INXN DUB15/16

Planning Report

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Digital Netherlands VII B.V. (Netherlands)

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1 INTRODUCTION

RPS has been instructed by Digital Netherlands VII B.V. (Netherlands) to prepare this Planning Report in support of a planning application for a data centre development at Profile Park, Nangor Road, Clondalkin, Dublin 22.

The application site comprises a brownfield site located within an existing business park. Planning permission was granted previously for a development of the site which was partially constructed. This application seeks to develop the remainder of the site.

In summary, the application proposes two datacentre buildings with an element of energy generation to the north east.

The development will consist of:

> *"10 year permission for the following development: Removal of an existing unused waste water treatment facility on site and the erection of two data centre buildings, gas powered energy generation compound, and all other associated ancillary buildings and works. The two data centre buildings, DUB 15 and DUB 16, will comprise a total floor area of c. 33,577m² over two storeys. The first 2 storey data centre building (DUB15), located to the south west of the site, will comprise 16,865m² data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. A second 2 storey data centre building (DUB16), located to the south east of the site, will comprise 16,712m² data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. 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 north east corner of the site to provide electricity for the proposed development. The application proposes to re-route and widen an existing watercourse constructed following an earlier planning permission. It is proposed to reroute this watercourse along the eastern and southern boundary of the site. Landscaping is proposed to the south of the site to screen the buildings. Fencing and security gates are proposed around the site. New access roads within the site are proposed along with 71 car parking spaces and 26 cycle spaces, bin stores, site lighting, and all associated works including underground foul and storm water drainage attenuation and utility cables and all other ancillary works. A Natura Impact Statement will be submitted to the planning authority with the application".*

2 SITE AND SURROUNDING AREA

The site is located on the eastern fringe of Profile Park, south of Nangor Road and west of Clondalkin Village. Kulcarbery Golf Course is located to the east of the site. Grange Castle Business Park is located to the north of Profile Park. The site of Kilbride Castle, Church (Protected Structure) and graveyard and Kilbride House are located to the south of the site. The site is located within the Department of Defence Inner Zone Limit, but not in the approach zone to either runway.

To the north west of the site is a smaller area which contains two data centre/warehouse structures (known as DUB13 and DUB14, and associated service roads, parking and ancillary works. The existing buildings comprise large rectangular data halls book-ended by ancillary plant and office blocks at the short ends. External plant cooler units punctuate the long elevations.

The application site itself comprises c. 6.181ha of brownfield land, having been cleared pursuant to a previous permission which was not fully implemented[1]. To the east of the site is a disused wastewater treatment plant. Through the centre of the site is a service road which was constructed to serve the permitted (now expired) scheme.

A watercourse runs from north to south through the centre of the site, adjacent to the service road. This stream was constructed pursuant to the partially implemented planning permission and was rerouted from another location within the site.

[11] SD11A/0023

3 PLANNING HISTORY

3.1 Reg. Ref: SD11A/0023

Planning permission was granted on 15th June 2011 for a data processing facility on a site of 4.04ha comprising four buildings totalling 21,090m² (Ref. Ref: SD11A/0023). The application site to which SD11A/023 relates, comprised some of the current application site.

The application site in Reg. Ref: SD11A/0023 comprised the western portion of the site to which this application relates.

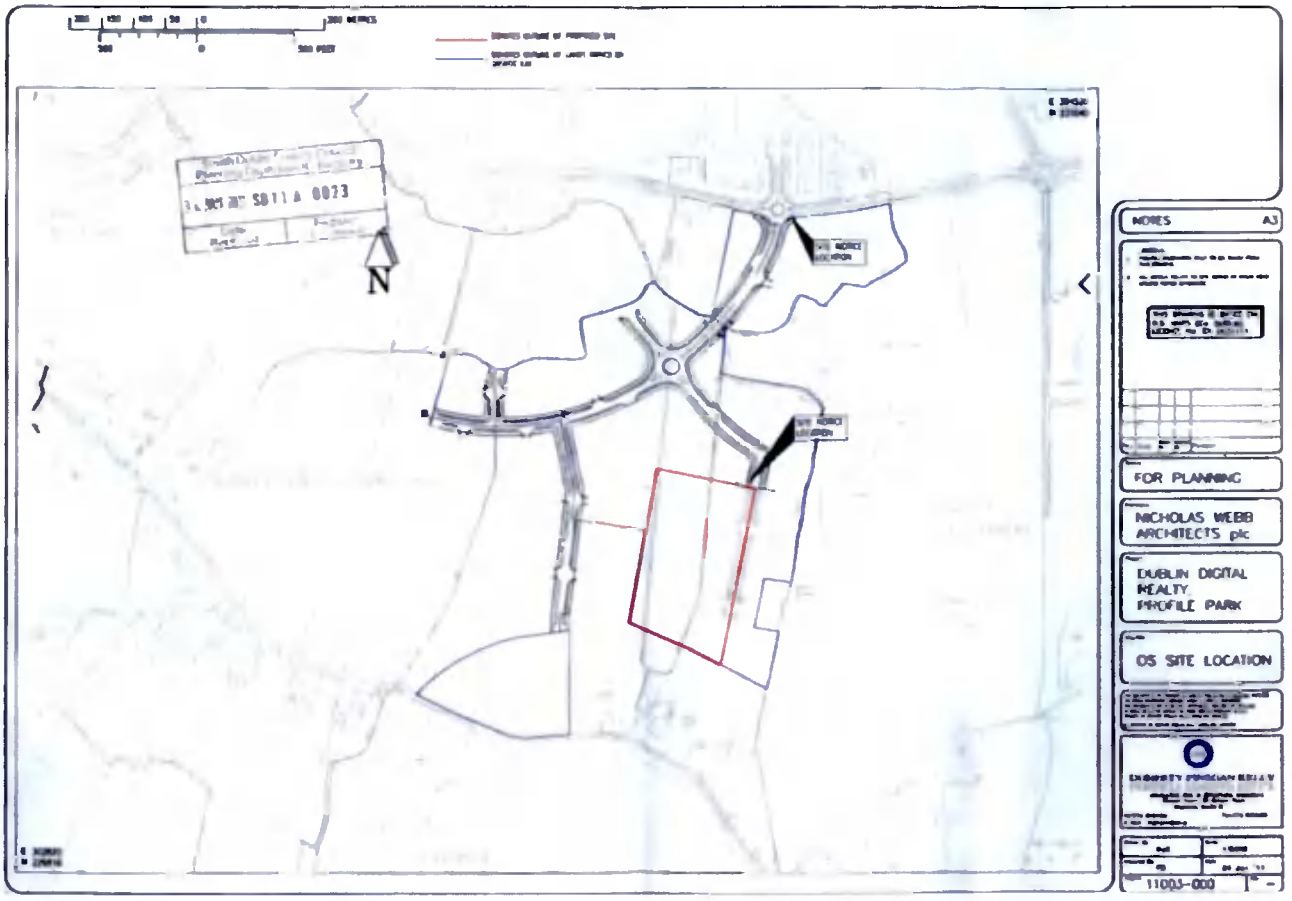

Figure 1: Site Location Map

The proposal was summarised as follows in SDCC's Manager's Order:

> *"Construct a Data Processing Facility to include four buildings totalling 21,090 sq m, each building contains a large data hall, with a maximum height of 10 metres as follows:*
>
> - *Two Type A buildings, 3,572 sq m floor area each, including 448 sq m office space on the two upper floors and external plant of 1,975 sq m each*
> - *Two Type B buildings, 3,005 sq m floor area each and with external plant of 1,993 sq m each.*
> - *Substation, 16 sq m floor area and 2.6 metres in height, located at south eastern corner of site.*
> - *Two vehicular site entrances. 84 car parking spaces, cycle parking and recycling storage*
> - *Associated site works including lighting and landscaping*
>
> *Power supply to the data centre would be provided from substation in Grange Castle Busines Park. Fibre optic telecommunication cables for the data centre will be connected to the T50 network on the Nangor Road. Development to be constructed in two phases".*

The approved site layout (submitted at FI Stage, 6th April 2011) is shown in **Figure 2**.

Planning permission was granted on 15th June 2011 subject to 21 conditions.

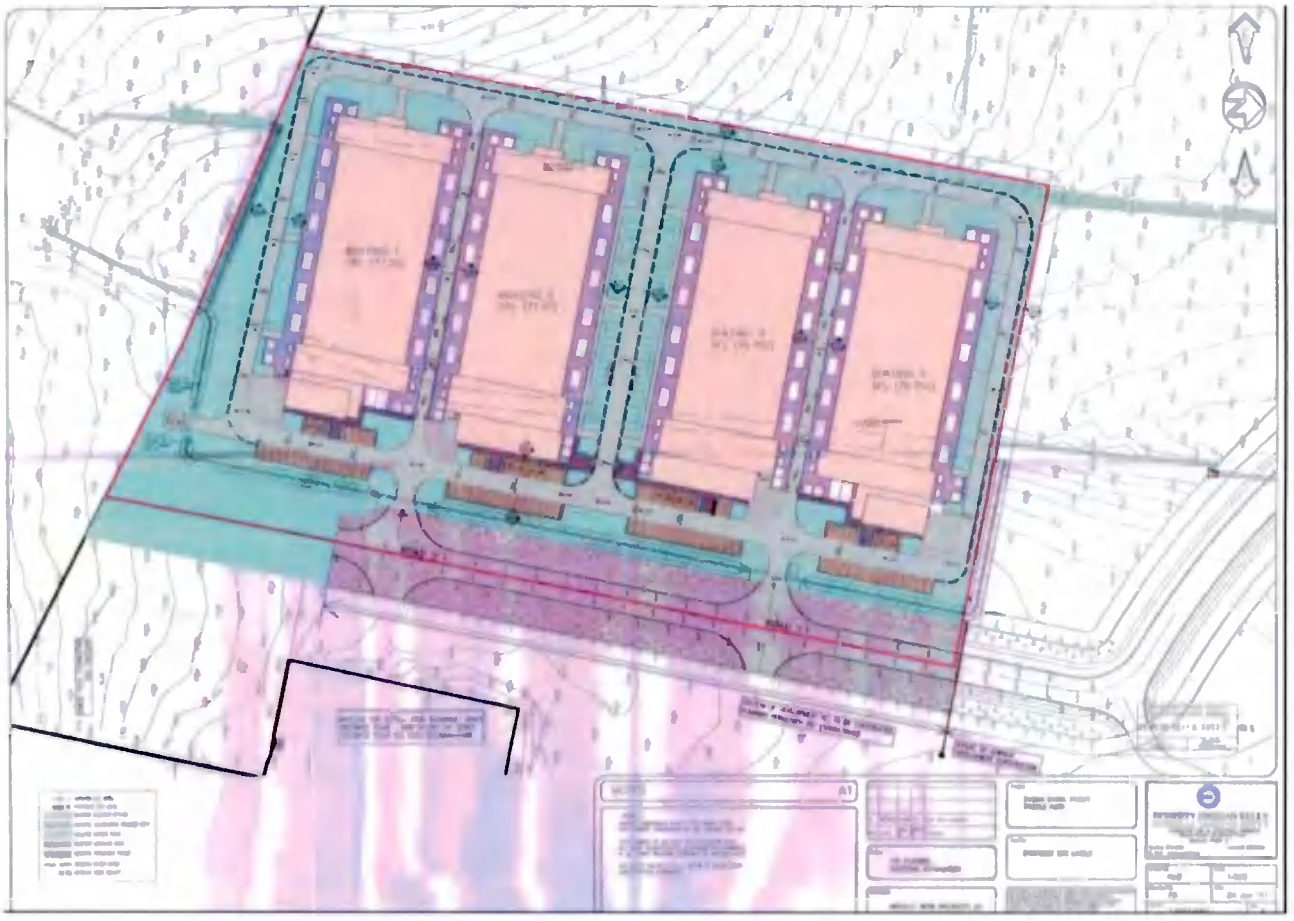

Figure 2: Approved Site Layout (Reg. Ref: SD11A/0023)

This permission was partially implemented. The two data halls to the north were constructed.

3.2 Reg. Ref: SD12A/0002

Planning permission was granted on 11th April 2012 for amendments to the earlier permission granted under Reg. Ref: SD11A/0023. This included minor alterations to the four permitted data centre structures.

This included the extension of the appropriate period to seven years (Reg. Ref: SD12A/0002).

3.3 Reg. Ref: SD17A/0377

Further minor alterations were approved in December 2012 (Reg. Ref: SD17A/0377). At this stage, one data hall had been constructed. The application proposed four data halls in total.

3.4 Reg. Ref: SD12A/0002/EP

Permission was refused for the extension of duration of the 2012 permission on site. Planning permission was refused as the application was made after the appropriate period of the parent permission.

3.5 Adjacent Site Reg. Ref: SD21A/0167

Greener Ideas Limited submitted a planning application for a gas powered plant with an electrical output of up to 125MW to the north of the application site. This application was submitted on 25th June 2021 and registered under Reg. Ref: SD21A/0167.

The proposed energy generation has been fully considered by the design team.

4 DESCRIPTION OF DEVELOPMENT

4.1 Proposal

The planning application proposes two data centres, energy generation and all other associate works on a site of 6.181ha at Profile Park, Nangor Road, Clondalkin, Dublin 22.

The application proposes two data centres, one to the south west of the site and the other to the south east of the site.

The first, known as DUB 15, is located to the south west of the site. This data centre comprises a total Gross Floor Area of 16,865m^2 over two floors. The building is rectangular in shape with the main body of the building comprising data halls, with ancillary office and welfare space to the north over two floors. Proposed at ground floor is 7,340m^2 of data hall space with 940m^2 ancillary space to the north. At first floor there will be 7,333m^2 data hall space with 1,049m^2 ancillary space to the north. Roof level will comprise three small elements of staircore totalling 74m^2 with ancillary space measuring 131m^2 to the north.

The data halls within DUB 15 comprise a large data hall area with smaller technical rooms to the west. The ancillary space comprises various uses such as a loading bay, conference room, welfare, security and technical room at ground floor with office, switchrooms, welfare and breakout space at first floor. Staircores, ancillary roof and roof mounted mechanical plant are proposed at roof level.

A single storey screened generator compound is proposed to the south and west of DUB 15.

DUB 15 comprises two storeys with ancillary plant at roof level. The proposed building reaches a height of 20m. The parapet level will be at 96.7mOD.

The northern elevation comprises the building entrance and the ancillary floorspace is also located towards this side of the building. The proposed elevation will comprise powder coated vertical profiled metal cladding. The cladding proposed will comprise a mix of colours including medium grey, Pearl, Moonstone, Pigeon Blue and Dark Grey. The north elevation will also comprise curtain wall glazing to provide light to the ancillary floor space. High level signage is proposed.

The southern elevation comprises predominantly powder coated medium grey metal cladding. A number of doors are proposed for service/escape and polished steel generator flues extend from the generator compound.

The eastern elevation also comprises predominantly powder coated medium grey metal cladding. Some glazed curtain walling and access doors are proposed towards the north where the ancillary space is located. Two stair cores are proposed on the eastern elevation, one to the north and one to the south. These are finished in a perforated metal screen.

The western elevation also comprises medium grey metal screening with polished steel flues extending from the generator yard. Louvres and access doors are proposed where required. Additional interest is provided through the use of varying colours towards the north of the western elevation. Signage is also proposed.

The second data centre, named DUB 16, is proposed to the south east of the site. This data centre comprises a total Gross Floor Area of 16,712m^2 over two floors. The building is also rectangular in shape with the main body of the building comprising data halls, with ancillary office and welfare space to the north over three floors. At first floor there will be 7,279m^2 data hall space with 940m^2 ancillary space to the north. At first floor there will be 7,274m^2 data hall space with 1,028m^2 ancillary space to the north. The third floor will comprise two small elements of data hall at the south east and south west corners totalling 56m^2 with 133m^2 ancillary floorspace to the north.

The data halls within DUB 16 comprise a large data hall area with smaller technical rooms to the south. The ancillary space comprises a range of uses such as loading bay, security, entrance lobby, conference room and welfare at ground floor with offices, switchrooms and welfare at first floor. Staircores, ancillary roof and roof mounted mechanical plant are proposed at roof level.

A single storey screened generator compound is proposed to the south of DUB 16.

DUB 16 comprises two storeys with ancillary plant at roof level. The proposed building reaches a height of 20m. The parapet level will be at 97.69mOD.

The northern elevation comprises the building entrance and the ancillary floorspace is also located towards this side of the building. The proposed elevation will comprise powder coated vertical profiled metal cladding. The cladding proposed will comprise a mix of colours including medium grey, Pearl, Moonstone, Pigeon Blue and Dark Grey. The north elevation will also comprise curtain wall glazing to provide light to the ancillary floor space. High level signage is proposed.

The southern elevation comprises predominantly powder coated medium grey metal cladding. A number of polished steel flues arise from the generator yard to the south. This generator yard is screened; four doors provide access to the generator yard.

The eastern elevation also comprises predominantly powder coated medium grey metal cladding. Some glazed curtain walling and access doors are proposed towards the north where the ancillary space is located. Polished steel flues to the south of the site will be visible from the east. High level signage is proposed.

The western elevation also comprises medium grey metal screening with polished steel flues extending from the generator yard. Louvres and access doors are proposed where required. Additional interest is provided through the use of varying colours towards the north of the western elevation. Access doors and louvres are provided as required.

An energy generation compound is proposed to the north east. This will comprise five generators in their own acoustic containers, the heat recovery plant room (c.35m^2), the distribution gas compound building (c.23m^2), electrical substation (c.623m^2) building within this compound.

The generators provide the first phase of DUB 15 with power. Future phases will import power from the grid. This will allow the data centre to use renewable power when available. During times of low renewable generation or grid constraints, the site will import power from the new natural gas power station in Profile Park.

Drainage will be provided across the site as well as Sustainable Urban Drainage measures to control run-off from the site.

There is a watercourse which runs through the site having been repositioned there during works to facilitate DUB 13 and 14. The application proposes to reroute this watercourse to the east of the site. The relocation of the watercourse has several ecological benefits which are set out in the accompanying documentation.

In order to ensure that the watercourse is suitably accommodated, additional work to the watercourse is proposed to the north of the site. This widening and clearing of the watercourse will have ecological and flood risk benefits.

The application proposes two significant buildings on EE zoned land. Significant planting is proposed around the site and in particular to the south to ensure the visual impact of the proposals are softened.

Access to the site will be from existing roads to the north west. New access roads are proposed throughout the site to provide access for employees, visitors, deliveries where relevant and for emergency services should they require it. 71 car parking spaces are proposed. This level of car parking will ensure that the sufficient parking will be provided for employees and there will be no overflow onto the surrounding roads. Of the 71 spaces, 4 are disabled spaces. 8 spaces will be available for the charging of electric vehicles. Covered cycle parking is provided on site, 13 Sheffield stands will provide parking for 26 bicycles.

Other ancillary buildings throughout the site will include a pump room (c.52m^2) and two refuse stores (c.25m^2). The total floor area of all ancillary structures measures circa 2,717m^2.

Security fencing and entrances are proposed around the site as required.

Due to the scale of the development, it is requested that the Applicant be allowed 10 years in which to implement the permission. This will allow the appropriate phasing of the proposed development.

4.2 Energy Centre

Due to the current limited availability of power in Ireland from the Network Operator Eirgrid, the data centre will not be provided with a power connection from the local electricity network upon its planned operational date in Q1 2023.

Power will therefore initially be provided by an on-site Energy Centre located adjacent at the north east corner of the site. This Energy Centre will have sufficient capacity for the first phase of the cata dentre development for an electrical demand of up to 10MW.

It is the Applicant's intention for a long-term grid connection to be established to serve the data centres. This grid connection will be capable of supporting the ultimate combined electrical demand of both DUB15 and DUB16 of 52MW. The Energy Centre shall remain operational until such time that the facility is transferred to this grid supply. At this time the Energy Centre will be decommissioned.

4.2.1 Energy Generating Plant

The on-site Energy Centre is will comprise five gas powered generators to support the first phase of the development. The generators will be configured in an N+1 arrangement in order to meet the data centre resilience requirements.

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). 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.

4.2.2 Gas Connection

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. The system will have the ability to accept renewable gasses in the future.

4.2.3 Emissions

The European Unition Medium Combustion Plant Regulations 2017 were signed into law in December 2017. The purpose is to limit emissions to the atmosphere from boilers and other stationary combustion plants.

The Energy Centre will comply with the Medium Combustion Plant (MCP) regulations and will include monitoring and reporting of NOx emissions to the EPA.

The Energy Centre will be designed and operated to ensure compliance with the MCP regulations. Critical to this is the selection of low NOx gas engines.

The EU emissions trading system (EU ETS) is an essential part of the EU's policy to combat climate change and as such the carbon dioxide (CO_2) emissions from the Energy Centre will be regulated under the EU ETS.

4.2.4 Data Centre Generators

In addition to the Energy Centre supply the data centres will have back-up diesel generators rated at 2.2MWe. These generators provide an additional layer of resilience to the data centre. In the event of a gas supply interruption these generators will operate providing power to the data centre.

The diesel generators will continue to provide back-up power to the data centre when it transitions to its permanent power supply.

The data centres will have 48 hours of on-site back-up diesel fuel storage and as such will ensure that the data centre does not impact the electrical grid.

4.2.5 Decarbonisation

GNI have published information outlining how the gas network can become net zero carbon by 2050, this is detailed in the GNI Vision 2050 report. The report details a target to achieve 11TWh/annum renewable gas production by 2030.

As such the Energy Centre will be designed to accept renewable gasses, thereby enabling the site to reduce its CO_2 emissions as renewable fuels become available through the gas supply grid.

4.2.6 District Heating

Provision is made within the Energy Centre to enable for a future connection to a local district heating network to accept and reuse heat generated by the Energy Centre.

4.3 Rationale

The proposed data centres will facilitate the increased reliance on cloud computing and data storage. This is generated by a change in the way data is stored and a movement from on site and on device storage to cloud storage. Such storage facilitates changes in society such as remote working.

5 PLANNING POLICY

5.1 Project Ireland 2040: National Planning Framework (2040)

Project Ireland 2040: National Planning Framework (NPF) is the Government's high-level plan for the future development of Ireland, with a focus on the strategic growth of Ireland.

National Strategic Outcome 6 of the NPF relates to the creation of *"A Strong Economy Supported Economy, Enterprise, Innovation and Skills"*. This strategic outcome is underpinned by a range of objectives including: ***"Promotion of Ireland as a sustainable destination for ICT infrastructures such as data centres and economic activities".***

National Strategic Outcome 5 states: *"Ireland is very attractive in terms of international digital connectivity, climatic factors and current and future renewable energy sources for the development of international digital infrastructures,* ***such as data storage facilities.*** *This sector underpins Ireland's international position as a location for ICT and creates added benefits in relation to establishing a threshold of demand for sustained development of renewable energy sources."*

5.2 Regional Economic and Spatial Strategy 2019-2031

The Eastern and Midland Regional Assembly Regional Economic and Spatial Strategy 2019-2031 (RESS) is informed by the NPF. It is a strategic plan which identifies regional assists, opportunities, and pressures. It provides appropriate policy responses in the form of Regional Policy Objectives. These reiterate the objectives of the NPF and focus these on a regional level.

The Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Regional Assembly (EMRA) includes Regional Policy Objective (RPO) 8.25 which states the following:

> *"Local Authorities shall:*
>
> *Support and facilitate delivery of the National Broadband Plan.*
>
> *Facilitate enhanced international fibre communications links, including full interconnection between the fibre networks in Northern Ireland and the Republic of Ireland.*
>
> *Promote and facilitate the sustainable development of a high-quality ICT network throughout the Region in order to achieve balanced social and economic development, whilst protecting the amenities of urban and rural areas.*
>
> ***Support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures such as data storage facilities and associated economic activities at appropriate locations.***
>
> *Promote Dublin as a demonstrator of 5G information and communication technology."*

5.3 South Dublin County Development Plan 2016-2022

The South Dublin County Development Plan 2016-2022 (hereafter the Development Plan) has been prepared in accordance with the requirements of the Planning and Development Act 2000 (as amended). The Development Plan provides a spatial framework for the county in the context of national and regional frameworks, in which all planning applications are assessed by.

The following policies are of key importance:

> *"**4.2.0 Strategic Policy for Employment***
>
> *It is the policy of the Council to facilitate and support the growth of the economy of South Dublin County and the Greater Dublin Area in a sustainable manner whilst maintaining and improving environmental quality with the following key aims:*
>
> - *To strengthen existing employment centres;*
> - *To strengthen the integration between employment, housing and transportation with a view to promoting compact urban areas and reducing car dependency;*

- *To support high-value jobs as companies seek to move up the value chain and undertake higher value-added activities in Ireland.*
- *To facilitate economic growth by consolidating existing industrial and commercial areas and by ensuring that there is an adequate supply of serviced employment lands at suitable locations.*
- *To promote the regeneration of underutilised industrial areas in a manner which enhances the local economy and encourages a sequential approach to development;*
- *To provide for a range of business accommodation types, including units suitable for small business".*

***"Economic and Tourism (ET) Policy 1 Overarching:** It is the policy of the Council to support sustainable enterprise and employment growth in South Dublin County and in the Greater Dublin Area, whilst maintaining environmental quality".*

***"Economic and Tourism (ET) Policy 3 Overarching:** It is the policy of the Council to support and facilitate enterprise and employment uses (hightech manufacturing, light industry, research and development, food science and associated uses) in business parks and industrial areas".*

***"ET3 Objective 2:** To prioritise high tech manufacturing, research and development and associated uses in the established Business and Technology Cluster to the west of the County (Grange Castle and Citywest areas) to maximise the value of higher order infrastructure and services that are required to support large scale strategic investment".*

***"ET3 Objective 5:** To ensure that all business parks and industrial areas are designed to the highest architectural and landscaping standards and that natural site features, such as watercourses, trees and hedgerows are retained and enhanced as an integral part of the scheme".*

***"ET3 Objective 6:** To ensure that business parks and industrial areas are designed to promote walking, cycling and public transport".*

***"ET3 Objective 7:** To support the provision or retrofitting of suitable electricity and heat micro generation and storage equipment, such as photovoltaic and water-heating solar panels and small to medium scale wind turbines within business parks and industrial areas".*

6 ASSESSMENT

6.1 Principle of Proposed Use

The application proposes a data centre use and ancillary energy generation.

The site is located in an area zoned EE: *"to provide for enterprise and employment related uses"*. Industry – general, industry – light, and office -based industry are permitted in principle within the zoning objective.

A small portion of the site to the south is zoned RU: *"to protect and improve rural amenity and to provide for the development of agriculture"*.

Figure 3: Policies Map with site shown

The site is also located within the Department of Defence Inner Zone Limit. A Noise Significant Boundary associated with Baldonnell Airdrome is close to the southern boundary of the site.

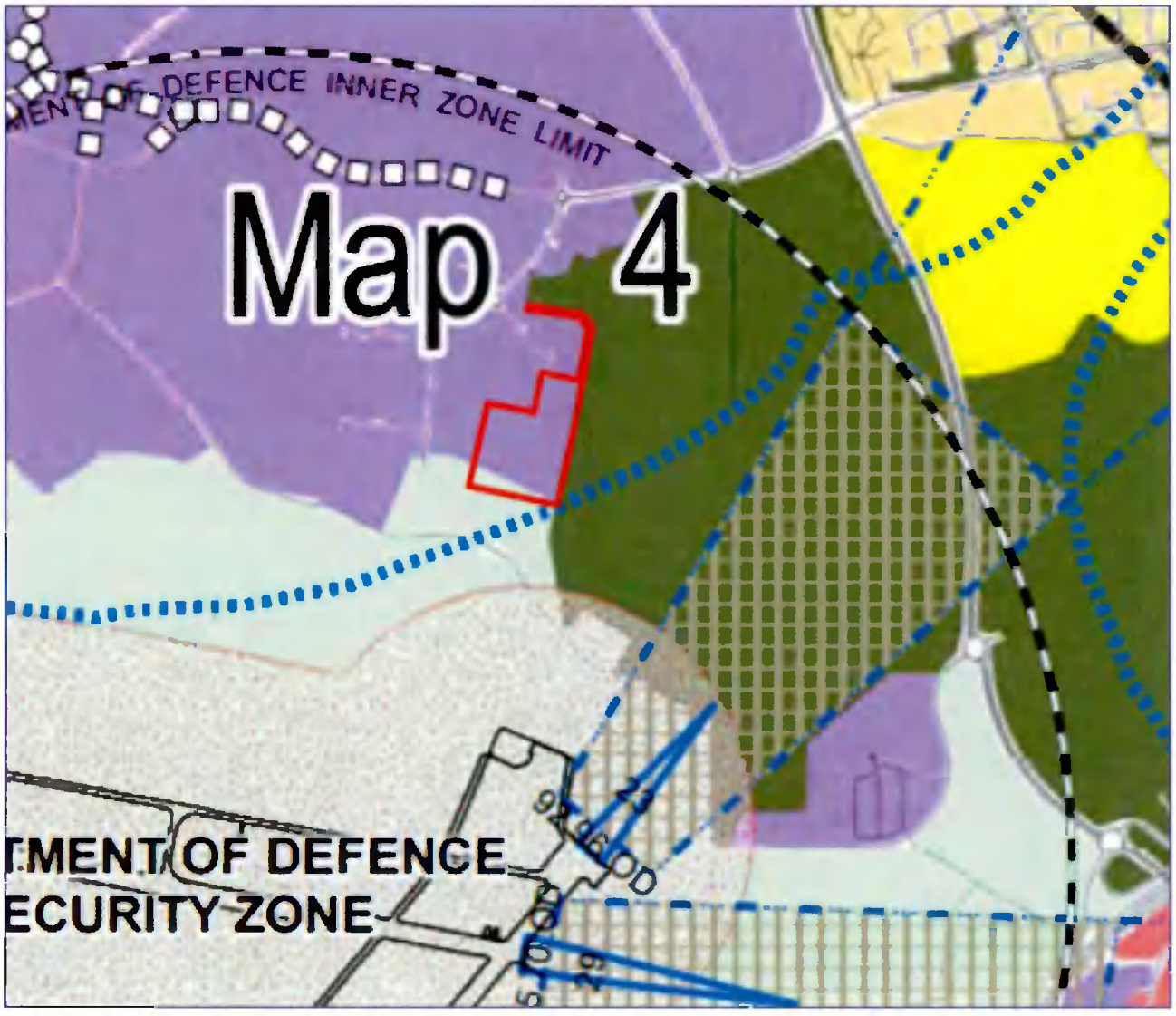

Figure 4: SDCC Index Map

6.1.1 Principle of development in EE zoned land

The proposed data centre and energy generation development relates to a second phase to a permitted data centre facility on this site. All built parts of the proposed development are located on EE zoned land with only planting and ecological works on the RU zoned land to the south.

Economic and Tourism Policy ET Enterprise and Employment (EE) states: *"It is the policy of the Council to support and facilitate enterprise and employment uses (high-tech manufacturing, light industry, research and development, food science and associated uses) in business parks and industrial areas."*

ET3 Objective 2 seeks *"To prioritise high tech manufacturing, research and development and associated uses in the established Business and Technology Cluster to the west of the County (Grange Castle and Citywest areas) to maximise the value of higher order infrastructure and services that are required to support large scale strategic investment."*

ET3 Objective 5 states the following as a Council objective: *"To ensure that all business parks and industrial areas are designed to the highest architectural and landscaping standards and that natural site features, such as watercourses, trees and hedgerows are retained and enhanced as an integral part of the scheme".*

Numerous data centres have been granted planning permission within areas zoned 'EE' which has established a pattern of development in the current policy context. This point was agreed with the Council at pre-application stage. Therefore, the proposed development, in terms of the development within the 'EE'

zoned lands, is acceptable in principle, subject to compliance with the relevant policies, standards and requirements of the current Development Plan.

6.1.2 Principle of development in RU zoned land

The application proposes the development of a site zoned predominantly EE for a data centre and energy generation use. However, a portion of the site to the south is zoned RU. The objective of this land is *"to protect and improve rural amenity and to provide for the development of agriculture"*.

Development on the RU zoned land will comprise only planting, landscaping, and the rerouting of the watercourse on site.

It is considered that the proposed planting will meet the objective for RU zoned and will protect and improve rural amenity.

This point was discussed with planners at pre-application stage and it was accepted that the provision of planting in RU zoned land was acceptable.

6.1.3 General support

Section 7.4.0 of the Development Plan notes that it is Council policy to promote and facilitate the sustainable development of a high quality information and communications technology network throughout the county.

6.2 Design and Visual Impact

The proposed data centre will be circa 20m with some taller elements exceeding this.

Under section 11.2.1 of the Development Plan 2016-2022, a Design Statement, including site analysis and concept plan, is required for all planning applications in relation to commercial proposals greater than 1,000m^2. The total floorspace proposed exceeds this, therefore a Design Statement is provided.

An Architectural Design Statement has been provided by RKD Architects,

The proposed development would involve the construction of two data centres and energy generation. All development would take place within 'EE' zoned lands and the 'RU' zoned lands would be maintained as a buffer and as the route for the rerouted watercourse. The Applicant has aimed to minimise the impacts of the development by screening it from neighbouring lands and public roads. The site is located within the centre of the industrial park and benefits from good natural screening.

Significant screening is proposed to the south which will ensure that the site is screened from the nearby public road.

The external façade finish will comprise powder coated vertical profiled metal cladding panels. Different colour and style panels will provide interest.

The application site is industrial and commercial in nature and there are several examples of modern industrial architecture in the area.

Screening and planting are proposed around the site to soften views to the site and a Landscape and Visual Impact Assessment is provided with any future planning application to assess the impact of the proposals.

It is considered that such a development is appropriate in industrial zoned lands and will be in keeping with the existing development in the area.

6.3 Density

The application site comprises zoned land within an industrial park. One common criticism of data centre developments is that they take up too much land.

The proposed development has been designed to provide a good quantum of development, sustainably on the site, while also ensuring that the amenity of the site is protected.

It is considered that the proposed development comprises a sustainable and efficient use of the site and comprises good planning and sustainable development.

6.4 Residential Amenity

The data centre and ancillary energy generation has the potential to generate noise. The surrounding area is predominantly commercial to the north and west but the land to the south is agricultural with some residential uses and the land to the east is in use as a golf course. The golf tees are a sensitive noise receptor.

The relationship between the proposals and the nearest noise receptors is recognised and a detailed study will be carried out to ensure that the noise generated will be of an acceptable level and will not seriously injure the amenities of nearby occupiers.

The Development Plan notes in section 7.7.0 that *"air quality, light pollution and noise control are primarily covered within air, light and noise control legislation"*. Notwithstanding this, the application is accompanied by the following reports prepared by Arup:

- Noise Impact Assessment, Arup
- MEP & Public Lighting Report, Arup
- Emissions Impact Assessment, Arup
- Part L Report, Arup

Section 11.6.3 of the Development Plan states:

> *"(i) Air Quality*
>
> *In considering development proposals for planning permission the Planning Authority will have regard to the Local Government (Planning and Development) General Policy Directive 1988 (as may be amended) issued by the Minister for the Environment and Local Government relating to air quality standards nationally, and to the Dublin Regional Air Quality Management Plan, Dublin Local Authorities (2009).*
>
> *(ii) Noise*
>
> *The Planning Authority will have regard to the Dublin Agglomeration Environmental Noise Action Plan 2013 – 2018, Dublin Local Authorities (2013) when assessing development proposals along major road and rail transport corridors, with a view to reducing noise from new sources and to identify and protect areas of low sound levels.*
>
> *Development proposals with the potential to give rise to significant noise impacts may require a Noise Impact Assessment and mitigation plan to minimise noise disturbances and protect the amenities of the area.*
>
> *The Planning Authority will carefully consider the location of noise sensitive developments so as to ensure they are protected from major noise sources where practical. Furthermore, the provision of appropriate mitigation measures for existing areas adjacent to major noise sources is supported and will be considered having regard to the visual amenity and the proper planning and sustainable development of the area.*
>
> *Where development sites adjoin residential properties, the Planning Authority will generally attach a condition to grants of planning permission restricting the operation of equipment or machinery (to include pneumatic drills, construction vehicles, generators, etc.) on or adjacent to the site before 7.00 hours on weekdays and 9.00 hours on Saturdays, after 19.00 hours on weekdays and 13.00 hours on Saturdays and at any time on Sundays, Bank Holidays or Public Holidays.*
>
> *(iii) Lighting*
>
> *Development proposals that include external lighting should include details of the external lighting scheme.*
>
> *Lighting should be designed so as to avoid light spillage, the creation of glare or the emission of light above a horizontal plane.*
>
> *External lighting schemes and illuminated signage on commercial and industrial premises, sports grounds, and other community facilities, should be designed, installed and operated so as to prevent nuisance to adjoining occupiers and road users, in the interests of amenity and public safety. A Lighting Plan will be required for developments in sensitive locations".*

6.4.1 Air Quality

The application is accompanied by an Air Quality and Climate Impact Assessment Report by Arup.

The Report concludes that during construction there will be so significant residual impact on local air quality and climate as a result of the proposed development following the implementation of mitigation measures.

During the operational phase, the Report concludes that there will be no significant residual impact on local air quality as a result of the proposed development.

The Report finally concludes that 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 ETS and will reduce over time due to the grid being powered from more sustainable sources.

6.4.2 Noise

The application is accompanied by a Noise Impact Assessment prepared by Arup. This Report assesses the potential for the impact of noise from the proposed development on the nearest noise sensitive locations. These include residential properties which are shown in yellow and Grange Castle Golf Club which are shown in blue.

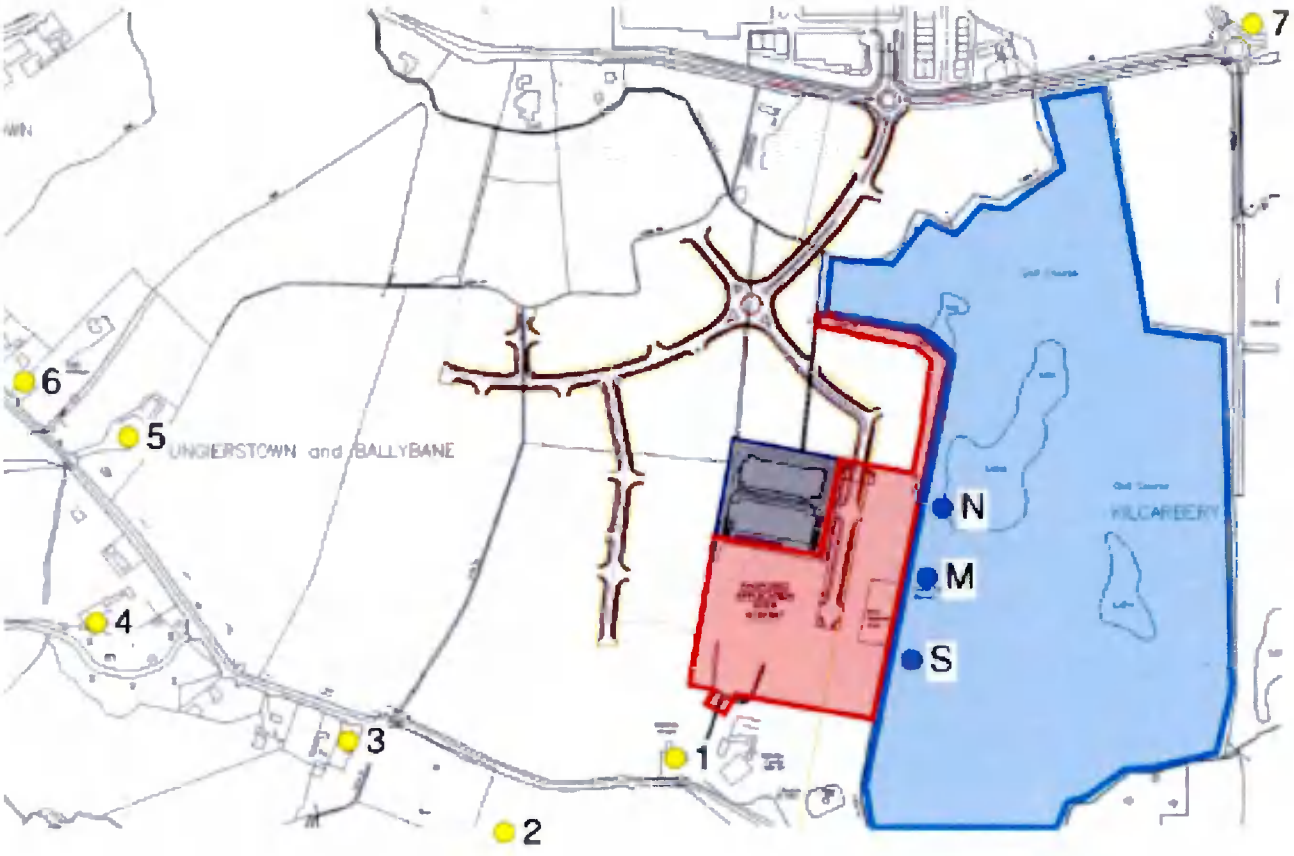

Figure 5: Noise Sensitive Receptors

To better understand the baseline acoustic environment, Arup undertook noise measurements to the south of the Proposed Development, close to the nearest noise sensitive receptor. The measured night-time noise levels were lower than measurements undertaken for other developments in the vicinity and may result in unreasonably low noise limits for the Proposed Development should the baseline be taken into account when determining noise limits.

Noise limits for the Proposed Development are based on the Dublin Agglomeration Action Plan Relating to The Assessment and Management of Environmental Noise, December 2018 – November 2023 (Noise Action Plan) Volume 4 South Dublin County Council (SDCC Noise Action Plan), the recommended internal levels in the South Dublin County Council Noise Control Pre Planning Guidance (SDCC Pre-Planning

Guidance), and the including EPA Office of Environmental Enforcement (OEE) Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4) (EPA NG4). The SDCC Noise Action Plan has been prepared in accordance with the requirements of the Environmental Noise Regulations 2006, Statutory Instrument 140 of 2006. These regulations give effect to the EU Directive 2002/49/EC relating to the assessment and management of environmental noise. Noise limits for other developments in the vicinity of the Proposed Development have been based on measured baseline levels. If noise limits were proposed based on measured baseline levels for the Proposed Development, it would result in unreasonably low night-time noise limits that would not be achievable. For this reason, noise limits that are aligned with the SDCC Noise Action Plan are proposed.

The proposed noise limits are presented in the table below.

Time period	Proposed Limit	Comment
Day/evening 07:00 – 23:00	55 $dBL_{Aeq,1hr}$	Based on limits in EPA NG4, SDCC Noise Action Plan, and existing measured noise levels at NMT1
Night 23:00 – 07:00	40 $dBL_{Aeq,1hr}$	Based on levels in EPA NG4, SDCC Noise Action Plan, the SDCC Pre-Planning Guidance and existing measured noise levels at NMT1
Emergency operations – residential receptors	60 $dBL_{Aeq,1hr}$	Based on guidance in EPA NG4
Emergency operations – amenity receptors	65 $dBL_{Aeq,1hr}$	Based on guidance in EPA NG4

Cumulative noise levels at sensitive receptors are also assessed against the significance criteria outlined in the table below.

Change in Sound Level (dB)	Subjective Reaction	Significance Level
None	No change	No change
<3	Inaudible	Imperceptible
4-5	Perceptible	Slight
6-10	Up to doubling of loudness	Moderate
11-15	Over a doubling of loudness	Significant
>16		Profound

3D noise modelling has been undertaken in SoundPLAN, considering the following scenarios:

- Scenario 1 – normal operation running 24 hours a day, powered by the gas turbines in the energy centre (assessed against night-time noise limits)
- Scenario 2 – emergency operation, powered by diesel generators (assessed against emergency noise limits)
- Scenario 3 – diesel generator testing running only during the day-time period, with only one diesel generator running, and the gas turbines in the energy centre running (assessed against day-time noise limits)

Noise modelling has shown that predicted noise levels will comply with limits at nearby noise sensitive receptors.

There is expected to be a significant impact on one receptor during Scenario 2 (emergency conditions). Emergency conditions are not expected to occur regularly, frequently, or for long periods of time. For this reason, the significant noise impact during emergency conditions is not expected to negatively impact the general acoustic amenity of the receptor.

It is therefore demonstrated that the proposed development will not injure the amenity of nearby residents. However, the imposition of the SDCC standard condition which limits noise based on baseline levels would not be appropriate in this case due to the low background noise levels and it is respectfully requested that this standard condition is not attached to any future permission.

It is further noted below that the site is located within the Department of Defence Inner Zone for Casement Aerodrome. The Noise Significant Area Boundary for Casement Aerodrome is at the south west corner of the site (**Figure 4**). This area has special protection under the Development Plan Policies. In particular, IE8 Objective 6 limits residential development and other land uses impacted by noise such as nursing homes, schools, hospitals and conference centres within this Noise Significant Area Boundary. It is therefore considered that the site is located at the edge of an area which the Council consider inappropriate for noise sensitive development. In terms of noise, it is considered that the proposed development is appropriate.

6.4.3 Illumination

Lighting has been limited to the eastern boundary to protect ecology. A MEP & Lighting Report is enclosed.

6.5 Energy Usage

The application proposes two data centre buildings. In order to ensure that the development can be delivered without impacting on the national grid, a level of gas powered energy generation is proposed on site. Details are set out in Section 4.2 of this Report and the accompanying Reports.

The Applicant is aware of proposals for energy generation to the north of the site (Reg. Ref: SD21A/0167).

The Development Plan states:

> *"It is the policy of the Council to implement the recommendations of the South Dublin Spatial Energy Demand Analysis (SEDA) in conjunction with all relevant stakeholders, promoting energy efficiency and renewable energy measures across the County".*
>
> *"E2 Objective 1: To develop planning policies and objectives in relation to energy planning on a spatial understanding of the existing and future energy demands of the County".*
>
> *"E2 Objective 2: To seek to reduce reliance on fossil fuels in the County by reducing the energy demand of existing buildings, in particular residential dwellings".*
>
> *"E2 Objective 3: To promote the generation and supply of low carbon and renewable energy alternatives, having regard to the opportunities offered by the settlement hierarchy of the County and the built environment".*

The proposed development will be self-sufficient at the outset and will not impact on the national grid. The proposed development is designed to be flexible and can secure power from the grid (including the proposed energy generation proposals to the north) if there is capacity on the grid and if the energy created in the grid is generated more sustainably.

6.6 Waste Heat Recovery

It is the policy of the Council to promote the development of waste heat technologies and the utilisation and sharing of waste heat in new or extended industrial and commercial developments, where the processes associated with the primary operation on site generates waste heat.

The application is designed in a fashion that waste heat can be recovered from the scheme. Should development in the area require heat, there is provision for this to be exported easily.

6.7 Roads

The application proposes a number of internal roads to provide access to the site. These roads have been designed in line with DMURS standards as required by the Development Plan.

Vehicular access will be from the north of the site using the existing road that connects with the nearest roundabout on Profile Park Road. The internal road network will consist of the site entrance road as well as an access leading around the back of both DUB15 and DUB16. There will also be a road between the buildings. Cars will be able to use these roads, but they will be predominantly for deliveries, waste collection and service vehicle access.

Deliveries, waste collection and emergency vehicles will also access the development via the same route. The road that runs to the south of both buildings will be used for deliveries, waste collection and emergency vehicles.

6.8 Car Parking

The application proposes a data centre use with ancillary office and energy generation. The built form comprises warehouse and office use. It is broken down as follows:

- DUB 15: 14,747m² Warehouse and 2,120m² office and ancillary space
- DUB 16: 14,609m² Warehouse and 2,101m² office and ancillary space

71 car parking spaces are proposed. There will be a maximum of 118 employees on site at any one time.

The car parking standards are discussed in section 6.4.4 of the Development Plan. It is an identified action to:

*"Implement **maximum** parking rates for all new development and require further reductions where external factors reduce the need to travel by car (see also Sections 11.4.2 –Car Parking Standards)".*

The following policies are noted:

> *"TM7 Objective 1: To carefully consider the number of parking spaces provided to service the needs of new development".*
>
> *"TM7 Objective 2: To effectively design and manage parking to ensure the efficient turnover of spaces".*
>
> *"TM7 Objective 3: To ensure that car parking does not detract from the comfort and safety of pedestrians and cyclists or the attractiveness of the landscape".*
>
> *"TM7 Objective 4: To make provisions for the use of electric vehicles through a significant increase in the provision of clearly and exclusively designed electric car charging points on public and private land in partnership with ESB and other relevant stakeholders and landholders".*

Car parking standards are set out in section 11.4.2 of the Development Plan. The site is located in Zone 1. The following standards are noted:

- Offices: 1 per 50 sqm GFA

The Development Plan states:

> *"The number of spaces provided for any particular development should not exceed the maximum provision. The maximum provision should not be viewed as a target and a lower rate of parking may be acceptable subject to:*
>
> - *The proximity of the site to public transport and the quality of the transport service it provides. (This should be clearly outlined in a Design Statement submitted with a planning application),*
> - *The proximity of the development to services that fulfil occasional and day to day needs,*
> - *The existence of a robust and achievable Workforce Management or Mobility Management Plan for the development,*
> - *The ability of people to fulfil multiple needs in a single journey,*

- *The levels of car dependency generated by particular uses within the development,*
- *The ability of residents to live in close proximity to the workplace,*
- *Peak hours of demand and the ability to share spaces between different uses,*
- *Uses for which parking rates can be accumulated, and*
- *The ability of the surrounding road network to cater for an increase in traffic.*
- *These criteria should be addressed as part of any Traffic and Transport Assessment and/or Workforce Plan in order to provide full justification for the number of spaces proposed".*

As noted above, the maximum number of employees at any one time is 118. The accompanying Traffic and Transport Assessment & Mobility Management Plan (Arup) concludes in section 3.2 that it is considered appropriate to apply a modal split of 60% car drivers. This would generate a requirement for 71 parking spaces. This quantum is proposed. 19 of the 71 spaces being provided will be provided for within the boundary of the existing campus as these spaces are not currently used as part of the operation of the exiting campus.

Four disabled spaces are proposed: in excess of 5%. 8 EV spaces are also proposed; in excess of the 10% required by section 11.4.3 of the Development Plan.

It is considered that the parking provision proposed on site reflects the proposed use and will accommodate the development without causing overflow parking elsewhere on the site.

6.9 Cycle Parking

The application proposes c. 33,577m^2 of data centre and ancillary use. 13 Sheffield stands are proposed to provide parking for 26 bicycles.

The Development Plan seeks to provide sufficient cycle parking to encourage more sustainable journeys. The Development Plan does not include cycle parking standards for data centres.

A Traffic and Transport Assessment & Mobility Management Plan has been prepared by Arup. Section 3.3 notes that only 118 staff will be employed on site once the development is operational.

Therefore, it is considered appropriate to calculate the cycle parking requirement based on a modal split of staff. Arup recommend a requirement based on 22% of employees. This equates to 26 cycle parking spaces on site. This is provided in the form of 13 Sheffield stands.

Lockers and changing facilities are provided within the buildings.

It is considered that the cycle parking provision is proportionate to the level of employment on site and the provision of cycle parking and associated facilities will encourage employees to make more sustainable transport choices, in line with the Development Plan Policies and Objectives.

6.10 Archaeology and Heritage

The subject site is located to the north of the site of Protected Structure RPS Ref: 184 Kilbride stone Church (Ruin) and Graveyard, ringfort and earthworks. There are a number of Recorded Monuments in the vicinity of the subject site including DU021-004 – a "Castle Site". There are no heritage assets identified on site.

It is the policy of the Council to protect, conserve and enhance natural, built and cultural heritage features, and to support the objectives and actions of the County Heritage Plan.

> *"HCL1 Objective 1: To protect, conserve and enhance natural, built and cultural heritage features and restrict development that would have a significant negative impact on these assets".*
>
> *"HCL1 Objective 2: To support the objectives and actions of the County Heritage Plan, including the preparation of a County Biodiversity Plan".*

It is the policy of the Council to manage development in a manner that protects and conserves the Archaeological Heritage of the County and avoids adverse impacts on sites, monuments, features or objects of significant historical or archaeological interest.

It is the policy of the Council to conserve and protect buildings, structures and sites contained in the Record of Protected Structures and to carefully consider any proposals for development that would affect the special character or appearance of a Protected Structure including its historic curtilage, both directly and indirectly.

6.11 Waste Management

Section 7.5.0 of the Development Plan considers Waste Management. It is the policy of the Council to implement EU, National and Regional waste and related environmental policy, legislation, guidance and codes of practice to improve management of material, resources and waste.

The application is accompanied by a Construction and Demolition Resource Management Plan which considers the waste generated during construction. This Plan assesses the policies, considers the development, and sets out a plan for how the development will achieve and meet the relevant objectives, legislation, policy, and guidance.

6.12 Aviation

Baldonnell (or Casement Aerodrome) is located to the south of the application site. The site is located within the Department of Defence Inner Zone Limit.

Section 7.8.1 of the Development Plan sets out the policies relating to casement Aerodrome. Of relevance:

> *"It is the policy of the Council to safeguard the current and future operational, safety and technical requirements of Casement Aerodrome and to facilitate its ongoing development for military and ancillary uses, such as an aviation museum, within a sustainable development framework".*
>
> *"IE8 Objective 4: To prohibit and restrict development in the environs of Casement Aerodrome in the following ways:*
>
> *a) By prohibiting development within the immediately adjacent approach areas to reduce the slight risk to persons on the ground and the increased risk to occupants of an aircraft in the event of the aircraft accidentally touching down outside the aerodrome boundary while taking off or approaching to land, except where development could not reasonably expect to increase the number of people working or congregating in or at the property (this may include development such as the extension of an existing dwelling or a change of building use). In general, no development shall be permitted within the Public Safety Zones.*
>
> *b) By applying height restrictions to development in the environs of the Aerodrome.*
>
> *c) By eliminating potential sources of interference with the operation of electronic navigation aids.*
>
> *d) By obviating possible hazards to aircraft through the generation of smoke, dust or fumes which may reduce visibility.*
>
> *e) By controlling and assessing the locations of any activities which may be an attraction to birds.*
>
> *f) By limiting the extent, height and type of external lighting to avoid confusing pilots in the interpretation of aeronautical lights or cause dazzle or glare.*
>
> *The extent of the restriction necessary in any particular instance depends on its purpose. In some cases, more than one purpose may have to be served in which case a combination of the restrictions to satisfy all the purposes to be served will be necessary".*
>
> *"IE8 Objective 5: Within the Department of Defence Inner Zone (delineated on Development Plan Index Map), in addition to the Obstacle Limitation Surfaces for the Aerodrome, no buildings or structures exceeding 20m in height above ground level should be permitted except where specifically agreed following consultation with the Department of Defence that the proposed development will not affect the safety, efficiency or regularity of operations at the aerodrome".*

The proposals have been designed with the site's proximity to Casement Aerodrome in mind. The proposals will not impact on the future operational, safety and technical requirements of Casement Aerodrome and will not inhibit its role or development.

The site is not located within the approaches to the runway or within the Public Safety Zones. It will also not interfere with the operation of electronic navigation aids. There will be no smoke, dust or fumes which would impact on visibility. The Lighting Plan submitted proposed modest lighting which will not impact on pilots on approach to the aerodrome.

The proposed data centre buildings are 20m in height; this accords with the limits set in IE8 Objective 5 for development within the Department of Defence Inner Zone.

It is considered that the proposals accord with the Development Plan policies and objective so far as they relate to Casement Aerodrome.

6.13 Landscaping and Green Infrastructure

The application is accompanied by a Tree Protection Strategy and Landscape Design Report prepared by Murray and Associates.

These documents set out the tree protection strategy and landscape strategy for the proposed development to ensure that future development on site will provide usable open space so employees while also providing increased biodiversity vale to the site.

A nature loop walk and pocket park to the south are proposed. Benches along the loop provide a more intimate and contemplative space to escape the workday. Landscape elements are proposed to increase screening. Shrub planting along the building edges and flaking car parking softens and screens the hardstanding. A berm and avenue of trees are proposed along the south to create a visual boundary. The existing green boundary along the east will be enhanced with low level riparian strip planting and wetland trees, biodiversity value and water quality. The Pocket Park is located at the centre of a large, greened area, trying in with the loop walk allowing for maximum use and to take advantage of the aspect of the site.

Central woodland planting creates a sense of enclosure around the seating, to give a 'clearing in the woods' type effect. Feature trees are dotted along the loop walk to add interest and are placed at the centre of the seating zone to create a focal centre point. The feature trees were selected to provide year round interest.

The Landscape design takes advantage of stream on site by providing wetland tree and marginal planting along the boundary of the stream, naturalization of this element increases biodiversity and amenity value. Spending time near water bodies is thought to lower levels of stress and release endorphins, by providing benches at the edge of the water an oasis for workers has been provided.

The design of the landscaping and green infrastructure has been central to the overall design and will provide a pleasant working environment and ecological improvements.

6.14 Water, Drainage and Flood Risk

The application proposes two data centre buildings, associated energy generation and the rerouting of an existing watercourse within the site.

IE3 SLO1 is:

> *"To require the preparation of a site and catchment specific Flood Risk Assessment and Mitigation Strategy, prepared by a qualified person(s), to be submitted with any proposal for development on the 'EE' zoned lands and demonstration that the development satisfies all the criteria of the Development Management Justification Test as set out in Table 2.3 of the document titled 'Strategic Flood Risk Assessment for SDCC Development Plan - Detailed Report on Flood Risk in the Baldonnell Area'*

Arup was commissioned to undertake a Flood Risk Assessment (FRA); this is submitted in support of the planning application. The purpose of the study is to identify and quantify the risk of flooding to the proposed development and identify measures, if required, to mitigate the risk to site. The FRA was undertaken in accordance with 'The Planning System and Flood Risk Management' Guidelines for Planning Authorities

published in November 2009, jointly by the Office of Public Works (OPW) and the then Department of Environment, Heritage and Local Government (DEHLG).

In order to assess the flood risk to the site, a 1D unsteady hydraulic model of the minor watercourse that flows through site was developed in order to determine design water levels for both the existing and proposed scenarios. The results of the modelling have demonstrated that water does not get out of bank within the site for the existing scenario. The risk of fluvial flooding risk to the site is therefore very low.

The results of the model have also indicated when conveyance improvements are considered as part of the proposed diversion channel, water is also kept within bank. Flood risk to the site in the proposed scenario is also therefore very low. The results of the hydraulic modelling have also clearly indicated that flood risk downstream of the site is not increased with the proposed development in place.

The risk of pluvial flooding to the site is very low. The risk of ground water flooding is also very low.

It is proposed to adopt a conservative approach and set the FFL of the Dub 15 data centre at 76.85mOD which is 0.55m higher than the recommended flood defence level. It is proposed to set the FFL of the Dub 16 data centre to 77.84mOD which is 1.54m higher than the recommended level. It is also proposed to set the FFL of the energy centre to 76.5mOD which is 1.4m higher than the recommended level.

Access and egress routes are very unlikely to be compromised during flood events. Conveyance and floodplain storage will not be impacted by the proposed development given the low flood risk to the site.

The subject site is outside the 1000-year fluvial flood extent and is therefore classified as being within Flood Zone C. A Justification Test for the development is therefore not required and it is necessary only to identify mitigation measures for any residual flood risk which has been described in this Report.

It is therefore considered that the proposals are acceptable in terms of flood risk.

6.15 Ecology and Biodiversity

The application proposes two data centre buildings, associated energy generation and the rerouting of an existing watercourse within the site.

The existing watercourse was created following permission granted under Reg. Ref: SD11A/0023.

The watercourse to the east of the site will create an improved area of biodiversity to the east of the site while the planted area to the south of the site will create an east to west area of biodiversity to the south of the site.

IE2 Objective 9 is: *"To protect water bodies and watercourses, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains, within the County from inappropriate development. This will include protective buffers in riverine and wetland areas as appropriate (see also Objective G3 Objective 2 – Biodiversity Protection Zone)".*

Section 8 of the Development Plan relates to Biodiversity. *"It is the policy of the Council to protect, enhance and further develop a multifunctional Green Infrastructure network by building an interconnected network of parks, open spaces, hedgerows, grasslands, protected areas, and rivers and streams that provide a shared space for amenity and recreation, biodiversity protection, flood management and adaptation to climate change".*

> *"G1 Objective 1: To establish a coherent, integrated and evolving Green Infrastructure network across South Dublin County with parks, open spaces, hedgerows, grasslands, protected areas, and rivers and streams forming the strategic links and to integrate the objectives of the Green Infrastructure Strategy throughout all relevant Council plans, such as Local Area Plans and other approved plans".*
>
> *"G1 Objective 2: To prepare and implement a South Dublin County Green Infrastructure Strategy during the lifetime of this plan that will form the basis for the identification, protection, enhancement and management of the Green Infrastructure network within the County".*
>
> *"G2 Objective 1: To reduce fragmentation of the Green Infrastructure network and strengthen ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional Green Infrastructure network".*
>
> *"G2 Objective 2: To protect and enhance the biodiversity value and ecological function of the Green Infrastructure network".*

"G2 Objective 3: To restrict development that would fragment or prejudice the Green Infrastructure network".

"G2 Objective 4: To repair habitat fragmentation and provide for regeneration of flora and fauna where weaknesses are identified in the network".

"G2 Objective 5: To integrate Green Infrastructure as an essential component of all new developments".

With regard to watercourses, the following is of note:

"It is the policy of the Council to promote the natural, historical and amenity value of the County's watercourses; to address the long term management and protection of these corridors and to strengthen links at a regional level".

"G3 Objective 1: To promote the natural, historical and amenity value of the County's watercourses and address the long term management and protection of these corridors in the South Dublin Green Infrastructure Strategy".

"G3 Objective 2: To maintain a biodiversity protection zone of not less than 10 metres from the top of the bank of all watercourses in the County, with the full extent of the protection zone to be determined on a case by case basis by the Planning Authority, based on site specific characteristics and sensitivities. Strategic Green Routes and Trails identified in the South Dublin Tourism Strategy, 2015; the Greater Dublin Area Strategic Cycle Network; and other government plans or programmes will be open for consideration within the biodiversity protection zone, subject to appropriate safeguards and assessments, as these routes increase the accessibility of the Green Infrastructure network".

"G3 Objective 3: To ensure the protection, improvement or restoration of riverine floodplains and to promote strategic measures to accommodate flooding at appropriate locations, to protect ground and surface water quality and build resilience to climate change".

"G3 Objective 4: To uncover existing culverts and restore the watercourse to acceptable ecological standards and for the passage of fish, where possible".

"G3 Objective 5: To restrict the encroachment of development on watercourses, and provide for protection measures to watercourses and their banks, including but not limited to: the prevention of pollution of the watercourse, the protection of the river bank from erosion, the retention and/or provision of wildlife corridors and the protection from light spill in sensitive locations, including during construction of permitted development".

The application is accompanied by a detailed Ecological Impact Assessment which fully sets out the ecological implications of the proposed development. Based on the findings of a detailed desk-based study, a review of all the ecological information available for the site and wider area and a field survey by Malone O'Regan Ecologists, the Ecological Impact Assessment concludes as follows:

- The site itself is currently of low local ecological value;
- The site is located in an area predominantly made up of improved agricultural grassland, recolonising species and spoil and bare ground and is zoned under objective EE which aims to 'provide for enterprise and employment related uses'. It is not of value to any Annex I or Annex II species or Red listed birds;
- The bat surveys did not identify any bats roosting on-site;
- The proposed development will not result in any significant impacts on ecological receptors identified both on-site and in the surrounding area following the implementation of appropriate mitigation measures;
- The re-routing of the Baldonnell Stream has the potential to significantly improve the health of the watercourse and subsequently biodiversity of the area; and
- The proposed additional landscaping and protected species enhancement measures will supplement the existing treeline on-site in the longer term and provide additional habitats for species already existing within the area.

6.16 Natura Impact Statement

The application proposes a significant development. The potential impact on European sites has been carefully considered. A Natura Impact Statement (NIS) has been carried out by Malone O'Regan.

> *"It is the policy of the Council to support the conservation and improvement of Natura 2000 Sites and to protect the Natura 2000 network from any plans and projects that are likely to have a significant effect on the coherence or integrity of a Natura 2000 Site".*
>
> *"HCL12 Objective 1: To prevent development that would adversely affect the integrity of any Natura 2000 site located within and immediately adjacent to the County and promote favourable conservation status of habitats and protected species including those listed under the Birds Directive, the Wildlife Acts and the Habitats Directive".*
>
> *"HCL12 Objective 2: To ensure that projects that give rise to significant direct, indirect or secondary impacts on Natura 2000 sites, either individually or in combination with other plans or projects, will not be permitted unless the following is robustly demonstrated in accordance with Article 6(4) of the Habitats Directive and S.177AA of the Planning and Development Act (2000 – 2010) or any superseding legislation:*
>
> *1. There are no less damaging alternative solutions available; and*
>
> *2. There are imperative reasons of overriding public interest (as defined in the Habitats Directive) requiring the project to proceed; and*
>
> *3. Adequate compensatory measures have been identified that can be put in place".*
>
> *"It is the policy of the Council to protect the ecological, visual, recreational, environmental and amenity value of the County's proposed Natural Heritage Areas and associated habitats".*
>
> *"HCL13 Objective 1: To ensure that any proposal for development within or adjacent to a proposed Natural Heritage Area (pNHA) is designed and sited to minimise its impact on the biodiversity, ecological, geological and landscape value of the pNHA particularly plant and animal species listed under the Wildlife Acts and the Habitats and Birds Directive including their habitats".*
>
> *"HCL13 Objective 2: To restrict development within a proposed Natural Heritage Area to development that is directly related to the area's amenity potential subject to the protection and enhancement of natural heritage and visual amenities including biodiversity and landscapes".*

A detailed assessment of the layout and nature of the proposed development, the construction methods to be employed and the overall activities that will occur at the site during construction and operation has been carried out and the potential for adverse effects on Natura 2000 sites and qualifying features of interest within a 15km radius of the site has been examined in detail by Malone O'Regan and included in the Natura Impact Statement which accompanies this application. It concludes:

> *"The site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of four SACs and three SPAs are located within 15km of the site.*
>
> *Six further sites were screened out given the lack of impact pathways and the distance separating the site from the Natura 2000 sites.*
>
> *The application site is hydrologically connected to the South Dublin Bay and River Tolka Estuary SPA (within 15km of the site) and the South Dublin Bay SAC (which is c. 15.3km from the site) via the Baldonnell Stream which discharges into the Griffeen River, the River Liffey and eventually drains into Dublin Bay. North Dublin Bay SAC and North Bull Island SPA also form part of Dublin Bay and are located c. 19km northeast of the site.*
>
> *However, South Dublin Bay SAC, North Dublin Bay SAC and the North Bull Island SPA were screened out due to the presence of the Great South Wall and the North Bull Wall which separate any water discharging into Dublin Port from the respective Natura Sites.*
>
> *Of the Natural 2000 sites identified within a 15km radius, the South Dublin Bay and River Tolka Estuary SPA was taken forward for further detailed consideration due to its hydrological connection to the site and its position to the west of the breakwaters mentioned above It is considered reasonable to conclude that the proposed development will not result in any*

adverse effects on the basis that all recommended specific mitigation measures will be implemented. Specifically, the proposed construction works and stream diversion works will be undertaken to avoid impairment of water quality.

In terms of any significance with regard to adverse effects on Natura 2000 sites, the NPWS Guidance (2009) uses an EC definition as follows:

'Any element of a plan or project that has the potential to affect the conservation objectives of a Natural 2000 Site, including its structure and function, should be considered significant (EC, 2006)'.

It can be concluded that the proposed development and all associated Site works, alone or in combination with other projects, will not adversely affect the integrity, and conservation status of any of the qualifying interests of the South Dublin Bay and River Tolka Estuary SPA or any other Natura 2000 sites.

Accordingly, progression to Stage 3 of the Appropriate Assessment process (i.e., Assessment of Alternative Solutions) is not considered necessary".

6.17 EIA Screening

Section 11.8.1 of the Development Plan notes that the Planning and Development Regulations 2001 specify mandatory thresholds above which EIARs are required. The development is not of a scale that would require an EIAR when assessed under the thresholds set out in Schedule 5 of the Planning and Development Regulations 2001 (as amended).

This matter was raised with the Council in our pre-application submission.

However, the importance of undertaking various individual studies to assess the impact of the proposals on the environment was noted. We therefore have provided a comprehensive suite of documents to support the submission as well as an EIA Screening Report prepared by Malone O'Regan.

This Report concludes:

"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 CONCLUSION

RPS is instructed by Digital Netherlands VII B.V. (Netherlands) to submit this planning application for a data centre development at Profile Park, Nangor Road, Clondalkin, Dublin 22.

The application site comprises a brownfield site located within an existing business park. Planning permission was granted previously for a development of the site which was partially constructed. This application seeks to develop the remainder of the site.

The development will consist of:

> *"10 year permission for the following development: Removal of an existing unused waste water treatment facility on site and the erection of two data centre buildings, gas powered energy generation compound, and all other associated ancillary buildings and works. The two data centre buildings, DUB 15 and DUB 16, will comprise a total floor area of c. 33,577m² over two storeys. The first 2 storey data centre building (DUB15), located to the south west of the site, will comprise 16,865m² data storage use, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. A second 2 storey data centre building (DUB16), located to the south east of the site, will comprise 16,712m² data storage areas, ancillary office use and associated electrical and mechanical plant rooms, loading bays, maintenance and storage space. 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 north east corner of the site to provide electricity for the proposed development. The application proposes to re-route and widen an existing watercourse constructed following an earlier planning permission. It is proposed to reroute this watercourse along the eastern and southern boundary of the site. Landscaping is proposed to the south of the site to screen the buildings. Fencing and security gates are proposed around the site. New access roads within the site are proposed along with 71 car parking spaces and 26 cycle spaces, bin stores, site lighting, and all associated works including underground foul and storm water drainage attenuation and utility cables and all other ancillary works. A Natura Impact Statement will be submitted to the planning authority with the application".*

The application site is located on brownfield land at Profile Park, to the west of Clondalkin. The site is zoned for Enterprise and Employment and the surrounding business park has become a cluster for similar technology based uses.

Planning permission was granted in June 2011 for the development of a data centre development on part of the site. However, only two buildings of four were constructed. This permission has now expired. This application seeks to develop the remainder of the site for data centre use with an element of energy generation to the north east. A full description of the proposed development is set out in Section 4 of this Report.

In terms of power requirement, initial energy generation will take place on site so as to not impact on the national grid. It is the Applicant's intention for a long term grid connection to be established to serve the Data Centres more sustainably. This strategy takes into account the proposals for energy generation to the north of the site, but is not reliant on it.

Data Centres are required as IT systems turn to using more remote and cloud based data storage. They allow easy access to data for personal and business users and permit less reliance on personal and business data storage. This has become more important as the world has turned towards home and remote working and as our personal devices move towards storage of data within the cloud rather than on the device. It is vital for these data centres to be located around the world as this provides more security and an even distribution of data. They comprise a vital part of IT infrastructure required for Ireland to attract investment and jobs.

As set out in Section 5 of this Report, national, regional and local policies are supportive of data centre uses. National Strategic Outcome 6 sets as an objective the *"prometon of Ireland as a sustainable designation for ICT infrastructure* ***such as data centres*** *and economic activities"*. National Strategic Outcome 5 states: *"Ireland is very attractive in terms of international digital connectivity, climatic factors and current and future renewable energy sources for the development of international digital infrastructures,* ***such as data storage facilities.*** *This sector underpins Ireland's international position as a location for ICT and creates added*

benefits in relation to establishing a threshold" of demand for sustained development of renewable energy sources". Similar supportive policies and objectives are found in the RSES in RPO 8.25 which states as an objective: *"Support the national objective to promote Ireland as a sustainable international destination for ICT infrastructures* ***such as data storage facilities*** *and associated economic activities at appropriate locations".* The Development Plan reflects the national and regional guidance.

The application proposes a data centre use on EE zoned lands. Several data centres have been permitted on EE zoned land which has established a pattern of development in the current policy context. It is considered that the proposed development accords with the Development Plan and is acceptable in principle. Part of the site, to the south, is located on land zoned RU. However, this area is used entirely for planting, screening and ecological improvements. This is considered to be in keeping with the objective for agricultural zoning which is to protect and improve rural amenity and to provide for the development of agriculture.

The data centre is commercial in appearance and reaches 20m with some elements taller elements. The application is accompanied by an Architectural Design Statement, and a set of photomontages which assess the development from a number of points agreed with the Planners at pre-application stage. It is considered that the scale and design of development is appropriate for the proposed use. The development has been designed to ensure that the site is used as sustainably as possible without harming surrounding amenity.

The application is accompanied by a range of supporting reports which demonstrate compliance with Development Plan policies. In terms of air quality: during construction there will be no significant impact on local air quality and climate. During the operational phase, it is demonstrated that the proposed development will not have a significant residual impact on local air quality.

A Noise Impact Assessment was carried out to assess the proposed development. It noted very low background noise. But notwithstanding this, the proposed noise levels will not injure the amenity of nearby residents. It is noted that SDCC's usual condition limiting noise to a level above base level is not appropriate in this case due to very low background noise levels.

Details of the energy generation strategy for the site are set out in Section 4 and 6.5 of this Report. In summary, energy generation is initially proposed on site which will ensure no impact on the national grid. Future phases will connect to the grid. This will provide more sustainable energy as Ireland moves towards more non-carbon based energy generation. The energy generation is equipped for waste heat recovery should it be required in the nearby area.

All roads within the site are designed to DMURs standards. Engineering drawings from Arup demonstrate the roads are of a sufficient standard. The proposed level of car parking has been calculated to match the operational requirement. It does not exceed relevant maximum standards. Safe and secure cycle parking is proposed.

Archaeology and Heritage have been considered to ensure that the proposed development will not have any impact on heritage assets.

The site is located to the north of Casement Aerodrome. The proposed buildings do not exceed 20m as required by IE8 Objective 4 for development within the Department of Defence Inner Zone. The proposal accords with the Development Plan policies so far as they relate to Casement Aerodrome.

Landscaping on site has been carefully considered to both create an amenity for employees, and increase biodiversity.

The application seeks to reroute a watercourse which runs through the site and widen this watercourse to the north of the site. This will serve to reduce the risk of flooding and increase biodiversity throughout the site.

An Ecological Impact Assessment is provided which ensures that the proposals' impact on Ecology is considered. It concluded that the site is of low ecological value, and not of any value to Annex I or Annex II species or Red listed birds. Surveys did not find evidence of bats on site. It concludes that the proposed development will not result in any significant impacts on ecological receptors identified both onsite and in the surrounding area following the implementation of appropriate mitigation measures. It noted that the re-routing of the Baldonnell Stream has the potential to significantly improve the health of the watercourse and subsequently biodiversity of the area. The proposed additional landscaping and protected species enhancement measures will supplement the existing treeline on-site in the longer term and provide additional habitats for species already existing within the area.

A Natural Impact Statement has been produced which concludes that the proposed development and all associated site works, alone or in combination with other projects, will not adversely affect the integrity, and conservation status of any of the qualifying interests of the South Dublin Bay and River Tolka Estuary SPA or any other Natura 2000 sites.

An EIA Screening exercise was carried out to ensure that the proposed development would not require an EIAR.

A 10 year permission is required as the delivery of the data centres over this period would allow more flexibility, particularly where energy supply may restrict delivery.

As set out above, the application comprises a much needed data centre use. The proposals have been carefully developed and it is considered that they accord with the relevant national, regional and local policies and comprise good planning and a sustainable development of this site. It is respectfully requested that planning permission is granted.