July 2021

IE DUBZZ STE1-E0 MOR-RP-V-87010

Environmental Impact Assessment Screening Report

INXN DUB15/16

On behalf of

Digital Netherlands VII B.V.

Profile Park, Nangor Road, Clondalkin, Dublin 22

MALONE O'REGAN ENVIRONMENTAL

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Title: Environmental Impact Assessment Screening Report, for the INXN DUB15/16, on behalf of Digital Netherlands VII B.V., Profile Park, Nangor Road, Clondalkin, Dublin 22

Job Number: E1794

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Environmental Impact Assessment Screening Report
INXN DUB15/16
Digital Netherlands VII B.V.
Profile Park, Nangor Road, Clondalkin, Dublin 22

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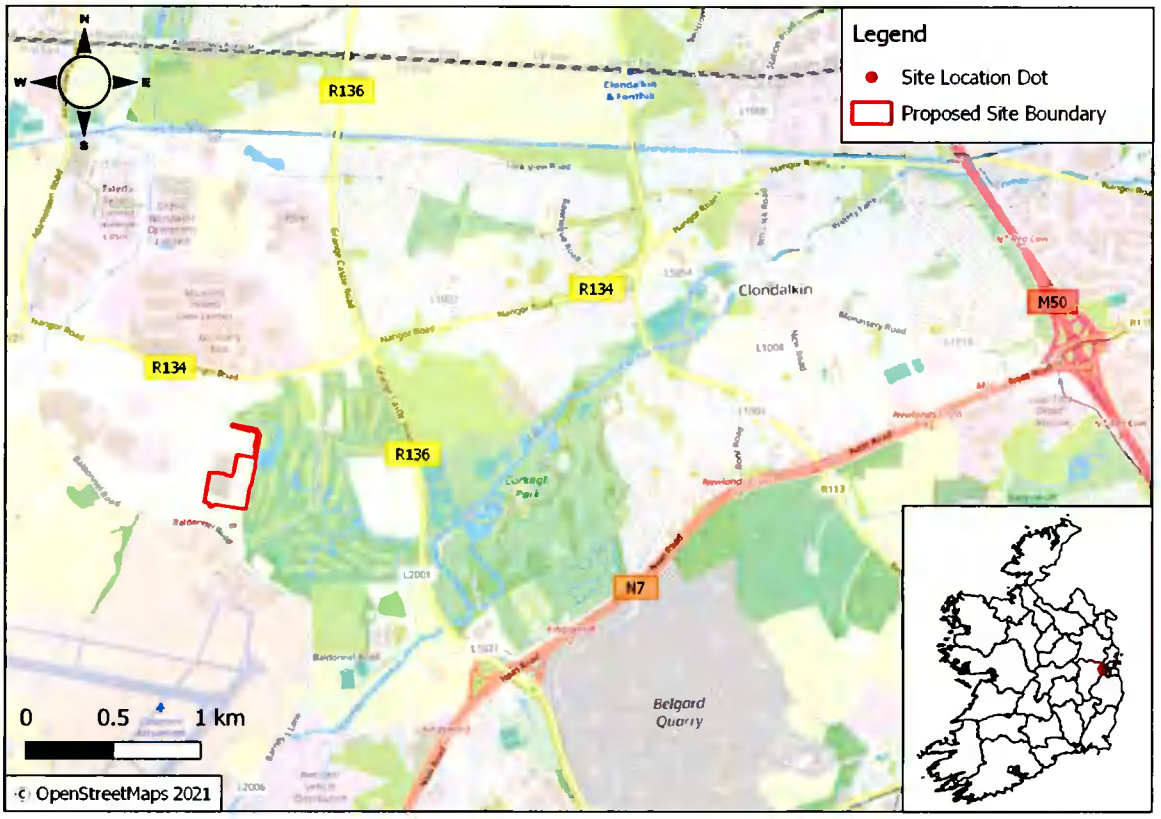
1 INTRODUCTION

Malone O' Regan Environmental Services (MOR) was commissioned by RKD Architects Ltd. on behalf of Digital Netherlands VIII B.V. ('the Applicant') to undertake an Environmental Impact Assessment (EIA) Screening Report, to assess the potential adverse effects, if any, for the construction of two (2No.) data centres, an energy centre and all ancillary works at DUB 15 / 16 (Proposed Development), at Profile Park, Nangor Road, Clondalkin, Dublin 22, Co. Dublin (OS Reference O 03785 30338).

The location of the proposed development ('the Site') is shown in Figure 1-1.

Figure 1-1: Site Location



This EIA Screening Report has been prepared to consider the requirement, or otherwise, of carrying out an EIA in respect of the Proposed Development. This screening exercise was undertaken in two stages:

- Stage 1 considered the requirement for a mandatory EIA; and,
- Stage 2 considered the requirement for a sub-threshold EIA.

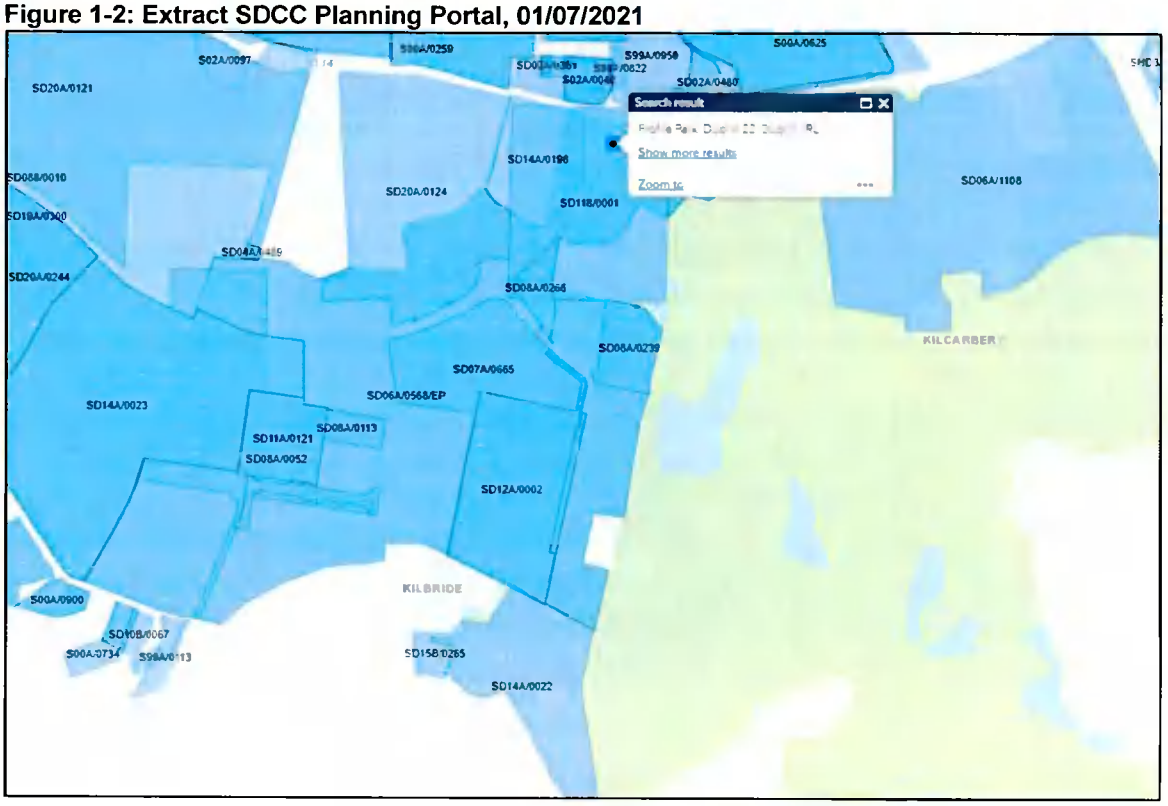
As part of the sub-threshold screening exercise, the potential impacts on environmental sensitivities were considered in addition to the interrelationship between those environmental sensitivities.

This EIA Screening Report will be submitted as part of the overall planning submission.

1.1 Previous Planning History

Th Site is located west of the M50 and south of the Nagor road. Figure 1-2 below, shows the locality within the South Dublin County Council planning portal (SDCC, 2021).

Figure 1-2: Extract SDCC Planning Portal, 01/07/2021



SD17A/0377 - Revisions and alterations of the permitted development of a data processing facility under planning Ref: SD12A/0002 on a 3.85-hectare site. The revised application consists of alterations to the DUB14 (previously DUB12) data centre/warehouse structure, granted in the previous application. The alterations to the DUB14 include: 2 data halls 2137 square metres (m^2), offices/reception 478m^2, support space/staff facilities and internal plant with a floor area of 953m^2, external plant of 1,777m^2. The data centre part of the building is single storey reaching a maximum of 8.6m in height. The plant area is to a maximum of 10.5m high and the office building has been lowered one storey and is 9.1m in height. The development will be constructed in 5 phases, currently Phases 1 & 2 have been completed with the enabling site works and 2 substations and single warehouse building to the North of the site. The subsequent phases will contain a single warehouse building starting with Phase 3, the application in which this Site Notice relates. A total of 84 car parking spaces will be provided together with recycling storage and all ancillary services and landscaping. There will be 2 site entrances from vehicular accesses permitted as part of business park infrastructure (SD06A/0568).

Granted: 30/01/2018

Link: View Application SD17A/0377 | South Dublin County Council (sdublincoco.ie)

SD12A/0002/EP- Revisions and alterations to the permitted development of a data processing facility under planning reference SD11A/0023 consisting of minor alterations to the four permitted data centre/warehouse structures, additional internal floor areas, alterations to sub-station structures and car park layout to be provided on a phased basis (it is proposed to extend the life of the planning permission to 7 years). The construction of the four data centre/warehouse buildings totals 23278m^2 and associated site works comprising the following areas: Two Type 'A' buildings each with 1872m^2 of data halls, 697m^2 of offices/reception, 1934m^2 of support space/staff facilities/internal plant giving each a total internal floor area of 4503m^2 and 1483m^2 of external plant - total area for both Type 'A' is

11972m^2. Two Type 'B' buildings each with 1872m^2. of data halls, 419m^2. of offices/reception; 1879m^2. support space/staff facilities/internal plant giving a total internal floor area of 4170m^2. and 1483m^2. of external plant - total area for both Type 'B' structures is 11306m^2. The Data Centre part of the building is single storey reaching a maximum of 8.6m in height; the plant area is to a maximum of 10.7m high and the tallest building is Type 'A' office building is 12.5m in height. 4 substations accessed from the estate road to facilitate the development are now proposed; each has an area of 49m^2. and will be 3.75m in height. The development will be constructed in 5 phases initially with the enabling site works and 2 substations; the subsequent phases will contain a single warehouse building starting with the northern-most building. A total of 84 car parking spaces will be provided together with recycling storage and all ancillary services and landscaping. There will be 2 site entrances from vehicular accesses permitted as part of business park infrastructure (SD06A/0568).

Refused: 07/08/2019

Link: View Application SD12A/0002/EP | South Dublin County Council (sdublincoco.ie)

SD12A/0002 - Revisions and alterations to the permitted development of a data processing facility under planning reference SD11A/0023 consisting of minor alterations to the four permitted data centre/warehouse structures, additional internal floor areas, alterations to sub-station structures and car park layout to be provided on a phased basis (it is proposed to extend the life of the planning permission to 7 years). The construction of the four data centre/warehouse buildings totals 23278m^2 and associated site works comprising the following areas: Two Type 'A' buildings each with 1872m^2. of data halls, 697m^2. of offices/reception, 1934m^2 of support space/staff facilities/internal plant giving each a total internal floor area of 4503m^2. and 1483m^2 of external plant - total area for both Type 'A' is 11972m^2; Two Type 'B' buildings each with 1872m^2. of data halls, 419 m^2 of offices/reception; 1879m^2 support space/staff facilities/internal plant giving a total internal floor area of 4170m^2 and 1483m^2 of external plant - total area for both Type 'B' structures is 11306m^2 .The Data Centre part of the building is single storey reaching a maximum of 8.6m in height; the plant area is to a maximum of 10.7m high and the tallest building is Type 'A' office building is 12.5m in height. 4 substations accessed from the estate road to facilitate the development are now proposed; each has an area of 49m^2 and will be 3.75m in height. The development will be constructed in 5 phases initially with the enabling site works and 2 substations; the subsequent phases will contain a single warehouse building starting with the northern-most building. A total of 84 car parking spaces will be provided together with recycling storage and all ancillary services and landscaping. There will be 2 site entrances from vehicular accesses permitted as part of business park infrastructure (SD06A/0568).

Granted: 10/04/2012

Link: View Application SD12A/0002 | South Dublin County Council (sdublincoco.ie)

SD11A/0023 - Development of a data processing facility on a 4.04ha site consisting of: the construction of four buildings totalling 21090m^2. and associated site works comprising the following: two 'Type A' buildings each with a data hall (1870 m^2), offices/reception (607m^2), support space/staff facilities and internal plant with a floor area of 3572m^2 each and external plant 1975m^2 each (total 'Type A' structures is 11094m^2); two 'Type B' buildings each with a data hall (1870m^2), reception (67m^2), support space/staff facilities and internal plant with a floor area of 3005m^2 each and external plant of 1993m^2 each (total Type B structures is 9996m^2). The Data Centre part is single storey reaching a maximum of 8.2m in height; the plant area is to a maximum of 9.2m and the office block is 10m in height. A substation to facilitate the development is also proposed with 16m^2 area and will be 2.6m in height. The development will be constructed in two phases with building No's 3. and 4 built initially. 84 car parking spaces will be provided together with recycling storage. There will be 2 site entrances from the existing crossovers already established as part of business park infrastructure.

Surface and foul drainage has been designed to utilize existing sewer system and all retention of surface water and Page 3 of 5 drainage will be in accordance with the agreed design criteria. Lighting and landscaping have been designed with the approved masterplan and site owners.

Granted. (Refuse leave to Appeal): 15/06/2011

Link: View Application SD11A/0023 | South Dublin County Council (sdublincoco.ie)

SD06A/0568/EP - Provision of roads and services infrastructure to facilitate the future development of a business park, to be known as 'Profile Park' on these lands. The development includes the provision of 1,675m of internal distributor roads consisting of 267m to dual carriageway standard (at the main entrance) with a further 1,408m to single carriageway standard and one internal roundabout. The development also includes surface water drainage, foul drainage, and water supply infrastructure, associated landscaping and all ancillary works, on a site of 39.84 hectares. Access to the site will be provided at the northern boundary off the existing roundabout to Kilcarbery Business Park. This application is accompanied by an Environmental Impact Statement.

Granted: 13/012012

Link: View Application SD06A/0568/EP | South Dublin County Council (sdublincoco.ie)

SD06A/0568 - Provision of roads and services infrastructure to facilitate the future development of a business park, to be known as 'Profile Park' on these lands. The development includes the provision of 1,675m of internal distributor roads consisting of 267m to dual carriageway standard (at the main entrance) with a further 1,408m to single carriageway standard and one internal roundabout. The development also includes surface water drainage, foul drainage, and water supply infrastructure, associated landscaping and all ancillary works, on a site of 39.84 hectares. Access to the site will be provided at the northern boundary off the existing roundabout to Kilcarbery Business Park. This application is accompanied by an Environmental Impact Statement.

Granted: 29/06/2021

Link: View Application SD06A/0568 | South Dublin County Council (sdublincoco.ie)

SD21A/0167 - Construction of a gas fired power plant with an electrical output of up to 125MW with associated balance of plant, equipment and buildings including; an Engine Hall building with a height of 18.9m, comprising 6 gas engines and ancillary infrastructure; an Electrical Annex Building with a height of 18.7m; a Workshop building with a height of 5. 1m; a Tank Farm building with a height of 5.68m; a Security hut with a height of 3.27m; an Exhaust Stack with a height of 31.8m; a Gas AGI including a kiosk with height of 3.3m; Radiator Coolers with a height of 8.46m; 2 electrical transformers with a height of 4.98m; Tanks including 2 x Diesel Oil Storage Tanks (volume of 2500m3 combined); SCR Urea Tank (26m^3); Lube Oil Storage Tank (26m^3); Lube Oil Maintenance Tank (26m^3); Pilot Oil Tank (26m^3); Fire Water Storage Tank (1000m^3); Effluent Collecting Tank (26m^3); Underground Surface Water Attenuation Tank (490m^3); 2 new access onto the existing private road network with Profile Park; 12 parking spaces, footpaths, landscaping; fencing and all other associated site development plant and equipment and other works including surface water and foul wastewater drainage. This application is accompanied by an Environmental Impact Assessment Report (EIAR) and an Appropriate Assessment Screening Report.

Awaiting decision: submitted on 25/06/2021

Link: View Application SD21A/0167 | South Dublin County Council (sdublincoco.ie)

1.2 Site Zoning

The Site is located in Kilbride, Co. Dublin and the majority of this area is zoned under objective EE of the South Dublin County Development Plan (SDCDP) 2016-2022 which aims to, '*provide for enterprise and employment related uses*,' (SDCC, 2016).

The SDCDP states that under this objective, developments that fall under the class '*industry-general, industry-light, industry-special*' and '*science and technology-based enterprises*' are permitted in principle. It is considered that the proposed development fits the criteria for this category under zoning objective EE and no part of the proposed development could be categorised within the 'not permitted' class (SDCC, 2016).

A small section of the Site to the south is zoned under objective RU of the SDCDP which aims to, '*protect and improve rural amenity and to provide for the development of agriculture*,' (SDCC, 2016). Only landscaping is proposed along this southern boundary which is in keeping with the permitted development i.e., '*open space*' under this zoning objective (SDCC, 2016).

Profile Park is an IDA manged industrial park, targeting data centres. Their website (https://www.profilepark.com/index.php/the-park/) notes:

> *"Profile Park comprises a 100 acre (40.5 Ha) fully enclosed, private business park which has been developed to the highest of standards to provide truly world-class infrastructure and finishes throughout. Strategically located on the outskirts of Dublin City the Park is easily accessible from the major arterial roads in the City including the M50, M7 and M4, and is served by excellent public transport links also.*
>
> *Having recently sold a total of 60 acres to Google and Digital Realty Trust, the remaining approximately 40 acres in the Park is now immediately available and "Shovel-Ready" to satisfy further data centre requirements.*
>
> *Profile Park is the very heart of what is rapidly becoming "Ireland's Data Centre Cluster" with Google, Microsoft, Digital Realty Trust and Telecity all located in the immediate vicinity."*

1.3 Need for the Proposed Development

Data centres play a fundamental role in our society and digital economy. Everything that happens online, needs to be housed in data centres. Data centres house many digital applications and thus form the foundation of the internet. These data centres comprise of servers and other digital equipment, where files are stored, important software runs, and data is exchanged between different networks that form a data distribution hub. Data centres support a wide range of activities of the government, business, and society.

They, therefore, form an important part of our critical digital infrastructure, contribute to the national economy.

In order to supply the required energy demand for the data centre, a gas-powered energy generation compound has been included as part of the proposed development design.

Furthermore, the inclusion of a gas-powered energy generation compound onsite will provide a stable energy source reduce the transport costs / outsourcing for energy supplies.

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Context

The Site is located within the townlands of Kilbride, Dublin 22, in the Profile Park business park. The Site of the proposed development is ca.61,810m^2.

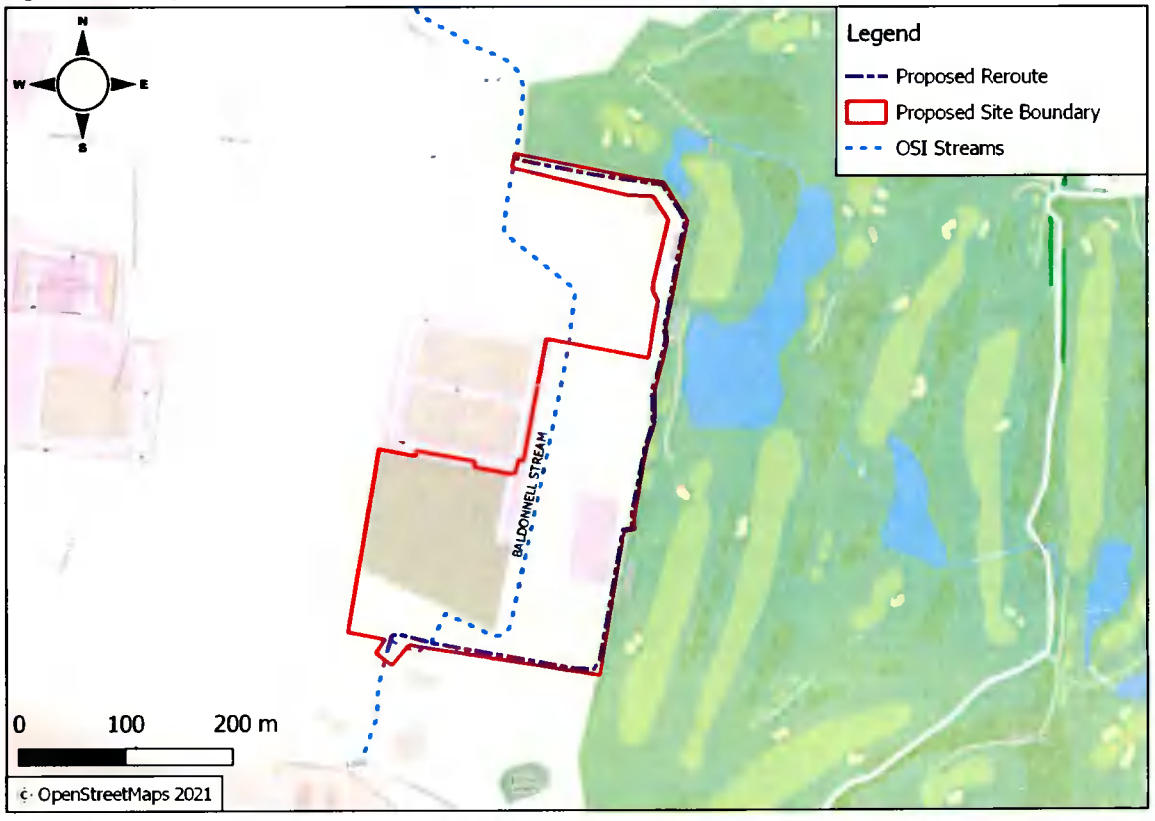
The Site is accessed from the existing Site entrance on the Profile Park Road via the R134 regional road. The Profile Park Road currently runs through the central region of the Site. Directly to the east of the Site lies the Grange Castle Golf Club, the Google Data Centre is located to the west and the Baldonnell Road (L2001), Kilbride cemetery and the Baldonnell Casement Aerodrome lies to the south.

Immediately to the northwest of the Site are existing buildings and artificial surfaces which transition to areas of improved agricultural grassland, disturbed ground and spoil heaps within the Site boundaries. The disturbed ground within the southwest portion of the Site is predominantly bare or overgrown with ruderals / weeds and is composed of construction and demolition material. There is also an area of scrubland and the remains of an old, decommissioned sewage building to the east of the Site. A dry ditch runs along the southern boundary of the Site while a wet ditch is located along the eastern boundary of the Site, adjacent to a mature hedgerow / treeline. The Baldonnell Stream bisects the Site.

2.2 Proposed Development

- Removal of an existing unused wastewater treatment facility onsite;
- Two (2No.) data centre buildings, DUB15 and DUB16, comprising of 8No. data halls and the various equipment areas required to support the IT servers contained within them. These buildings will comprise a total floor area of 33,577m^2 over two-storeys;
    - The first two storey data centre building (DUB15), located to the southwest of the Site, will comprise 16,865m^2 data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space;
    - A second two storey data centre building (DUB16), located to the southeast of the Site, will comprise 16,712m^2 data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space; and,
    - Both data centre buildings will reach a height of 20m.
- Emergency generators and associated emission flues and plant are proposed in compounds adjacent to each data centre building;
- Gas powered energy generation is proposed to the northeast corner of the Site to provide electricity for the proposed development;
- The application proposes to re-route a watercourse, which was previously constructed through the centre of the Site pursuant to an earlier planning permission. It is proposed to reroute this watercourse along the eastern and southern boundary of the Site, refer to Figure 2-1 for indicative location;
- Landscaping is proposed to the south of the Site to screen the buildings;
- Fencing and security gates are proposed around the Site; and,
- New access roads within the Site are proposed alongside 71No. car parking spaces, 26No. cycle spaces, bin stores, Site lighting and all associated works including underground foul and storm water drainage attenuation and utility cables.

Figure 2-1 Proposed Stream Diversion



2.2.1 Data Centre Buildings

Each data centre building will be a two-storey building, (ground and first floors). Each floor will be identical, comprising of 4No. data halls on each floor, it is within these data halls where the IT servers will be located. Electrical switch rooms will be located internally adjacent to the data halls.

Equipment for data hall cooling will be located on the roof of the building, with standby emergency generators located in external compounds at ground level.

The following will be accommodated in each of the main building areas:

- Data Centre Technical Areas;
    - Data halls;
    - Low voltage switchgear, UPS and battery rooms;
    - Water services plant room;
    - Fire suppression tank and valve rooms;
    - Storage and waste areas;
    - POP and IDF rooms;
- External Ground Level;
    - Containerised MV generators (with belly fuel tanks);
    - Containerised MV switchgear;

- Office and Logistics Area;
    - Security and entrance facilities;
    - Loading bay and debox area;
    - Toilets and showers;
    - Office areas;
- Roof;
    - Air handling units providing fresh air to the offices and other Power Base Build (PBB) spaces;
    - Air handling units providing make-up air the data halls;
    - Air handling units providing make-up air to electrical plantrooms (UPS rooms and battery rooms);
    - Medium voltage switch rooms;
    - MV/LV transformers; and,
    - Refrigerant condenser systems (direct expansion and variable refrigerant volume) supporting space heating and cooling units, and their air handling units.

Each building will have its own standalone back-up generator system from the containerised generators located adjacent to each building. In total there will be a maximum of 32No. generators across the Site if the full upgrade potential is deployed. These shall provide power to the Site in the event that the incoming supply is unavailable.

2.2.2 Gas Energy Generation Centre

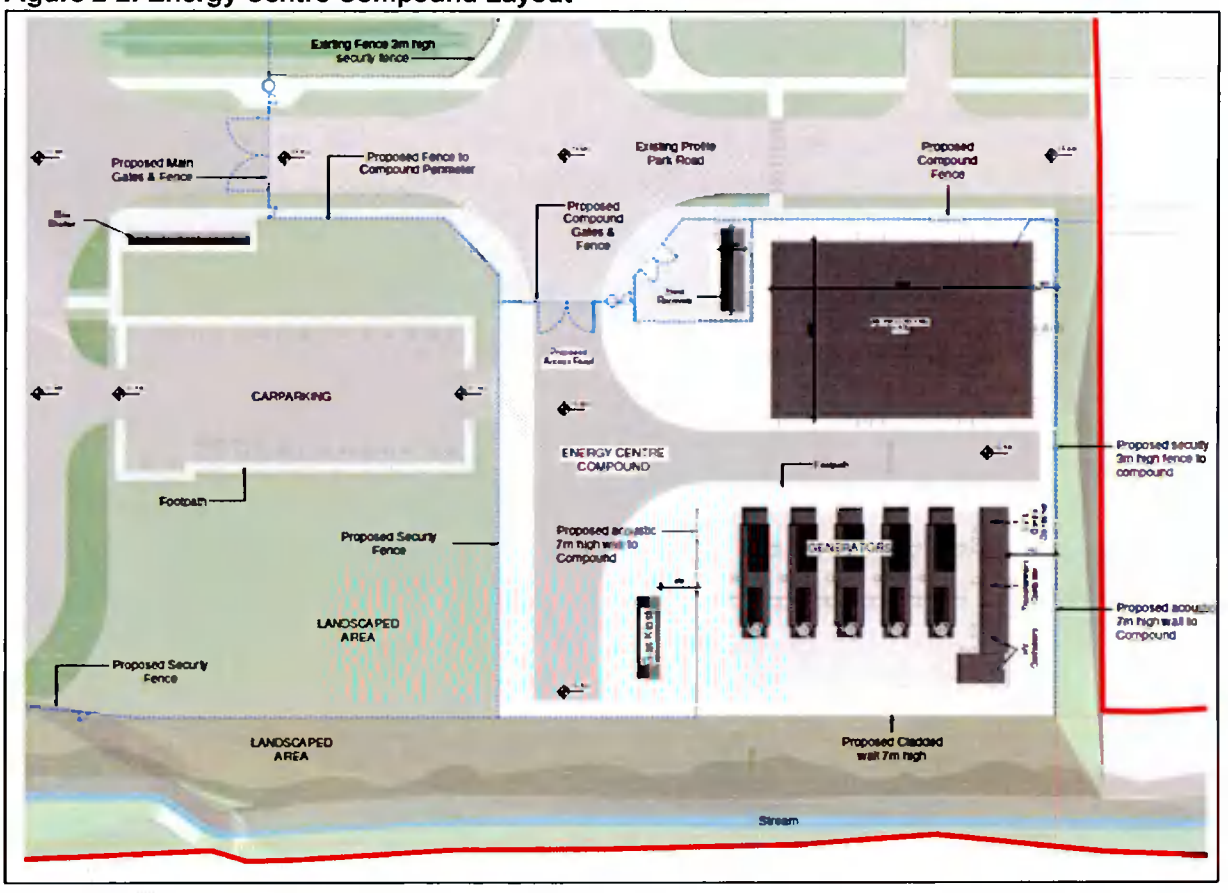
An energy generation compound is proposed to the northeast of the Site, refer to Figure 2-2 for context. This compound will comprise five (5No.) gas powered generators in their own acoustic containers, a heat recovery plant room (ca.35m^2), a distribution gas compound building (ca.23m^2) and an electrical substation (ca.623m^2) building.

The generators will provide the first phase of development with power. Future phases will import power from the grid. This will allow the data centre to use renewable power when available. As such power will initially be provided by the proposed onsite energy centre until such time that the facility is transferred to an alternative off-site power supply. At this time, the energy centre onsite will be decommissioned.

The gas generators selected will generate electricity to supply the data centre. The selected engines will be highly efficient with low emissions. The installed capacity of the generators will be 12.5MWe (10MWe @N) (ARUP, 2021). The generators will be designed to be continuously operational to meet the demand of the data centre, with a control system installed to monitor the data centre electrical demand which will control the operation of the generators and reduce the number of running sets depending on the data centre requirement.

The energy centre will be connected to the Gas Networks Ireland (GNI) grid. This will be a distribution gas connection and will provide the capacity required to ensure the security of supply.

Figure 2-2: Energy Centre Compound Layout



2.2.3 Fuel Storage

During the operational phase of the proposed development, there will be 32No. backup diesel generators onsite. These will require 859,248 litres of fuel which will be stored in 'belly tanks' within each generator container. All fuel storage will be integrally bunded with leak detection systems that conform to Irish regulations.

2.2.4 Earthworks

The development of DUB13 and DUB14, the existing infrastructure to the northwest of the Site, involved bulk excavation of material and the remaining stockpiles and made ground are currently located within the southwest area of the Site.

Enabling works will include the removal of these existing stockpiles onsite for recovery and disposal at a licensed facility. It will also include for the excavation and removal of the decommissioned sewage treatment works and associated buried structures and foundations. These excavations will be filled with suitable engineering fill to allow for the construction of DUB16.

Additional Site clearance and preparation works will include service diversions and works associated with the diversion of the Baldonnell Stream.

During enabling works, unsuitable material or made ground encountered onsite will be excavated under all structures and associated infrastructure for removal from Site to a suitably licensed facility and replaced with suitable engineering fill.

The suitability of the excavated materials for re-use as acceptable earthworks fill will be assessed in accordance with the requirements of the TII Specifications for Roadworks.

2.2.5 Drainage

Drainage from the proposed DUB15, DUB16 and Energy Centre development shall be drained by a completely separate system, with separate foul and surface water drains. The outfall of the surface water network will take place into the remaining channel of the existing watercourse, which after completion of proposed development will work only as a drainage ditch catering exclusively for surface water run-off coming from the proposed DUB15, DUB 16, Energy Centre and existing DUB13 and DUB14 data centres. Foul water drainage outfall discharge will take place into existing Profile Park private foul drain network along The Fairways estate road which subsequently discharges into existing Irish Water Foul Sewer.

Surface water discharges from the proposed development will be restricted in line with South Dublin County Council (SDCC) Water Services requirements to 2 litres/second/hectare. Any flows in excess of the allowable discharge rate will be retained onsite in underground attenuation facilities for storms up to and including the 1 in 100-year event + 20% climate change allowance. The proposed surface water drainage strategy is divided in three separate online attenuation systems which will serve separately DUB15, DUB16 and the Energy Centre.

The drainage systems have been designed in accordance with Part H Building Regulations, BSEN 752 Drain and Sewer Systems outside Buildings, the Greater Dublin Regional Code of Practice for Drainage Works, the Greater Dublin Strategic Drainage Study (GDSDS) and to the requirements of South Dublin County Council.

2.2.5.1 Surface Water

Surface water run-off for DUB15 attenuation system comprises two different sub catchments and consequently two separate attenuation tanks each one provided with hydro-brakes. As part of the proposed new surface water drainage layout, approximately 20m of the existing attenuation system for DUB14 will need to be removed and reinstated as new proposed attenuation tank connected into the existing attenuation pipes. DUB16 and Energy Centre attenuation systems have their own catchment areas and consequently separate attenuation tanks with hydro-brakes limiting the discharge to greenfield run-off rates. The three separate attenuation systems discharge into the same network which ultimately falls by gravity towards the existing open channel.

Surface water discharges from the Site will be restricted in line with the Greater Dublin Regional Code of Practice for Drainage Works and South Dublin County Council Water Services requirements. The allowable outflow from the development will be restricted to 2 litres/second/hectare.

Flows in excess of the allowable discharge rate will be stored onsite in the form of underground storm attenuation concrete tanks. Additionally, SuDS measures will be incorporated into the development to improve the quality of waters discharging into the receiving surface water systems, namely porous paving and swales will allow for partial infiltration and all run-off from roads will be directed through petrol interceptors prior to reaching the attenuation system.

Peak surface water discharges from the Site (particularly during storm events) will be substantially reduced due to the restricted outflow from the development, thereby reducing the impact on the receiving drainage network. Also, the proposed watercourse diversion will significantly improve the existing surface water strategy throughout the Site, with benefits related to the quantity and quality of the water.

2.2.5.2 Foul Drainage

Foul drainage from the new data centres and the energy centre welfare facility shall be drained by a separate system to that of the surface water drainage system. Foul drainage from the proposed development shall drain by gravity and discharge to the existing 225mm foul drainage system along the Fairways Road, of Profile Park ownership, which subsequently

discharges into Irish Water Foul sewer. No new connections will be required to the public sewerage system.

The foul drainage system will be designed to take discharges from office areas of both DUB15 and DUB16 data centre and Energy Centre welfare facility simultaneously to the discharge of both data hall areas including Reverse Osmosis system and Air Handling Units and testing / maintenance washdown of the Water Mist tanks. There will not be any chemicals added to the water serving the Data Hall.

2.2.6 External Lighting

External lighting will be provided outside the main structures and within the car-parking areas. A lighting pan has been submitted as part of the overall application, reference IE-DUBZZ-STE1-E0-ARP-DR-E-63000.

2.2.7 Landscaping

The Proposed Development design includes for boundary landscaping works. The proposed layout masterplan, reference IEDUBZZ-STE1-EO-MAL-LA-L-91001, presents both boundary and internal site breakout landscaping works.

2.3 Construction Procedures

During the construction phase, the methods of working will comply with all relevant legislation and best practice guidelines in reducing the environmental adverse effects of the works. Although construction phase adverse effects are generally of a short-term duration and are localised in nature, the adverse effects will be reduced as far as practicable through compliance with current construction industry guidelines.

A Construction Environmental Management Plan (CEMP) has been prepared and submitted as part of this apparition for the proposed works. The following Construction Industry Research and Information Association (CIRIA) guidance has been referred to and will be adhered to during the construction phase of the project to prevent water pollution:

- C532 – Control of Water Pollution from Construction, Guidance for Consultants and Contractors (CIRIA, 2011);
- CIRIA C741- Environmental Good Practice on Site (4th edition) (CIRIA, 2015);
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA, 2005)
- Guidance for the Treatment of Bats Prior to the Construction of National Road Schemes (NRA, 2006); and,
- Guidance for the Treatment of Badgers Prior to the Construction of National Road Schemes (NRA, 2006).
- Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (NRA, 2010); and,
- All works will be undertaken in accordance with the 'Requirements for the Protection of Fisheries Habitat during Construction and Development' (Inland Fisheries Ireland , 2016).

It is envisaged that the construction works will take approximately 60 months to complete. It is anticipated that the construction activities for the DUB15 building, first phase of the energy centre and all landscaping and external areas will take 18-months and that construction works for the DUB16 building are anticipated to last 10-months. The buildings are planned to be fitted out and commissioned in 6-month phases, with 4 fit out and commissioning phases per building.

Works will be limited to:

- Monday - Friday 07:00 hours – 18:00 hours
- Saturday 08:00 hours – 14:00 hours
- Sundays and Public Holidays Closed

An Ecological Clerk of Works (ECoW) will be appointed to the project and inspect the Sites in advance of works commencing and will undertake monthly Site inspections during the works as well as being present during away works adjacent to or near any waterbodies or the trees lines to ensure that they will be completed in line with the mitigation measures detailed within the CEMP.

3 METHODOLOGY

3.1 Desk Based Studies

In undertaking this EIA Screening Assessment, a detailed desk-based review of information sources was completed, which included the following:

- Relevant legislation and guidance;
- Relevant published information pertaining to the Site and the surrounding area in regard to Schedule 7 of the Planning and Development Regulations (2001-2019);
- The South Dublin County Council planning portal (SDCC, 2021);
- The South Dublin County Council Development Plan 2016-2022 (SDCC, 2016);
- Information supplied by the client in relation to the proposed development i.e., the Air Quality and Climate Impact Assessment Report, the Noise Impact Assessment Report, the Energy Centre Non-Technical Report, the Drainage and Watermain Planning Report, and Part L of the Planning Report;
- Environmental reports produced by MOR in support of this application including a Natura Impact Statement (NIS), Ecological Impact Assessment (EcIA) and a CEMP working document; and,
- The EPA Envision website was consulted to obtain details about the Site and environmental receptors in the surrounding area (EPA, 2021).

3.2 Regulatory Context

3.2.1 Environmental Impact Assessment Screening Legislative and Regulatory Context

EIA screening requirements derive from the EIA Directive (Directive 2011/92/EU as amended by Directive 2014/52/EU). The amended Directive came into force on 16th May 2017 and regulations transposing it into national legislation were signed into law on 19th July 2018 as the Planning and Development (Amendment) Act 2018 (Statutory Instrument, 2018). There are no changes to the prescribed project types or EIA thresholds under the amended EIA Directive 2014/52/EU. The project types and thresholds set out in the 2001-2010 Regulations remain in effect.

To determine whether it is required to undertake an EIA for the proposed Development, the following legislation was consulted:

- The Planning and Development Regulations, 2001 (as amended) (Statutory Instrument, 2001); and,
- EU Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment ('2014 EIA Directive') (European Parliament, 2014).

In addition, the following guidance documents were reviewed:

- European Commission (June 2017), Environmental Impact Assessment of Projects. Guidance on Screening (EU, 2017);
- Department of the Environment, Heritage and Local Government (August 2003), Environmental Impact Assessment (EIA) Guidelines for Consent Authorities regarding Sub-threshold Development (DEHLG, 2003);
- Environmental Protection Agency (EPA) Guidelines on the Information to be contained in Environmental Impact Assessment Reports Draft (EPA, 2017);

- Department of Housing, Planning and Local Government (DHPLG) Transposing Regulations (S.I. No. 296 of 2018) Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment (DHPLG, 2018); and,
- Office of the Planning Regulator, OPR Practice Note PN02: Environmental Impact Assessment Screening (OPR, 2021).

3.3 Field Based Studies

Habitat surveys were undertaken on 4th March 2021 by a Senior MOR Ecologist with follow up surveys undertaken on the 24th of May and 8th of June. The initial survey aimed to assess the extent and quality of habitats present on the Site and to identify any potential ecological receptors.

The assessment was extended to also identify the potential for these habitats to support other features of nature conservation importance, such as species afforded legal protection under either Irish or European legislation.

In addition, a biological stream assessment was carried out on the 4th of May 2021 by Sweeney Consultancy.

3.4 Survey Limitations

No survey limitations were encountered.

4 RECEIVING ENVIRONMENT

This section describes the existing conditions at the Site.

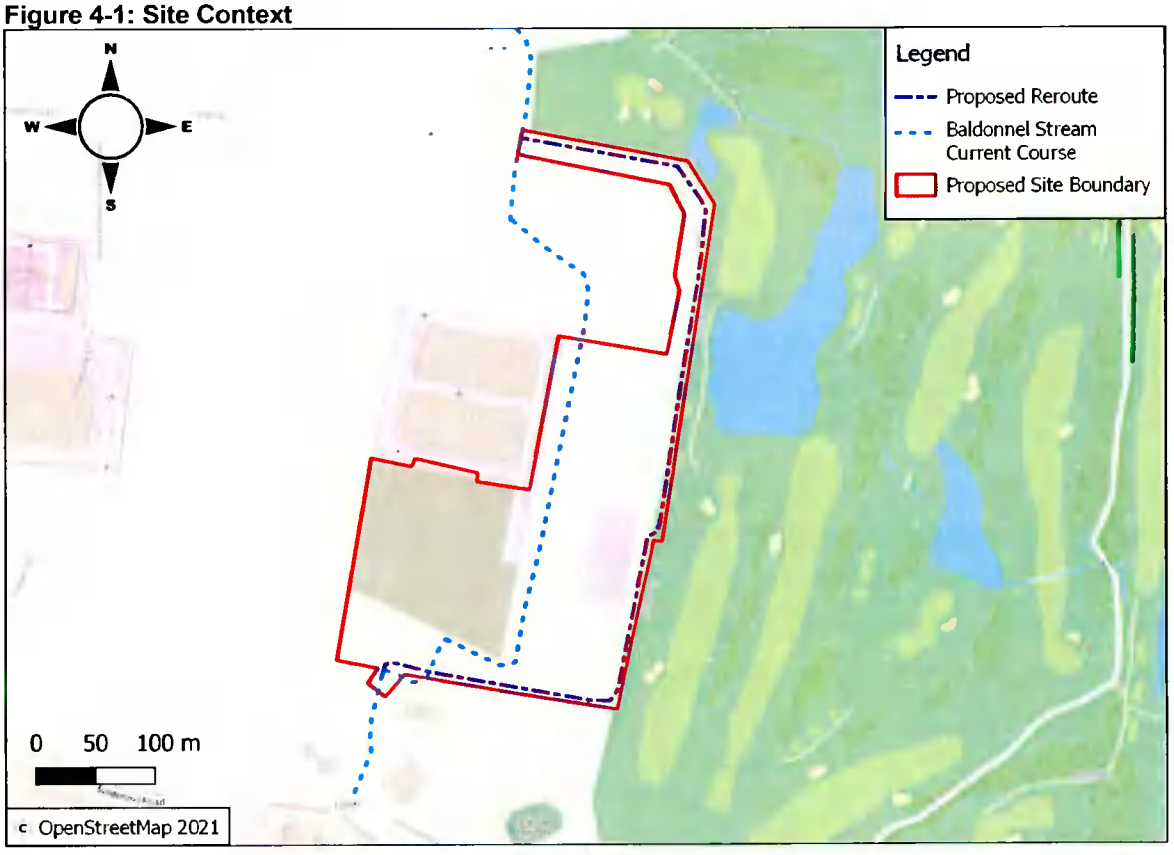
Within the Site boundary, there is a decommissioned sewage treatment plant along the eastern boundary and spoil heaps comprising of construction and demolition material to the southwest of the Site.

The lands directly to the east of the Site comprise the outer grounds of Grange Castle Golf Club whilst Kilbride Cemetery, agricultural land, the Baldonnell Road (L2001), and the Baldonnell Casement Aerodrome lie to the south.

The grounds of Profile Park extend to the north and west of the Site, providing lands serviced and ready for development of data centres. Digital Realty currently have two (2No.) units immediately adjacent to the Site boundary and the Google Data Centre is located further west.

The general locality therefore changes from amenity in the east to commercial and industrial warehousing to the north and west. Whilst to the south the land use is dominated by agricultural land and artificial surfaces relating to airports.

Figure 4-1: Site Context

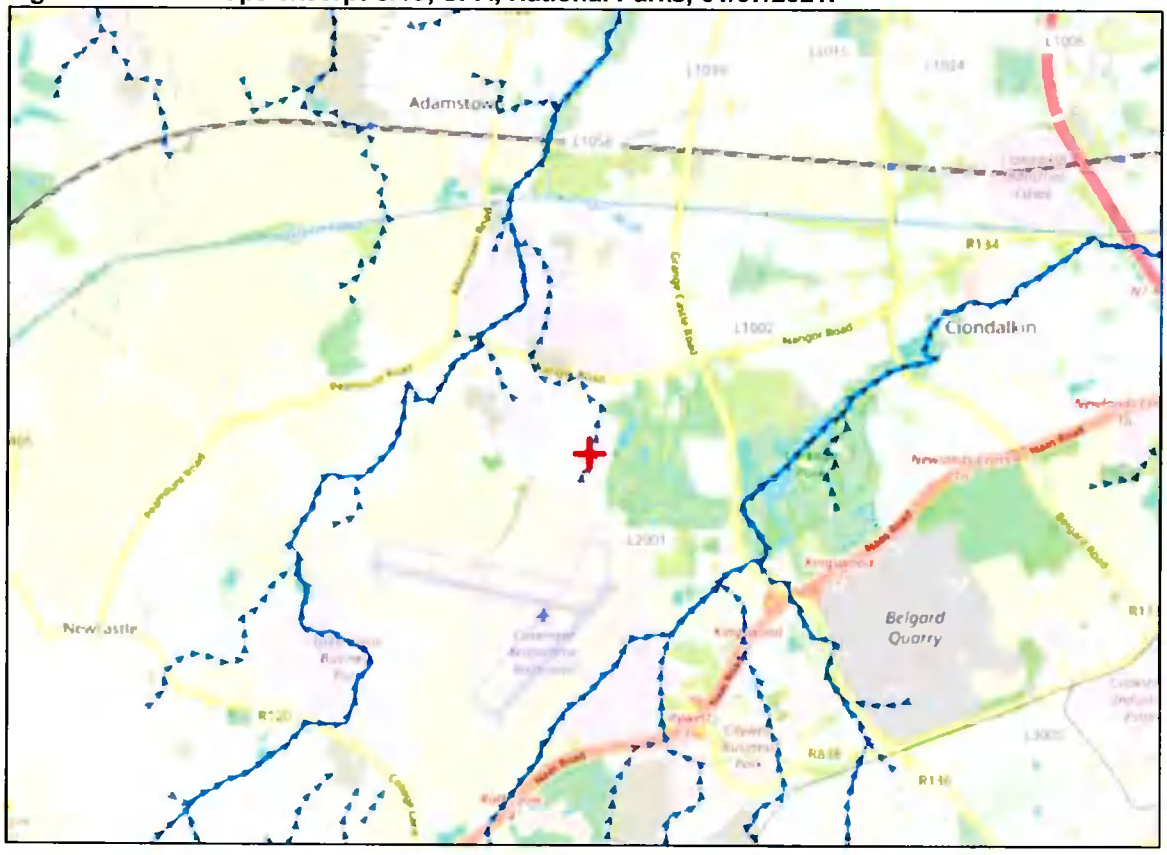


Floodinfo.ie was reviewed on 01/07/2021 and confirms that there are no likely flood events on the Site, refer to figure 4-2 below this shows all rivers with high, medium and low risk of flooding and their extents.

Figure 4-2: Extract https://www.floodinfo.ie/map/floodmaps/ 01/07/2021

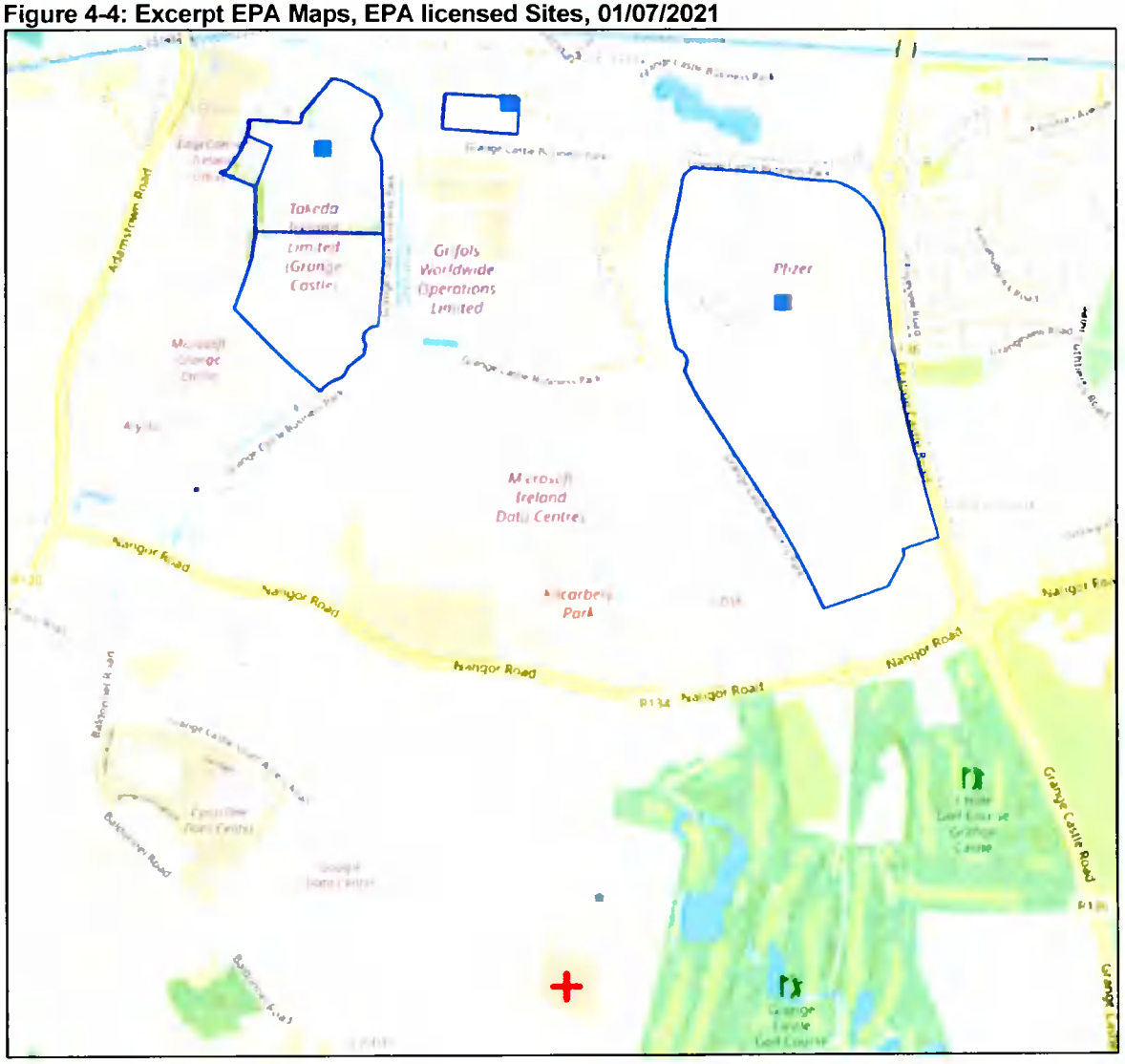
There are no Special Areas of Conservation (SAC), Special Protected Areas (SPA) or National Parks adjoining or in close proximity to the Site, refer to Figure 4-3 below.

Figure 4-3: EPA Maps excerpt SAC, SPA, National Parks, 01/07/2021.



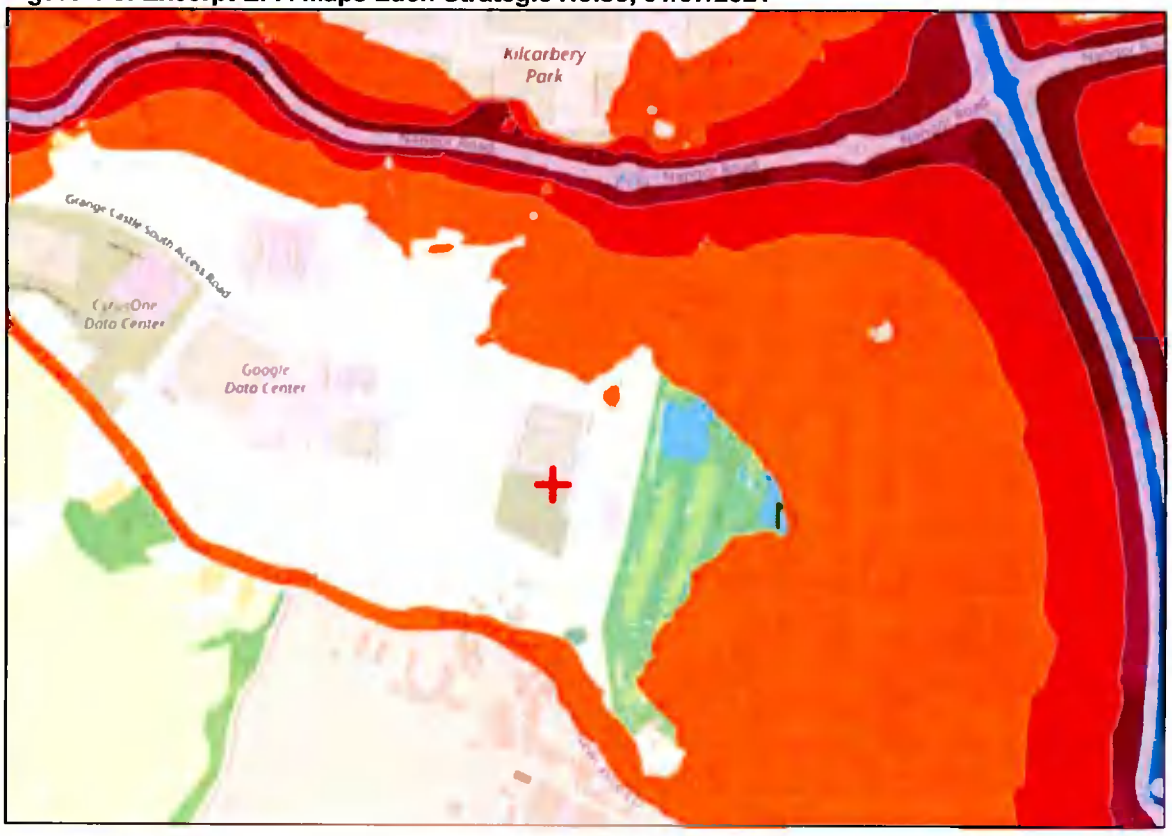
The closest EPA licensed sites are both located to the north of the Site at over 590m. There is a Section 4 Discharge (indicated with a star in Figure 4-4) within the current Digital Realty development adjacent to the Site's northwest corner, this discharge license is held by Google Ireland Ltd.

Figure 4-4: Excerpt EPA Maps, EPA licensed Sites, 01/07/2021



The northern section of the Site is located within a strategically noise mapped location for road noise; however, the majority of the Site lies outside these mapped noise contours, refer to Figure 4-5 below.

Figure 4-5: Excerpt EPA Maps Lden Strategic Noise, 01/07/2021



5 EIA SCREENING

From an EIA perspective, all proposed developments can be placed in one of the following two groups:

- Those that exceed the regulatory thresholds and require a mandatory EIA; and,
- Those that are sub-threshold and must be assessed on a case-by case basis to determine if they are likely to have significant effects on the environment.

5.1 Mandatory EIAR Screening

There are no activities listed within Part 1 of Schedule 5 of the Planning and Development Regulations (as amended) which relate to the Proposed Development. The Proposed development subject to this EIA Screening Report, therefore, does not fall within the scope of activities listed in Part 1 of Schedule 5 and a mandatory EIA, as classified under Annex I, is not required.

According to Schedule 5 of Planning and Development Regulations, 2001:

> *Class 3 (a) of Part 2 – Industrial installations for the production of electricity, steam and hot water not included in Part 1 of this Schedule with a heat output of 300 megawatts or more.*

The production of electricity onsite does not generate steam or hot water and therefore, the Site, including the 'Future Development' does not reach this threshold of 300 megawatts or more.

> *Class 3 (c) of Part 2 – Installations for surface storage of natural gas, where storage capacity would exceed 200 tonnes.*

The energy centre will be connected to the GNI grid and therefore, there will be no storage of gas onsite and this threshold will not be reached.

> *Class 10 (a) of Part 2 - Industrial estate development projects, where the area would exceed 15 hectares.*

The Site, including the 'Future Development', which encompasses an area of ca.6.18 hectares (ha), is significantly below this threshold.

It can be concluded that the proposed development does not result in development of a class listed in Part 1, or paragraphs 1 to 9 and 11-12 of Part 2 of Schedule 5 of the Planning and Development Regulations, 2001, as amended. Mandatory EIA is therefore not required.

It is further noted that planning application SD06A/0568 which sought authorisation for Profile Park, submitted an Environmental Impact Statement (EIS), which covers the development of the lands in question for an industrial estate, reference.

http://www.sdublincoco.ie/Planning/Details?regref=SD06A%2F0568.

5.2 Sub-threshold Screening for EIAR

Developments which correspond to Part 2 project types but are below the given threshold must be screened to determine whether they require an EIAR or not. This is done by consideration of criteria set out in Schedule 7 and Schedule 7a of the Planning and Development Regulations, as amended.

While the mandatory requirements for developments are relatively straightforward, being based on readily observable and definable quantum's of type and scale, the discretionary (or sub-threshold) requirements are based on an assessment of the likely significant environmental effects of the Project and will naturally vary on a case by case basis and require

greater investigation and diligence in appraisal and precise determination of depending on the complexity of the development and the proposed receiving environment.

Schedule 7 of the Planning and Development Regulations 2001 (as amended) sets out the criteria for assessing whether or not a project will have "likely" and "significant" effects on the environment, in which case an EIA is also required. These criteria include the following:

- Characteristics of proposed development;
- Location of proposed development; and,
- Characteristics of potential impacts.

These criteria, listed in Table 5-1, were considered for the proposed development under the topics recommended in EIAR guidance documents.

Table 5-1: EIAR Screening Criteria as per Schedule 7 of the Planning and Development Regulations (2001 – 2019)

1.Characteristics of proposed development
The characteristics of proposed development, in particular – *a) the size and design of the whole of the proposed development,* *b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172 (1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment,* *c) the nature of any associated demolition works,* *d) the use of natural resources, in particular land, soil, water and biodiversity,* *e) the production of waste,* *f) pollution and nuisances,* *g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge, and* *the risks to human health (for example, due to water contamination or air pollution).*
2. Location of proposed development
The environmental sensitivity of geographical areas likely to be affected by the proposed development, with regard to - *a) the existing and approved land use,* *b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground,* *c) the absorption capacity of the natural environment, paying particular attention to the following areas:* *I. wetlands, riparian areas, river mouths;* *II. coastal zones and the marine environment;* *III. mountain and forest areas;* *IV. nature reserves and parks;* *V. areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and;* *VI. areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure;* *VII. densely populated areas;*

landscapes and sites of historical, cultural or archaeological significance.

3.Types and characteristics of potential impacts

The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2 (above), with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account—

a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected),

b) the nature of the impact,

c) the transboundary nature of the impact,

d) the intensity and complexity of the impact,

e) the probability of the impact,

f) the expected onset, duration, frequency and reversibility of the impact,

g) the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A) (b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment, and

h) the possibility of effectively reducing the impact.

5.2.1 Characteristics of the Potential Development

Table 5-2 details the development characteristics criteria, as set out in Schedule 7 of the Planning and Development Regulations (2001-2019), considered and provides an assessment relating to the same.

Table 5-2: Characteristics of the proposed development

Characteristics of proposed development, in particular:	Screening Assessment Summary / Conclusion	EIA Screened In / Out
a) The size and design of the whole of the proposed development.	The size of the proposed development area is approximately ca. 61,810m^2, principally designed for large buildings, a gas-powered energy generation compound and ancillary works including access road and landscaping.	**Screened out**
b) The cumulation with other existing development and or development the subject of consent for proposed development for the purposes of section 172(1)(A) (b) of the Act and/or development the subject of any development consent for the purpose of the Environmental Impact Assessment Directive by or under any other enactment.	The Proposed Development will be similar to the existing industrial infrastructure located within Profile Park and be in keeping with the core objectives of Profile Park. Planning application SD06A/0568 included an EIS for the development of the overall industrial park and would have envisaged the development of multiple industrial units, such as the Proposed Development. In addition, the current Digital Realty Trust development (planning reference: SD12A/0002), directly adjacent to the Site was subject to an appropriate assessment and therefore assessed the potential for in-combination effects and concluded that there would not be any significant effects on Natura 2000 sites as a result of that development either alone or in-combination with other plans or projects.	**Screened out**
c) The nature of any associated demolition works.	No demolition work of existing buildings will be required for the provision of the Proposed Development.	**Screened out**

Characteristics of proposed development, in particular:	Screening Assessment Summary / Conclusion	EIA Screened In / Out
	However, the excavation and removal of a decommissioned sewage treatment plant, associated buried structures and foundations will be required. In addition, the removal of existing construction and demolition waste material stockpiles onsite will be required.	
d) The use of natural resources, in particular land, soil, water and biodiversity.	The development of the Site will require earthworks involving movement of soil material and regrading of ground. The reuse of soil / rock materials from within the Site, as per the Circular Economy principles, will be undertaken where possible. Therefore, the environmental impact of hauling materials from the Site to licensed disposal facilities will be minimised. The use of natural resources is deemed to be modest and not to a scale that would warrant an EIA.	**Screened out**
e) The production of waste.	The construction phase of the proposed development will likely generate waste such as plastic wrapping, strips, containers, polystyrene and wooden pallets etc. Waste will be collected and segregated on-site before being removed off-site and recycled or disposed of at a licensed waste facility. Materials will be reused onsite where possible; however, If any unsuitable materials are encountered, they will have to be removed offsite to a suitably permitted or licensed facility. During the operational phase wastes will be managed in accordance with relevant procedures and all relevant waste management legislation. Therefore, a further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
f) Pollution and Nuisances	Construction works will be subject to the standard health and safety controls and will be short-term in nature. A specialist noise impact assessment has been completed for the construction and operation of the proposed development and this report concluded that there will be no significant likely affects in relation to noise impacts. Therefore, a further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
g) The risk of major accidents, and/ or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge.	Potential risks associated with the construction phase include uncontrolled release of pollutants through a major construction related accident through uncontrolled construction works. The national flood hazard mapping was consulted. No historic flood events were noted within the Site or within close proximity. Therefore, a further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
h) The risks to human health (for example, due to water	The Site is located within an area of low population density. There would be limited risks to human health during the construction phase. The potential for human health impacts	**Screened out**

Characteristics of proposed development, in particular:	Screening Assessment Summary / Conclusion	EIA Screened In / Out
contamination or air pollution).	during this phase would be largely limited to those associated with noise and dust. The proposed development will not likely create significant risk to human health during normal operation and therefore an EIA is not required on this basis.	

5.2.2 Location of Proposed Development

A description of the location of the proposed development, as set out in Schedule 7 of the Planning and Development Regulations (2001-2019), with regard to the environmental sensitivity of the geographical area likely to be affected is required. Table 5-3 details the criteria considered and provides an assessment relating to same.

Table 5-3: Location of Proposed Development.

The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to -	Screening Assessment	EIA Screened In / Out
a) The existing and approved land use.	The Site is authorised for an industrial park, with specific core business for data centres. The proposed development is in keeping with the designation of Profile Park. Further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
b) The relative abundance, quality and regenerative capacity of natural resources (including soil, land, water, biodiversity) in the area and its underground.	The mature hedgerows / treelines along the Site boundaries and the Baldonnell stream have been subject to a specialist assessment. The findings of these assessments have been taken into consideration as part of the design and landscaping of the Proposed Development and will be retained / improved. Development of this surface area will not have a significant impact on the quality and regenerative capacity of natural resources in the area. No significant impacts related to the proposed development are predicted with such measures in place and therefore, an EIA is not warranted in this regard.	**Screened out**
c) The absorption capacity of the natural environment, paying particular attention to the following areas: (i) wetlands, riparian areas, river mouths; (ii) coastal zones and the marine environment; (iii) mountain and forest areas, (iv) nature reserves and parks, (v) areas classified or protected under legislation, including	The proposed development does not contain or is not likely to affect any of the criteria/ areas: (iii), (iv) and (vii). An examination of the potential effects on the remaining criteria is undertaken below: **(ii) (iii) (iv) (vi) (vii) and (viii)** These habitats are not in proximity to the site. **(i)** The Baldonnell Stream currently runs through the centre of the Site and will be diverted as part of the proposed development. Consultation, a biological assessment on the stream and an NIS and EcIA have been undertaken to ensure that no adverse effects will occur as a result of the proposed diversion works. These reports concluded that by following the sensitive design and with appropriate	**Screened out**

The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to -	Screening Assessment	EIA Screened In / Out
Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive and; (vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure; (vii) densely populated areas; (viii) landscapes and sites of historical, cultural or archaeological significance	pollution control measures in place, there could be a positive effect on the watercourse. **(v)** A NIS has been undertaken in relation to the proposed development and will be submitted with the planning application. The NIS concluded that there is potential for direct & indirect effects on Natura 2000 designated areas and to qualifying Annex II species, without specific and appropriate pollution control and work control / disturbance avoidance measures being employed. The NIS will be submitted to appropriately assess, avoid and mitigate against these potential impacts. Therefore, further assessment on potential impacts in the context of an EIA is not warranted. Therefore, an EIA is not required to ensure careful design, assessment and mitigation as part of an EIA process.	

5.2.3 Types and characteristic of potential impacts

Table 5-4 details the screening assessment relating to the types and characteristics of potential impacts, as set out in Schedule 7 of the Planning and Development Regulations (2001-2019).

Table 5-4: Characteristics of Potential Impact

The likely significant effects on the environment of proposed development taking into account:	Screening Assessment	EIA Screened In / Out
a. The magnitude and spatial extent of the impact (for example, geographical area and size of the affected population).	The Proposed Development encompasses a site area of ca.6.18 hectares (ha) or 61,810 m^2, within an approved industrial park. The Site has connections to all relevant services needed to support the operational phase of the development.	**Screened out**
b. The nature of the impact.	• During construction short term impacts in relation to noise, dust, and water runoff are a risk, however these risks are common to any construction project and can be adequately controlled through standard construction controls. • Operational phase will present minimal onsite emission in relation to storm water, which will be collected and directed through the onsite attenuation system. • The specialist noise report submitted as part of this planning application concluded that noise emissions during the operational phase of the proposed development will not cause significant likely effects to sensitive receptors in the wider area.	**Screened out**

The likely significant effects on the environment of proposed development taking into account:	Screening Assessment	EIA Screened In / Out
	• According to the Air Quality and Climate Impact Assessment Report, no significant impacts on local air quality are likely as a result of the proposed development. All normal and emergency operational emissions comply with relevant Air Quality Standards (AQS). • According to the Air Quality and Climate Impact Assessment Report, the proposed development is considered to have a moderate negative impact on climate due to the projected carbon emissions predicted to be generated from powering the Site. However, these emissions will be regulated under the Emissions Trading Systems (ETS) and will reduce overtime. Further assessment on potential impacts in the context of an EIA is not warranted. However, it should be noted that specialist additional assessments have been undertaken and have been submitted in support of this application.	
c. The transboundary nature of the impact.	No significant transboundary emissions are considered likely as a result of the proposed development.	**Screened out**
d. The intensity and complexity of the impact.	The operation of the Proposed Development will be relatively simple. The key resource consumed will be gas, to power the 13No. generators used to supply the two (2No.) 20MW data centre buildings with energy. Further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
e. The probability of the impact.	Normal operations are unlikely to result in local direct impacts. The generation of power is independently assessed as part of this planning submission. Based on the findings of these reports, no likely significant impacts to the environment are predicted. Further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
f. The expected onset, duration, frequency and reversibility of the impact.	In the Medium (7-15 Years) and Long-term (15-60 years) duration, the nature of the Proposed Development operations will be like other data centres. In the event of a requirement to reverse the impacts from the operation the Site can be shut down, and the buildings re-purposed or demolished, returning the land to a similar condition as to pre-development conditions. Further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**
g. The cumulation of the impact with the impact of other existing and/ or development the subject of a consent for proposed development for the purposes of section 172 (1 A) (b) of the Act and/ or development subject of any development	Profile Park is an established business park for data centre development authorised in 2006, with a holistic assessment conducted prior to the development of the serviced sites. This Proposed Development fits with the scope and nature of the locality. Therefore, further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**

The likely significant effects on the environment of proposed development taking into account:	Screening Assessment	EIA Screened In / Out
consent for the purposes of Environmental Impact Assessment Directive by or under any other enactment,		
h. The possibility of effectively reducing the impact.	The limited emissions associated with the operation of the Proposed Development and the need for the activity to ensure a carefully controlled interior environment will ensure the emission from the activities are controlled and maintained during the lifetime of the Site. It is unlikely that undertaking an EIA would result in further reduction of these potential impacts, therefore further assessment on potential impacts in the context of an EIA is not warranted.	**Screened out**

6 CONCLUSIONS

This EIA screening assessment report has reviewed the potential for the INXN DUB15/16 and associated works at Profile Park, Nangor Road, Clondalkin, Dublin 22 to be considered as an EIA development.

Based on the findings of this EIA screening assessment, the Proposed Development does not require a mandatory EIAR, nor does it meet the criteria where a sub-threshold EIA would be warranted.

There is no requirement to submit an EIAR in support of the planning application for the proposed development.

7 REFERENCES

ARUP. (2021). *Energy Centre Description.*

CIRIA. (2011). *C532 – Control of Water Pollution from Construction, Guidance for Consultants and Contractors* .

CIRIA. (2015). *C741 - Environmental Good Practice on Site (4th edition).*

DEHLG. (2003). *Guidelines for Consent Authorities regarding Sub-threshold Development.* Retrieved from http://www.housing.gov.ie/sites/default/files/migrated-files/en/Publications/Environment/Miscellaneous/FileDownLoad%2C1804%2Cen.pdf

DHPLG. (2018). *Transposing Regulations (S.I. No. 296 of 2018) Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment* .

EPA. (2017). *Guidelines on the Information to be contained in Environmental Impact Assessment Reports Draft.*

EPA. (2021). *EPA Map Viewer.* Retrieved from EPA Maps: http://gis.epa.ie/Envision

EU. (2017). *Environmental Impact Assessment of Projects. Guidance on Screening.*

European Parliament. (2014). *Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment Text with EEA relevance.*

Inland Fisheries Ireland . (2016). *Guidance and Protection of Fisheries during Construction Works in an adjacent to Water* . Dublin: IFI.

NBDC. (2021). *Biodiversity Maps.* National Biodiveristy Data Centre.

NPWS. (2021). *NPWS.* Retrieved from https://www.npws.ie/

NRA. (2005). *Guidelines for the crossing of watercourses during the construction of national road schemes.* National Roads Authority.

NRA. (2006). *Guidelines for the Treatment of Badgers prior to the Construction of National Road Schemes.* Dublin: National Roads Authority.

NRA. (2006). *Guidelines for the Treatment of Bats prior to the Construction of National Road Schemes.* Dublin: National Roads Authority .

NRA. (2010). *Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads.* National Roads Authority.

OPR. (2021). *OPR Practice Note PN02: Environmental Impact Assessment Screening.* Dublin: Office of the Planning Regulator.

SDCC. (2016). *South Dublin County Council Development Plan 2016-2022.* Dublin: South Dublin County Council .

SDCC. (2021). *South Dublin County Council Planning Portal.* Retrieved from SDCC Planning Maps Online: https://sdublincoco.maps.arcgis.com/apps/webappviewer/index.html?id=004b5a1a557a4c1a91b4629923f9d4b7

Statutory Instrument. (2001). *the Planning and Development Regulations (as amended).*

Statutory Instrument. (2018). *The Planning and Development (Amendment) Act.* Dublin: office of the Attorny General.