effect on any

Planning Ref.	Description of development	Comments
	on the east elevation. Reconfiguration of parking area to the east of the store and the inclusion of electric vehicle charging points, cycle parking (including cargo bike spaces) and motorcycle parking. All associated works to complete the development.	European site – as a result of emissions to air, water or noise.
5417/22	Permission to install up to 170kWp (c.800m2) of Roof Mounted Solar PV Panels and all associated works at our building.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3058/23	The development will consist of: (i) removal of existing vehicular entrance/access roadway and provision of 2no. new vehicular entrance gates and 1 no. pedestrian entrance gate off the Clonshaugh Business and Technology Park campus roadway; (ii) construction of 1 no. single-storey warehouse, with ancillary office accommodation, building (3,955sq.m) with solar/pv panels at roof level; (iii) provision of 2 no. parking bays comprising a total of 20 no. car parking spaces (inclusive of 5 no. accessible spaces) and 3 no. bicycle racks comprising a total of 24 no. bicycle parking spaces; and, (iv) all associated site development works, including landscaping , boundary treatment and , SuDS drainage works, necessary to facilitate the development.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3081/23	The Project will consist of the demolition of the existing two-storey dwelling on site and the construction of a five-storey building to provide for 36 no. apartments and communal open space, landscaping and boundary treatment, 29 no. car parking spaces, 123 no. bicycle parking spaces, bin storage, plant room and all associated engineering and site development works necessary to facilitate the development.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3195/23	The development will consist/consists of permission for the sub-division of existing site to construct a detached two storey 3 bedroom house with single storey element to rear, connection to public foul sewer and all associated site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3629/23	Permission for the addition of a new pedestrian gate and turnstile which will be located within the existing boundary fence line at a height of 2.5 metres to match the existing fence. The work will also include a footpath within the site boundary.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3895/23	PERMISSION: Sought for a. proposed side two storey and single storey attached to existing side two storey extension to form a dwelling house separate from existing, , all site development works, service connections, landscaping, and boundary treatment. b. proposed forming vehicular access driveway to front garden and proposed dormer roof window to front part of roof with associated internal & external alterations and rear single storey extension to existing dwelling house.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4394/23	Development will consist of a proposed new gable wall to the side of the existing house. A new flat dormer roof to the rear of the existing house. A new ground floor only extension to the front of the existing house. 2no. new windows in the side elevation at ground level & 1no. at attic level. Demolishing of existing ground floor extension to the rear of the existing house and replacing with a new ground floor only extension and all ancillary works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.

Planning Ref.	Description of development	Comments
4689/23	Demolition of the internal party walls between retail units 1, 52, 53 and 54, and the subsequent amalgamation of these units into one retail unit with a gross floor area of 380 sq.m.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4693/23	PERMISSION: The development will consist of the installation of 1,009.3 sqm roof-mounted solar photovoltaic panels to include all ancillary works and services.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
5043/23	The development will consist of the change of use from retail use to retail with ancillary off licence use.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
WEB1216/23	The construction of a 2-storey extension with green roof to the rear, changes to the existing window and provision of new window openings to the side elevation, and all associated site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
3273/24	Permission sought for (a) proposed side two storey dwelling house attached to existing side of two storey house using alteration of existing front vehicular access, including dormer roof window to rear part of roof and half hip profile roof, associated external alterations, all site development works service connections, division of land, landscaping and boundary treatment,(b) proposed alteration of existing from vehicular access to form vehicular access driveway to front garden to existing dwelling house.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4133/24	Permission for construction of a 910 sqm extension to the west facing side of the existing warehouse, alterations to the car parking layout and all associated site and ancillary works at The Novum Building, Clonshaugh Business & Technology Park, Dublin 17, Eircode D17YW27.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
4155/24	Permission for construction of a 410sqm extension to the east facing side of the existing warehouse, and all associated site and ancillary works at The Novum Building Clonshaugh Business Technology Park. Dublin 17 Eircode D17 YW27.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.
WEB1615/24	Works to include modification & extension of approx. 8sqm to single storey main entrance lobby and relocation of existing façade mounted company signage.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.

Planning Ref.	Description of development	Comments
WEB1975/24	PERMISSION & RETENTION: The development seeking retention permission consists of the provision of a vehicular entrance 2.6m wide to the front of the property; the development seeking permission will consist of widening that vehicular entrance to 3.75m wide and all associated site works.	No potential for in-combination effects given the Project will have no significant effect on any European site – as a result of emissions to air, water or noise.

6. Conclusion

There are no predicted effects on any European sites given:

- The distance and lack of direct hydrological connectivity between the Project site and any European Sites;
- There are no predicted emissions to air, water or the environment during the operational phase that would result in significant effects.

It has been objectively concluded by Moore Group Environmental Services that:

1. The Project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The Project is not likely to either directly or indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The Project, either alone or in combination with other plans or projects, is not likely to have significant effects on a European site.
4. It is possible to conclude that significant effects can be excluded at the screening stage.

It can be excluded, on the basis of objective information, that the Project, individually or in combination with other plans or projects, will have a significant effect on any European site, in the absence of any mitigation.

An appropriate assessment is not, therefore, required.

A final determination will be made by the competent authority in this regard.

7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive '92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

European Commission (2018) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission (2021) Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC, Brussels 28.9.21.

European Commission (2021) Guidance document on the strict protection of animal species of Community interest under the Habitats Directive, Brussels 12.10.21.

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2025) National Parks and Wildlife Service Metadata available online at https://www.npws.ie/maps-and-data

Office-of-the-Planning-Regulator (2021) Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021