Planning Application Report

Proposed On-Site Power Generation & Modifications to development permitted Under SDCC Reg. Ref. SD21A/0186

Site at Plot 100,
Profile Park,
Nangor Road,
Clondalkin,
Dublin 22

On behalf of
Equinix (Ireland) Ltd.

May 2022

Brock McClure

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1 Introduction

We, Brock McClure Planning & Development Consultants, 63 York Road, Dún Laoghaire, Co. Dublin, have prepared this Planning Application Report on behalf of Equinix (Ireland) Ltd, Unit 7 Kilcarbery Park, New Nangor Road, Dublin 22 for a proposed modifications works to the permitted data centre and provision of an on-site power generation compound (OSPG) at Plot 100, Profile Park, Dublin 22.

We confirm that the applicant is the owner of the subject site.
This application report is intended to specify the rationale behind the subject proposal; to identify compliance with relevant statutory documentation; and to provide a detailed description of the proposal for the benefit of the Planning Authority.

We wish to highlight from the outset, that our client is committed to working with the Planning Authority to deliver a proposal that is appropriate to the site and the surrounding development.

This application is for on-site power to serve the permitted Data Centre which was granted by the Planning Authority on 5 May 2022.

We now request that the Planning Authority review the content of the application package and consider the proposal on its merits.

1.1 Equinix (Ireland) Ltd.

The applicant is an experienced provider of data centre services, operating over 175 centres in 44 locations across the world. Equinix has implemented various renewable energy technologies and sustainability practices on its data centre platform. In 2015, the company made a long-term pledge to power all its data centre sites with clean and renewable energy. By 2016, 56% renewable energy coverage was achieved, and the company remains on target to achieve renewable goals.

In Ireland, Equinix operates data centres in Northwest Business Park (2no.), Citywest, Blanchardstown and Kilcarbery Park, (proximate to the subject site shown in Figure 1 below).
Equinix Ireland Limited is an experienced provider of data centre services, operating over 175 centres in 44 locations across the world. In Ireland, Equinix operates data centres in Northwest Business Park (2no.), Blanchardstown, Citywest and Kilcarbery Business Park, the latter being hubs for 175+ companies.

The Equinix Dublin metro International Business ExchangeTM (IBX®) data centres consist of four buildings with approximately 130,000 square feet (12,000+ square meters) of colocation space. The Dublin colocation facilities enable customers to be part of a highly connected digital ecosystem, including INEX, the Irish Internet exchange. Hundreds of technology companies have moved to set up a base in Dublin over the last two decades, attracted by its business-friendly environment. This has enabled the city to become a leading player in the global technology sector. The four sites in Dublin have become the gateway to the United States as U.S- based content companies must host EU customer data within Europe.

Equinix has implemented various renewable energy technologies and sustainability practices on its data centre platform. In 2015, the company made a long-term pledge to power all its data centre sites with clean and renewable energy. Equinix recently announced their Science Based Targets (SBT) as a metric for measuring their Global carbon footprint in line with Paris Climate Agreement. It is a target to be carbon neutral across their global footprint in the next ten years by 2030. This aligns with their signing up to the Climate Neutral Data Centre Pact (European initiative) in March 2021, and aligns with a broader EU goal for Climate action under the European Green deal and Europe fit for the digital age.

Having regard to the Applicant's involvement in the area and extensive knowledge within the sector, it is evident that they are committed to the delivery of the highest quality ICT infrastructure in Profile Park.
We confirm that the applicant is now the owner of the subject site.

1.2 Design Team

The scheme now before the Planning Authority has evolved following an input from the following design team:

- *Brock McClure (Planning and Development Consultants)*
- *RKD Architects(Project Architects)*
- *Pinnacle Consulting Engineers (Civil and Transport Engineers)*
- *Murray and Associates (Landscape Architects)*
- *Malone O'Regan Environmental (Environmental and Ecology Specialists)*
- *AWN Consulting (Environmental and Ecology Specialists)*
- *RED (Energy and Lighting Specialists)*
- *Reliqua Ltd. (Archaeologists)*

The various inputs from the design team are referenced where relevant within this report. For clarity purposes, we confirm that the following reports are included herewith to enable the Planning Authority make a comprehensive assessment of the scheme:

- Cover Letter (Brock McClure)
- Planning Application Form (Brock McClure)
- Site and Newspaper Notices (Brock McClure)
- Planning Application Report (Brock McClure)
- Architect's Drawings and Register (RKD Architects)
- Architect's Design Statement including 3D views (RKD Architects)
- Civil and Drainage Drawings including Register (Pinnacle)
- Engineering Report (Pinnacle)
- Landscape Drawings and Report (Murray and Associates)
- Arboricultural Assessment (Murray and Associates)
- Ecological Impact Assessment (Malone O'Regan)
- Natura Impact Statement (Malone O'Regan)
- Construction Environmental Management Plan (Malone O'Regan)
- Environmental Screening Statement (Malone O'Regan)
- Noise Assessment (AWN)
- Air Quality Assessment (AWN)
- Lighting Drawings and Design Report (RED)
- Archaeological Report (Reliqua)

2 Compliance with Planning Regulations

We confirm that prior to lodging this planning application, all relevant drawings were screened by this office with reference to the *Planning & Development Regulations, 2001 (as amended)* and are consistent with the spirit and intent of same.

In accordance with Article 19(1) and 19(2), the Site Notices have been printed on indelible ink on a white background and erected at conspicuous locations at entrances on and near public roads relating to the subject site.

In accordance with article 22(2)(b) and (d) this planning application is accompanied by a copy of the newspaper notice and the site notice.

In accordance with article 22(2)(b) and (d) this planning application is accompanied by 6 no. copies of a location map of sufficient size, prepared by RKD Architects, and clearly identifies, at a scale of 1:2,500 the lands which are the subject of this application outlined in red, adjoining lands in the control of the Applicant in blue and wayleaves in yellow. The approximate location of the 3 no. site notices erected are identified on the Site Location Map.

In accordance with article 22(2)(h) the appropriate fee payable to the Planning Authority with respect to this planning application is calculated at the end of this Report. Please note that the payment has been made by electronic transfer and cheque.

In accordance with article 23(1)(a) and (c) the lands which are the subject of this application are outlined in red on the enclosed Site Layout Plan at 1:500 scale by RKD Architects. Other features located on, adjoining or in the vicinity of the subject site are shown. The levels/contours of the site are also indicated on the Site Layout Plan.

In accordance with Article 23(1)(b), other plans, elevations and sections are shown at a scale not less than 1:200, where appropriate.

In accordance with article 23(1)(f) plans and drawings of elevations and sections indicate in figures the principal dimensions (including overall height) of any proposed structure.

In accordance with article 23(1)(g) all OS mapping is appropriately identified.

In accordance with article 23(1)(h) the north point is indicated on all relevant maps and plans.

As agreed with Michelle Dodrill, SDCC on the 25 May 2022 (by phone), 6 no. copies of the application are submitted including 1 no. soft copy of the Natura Impact Statement.

3 Site Context

3.1 Subject Site

The corner site is located at the entrance to Profile Park Business Park immediately bounded to the north by the Nangor Road and to the west by Profile Business Park access road, known as Falcon Avenue. The lands to the east are zoned open space in the form of Grange Castle Golf Club. The subject site area is c.2.65ha.

There are no distinguishable features on site save for the hedgerow and ditch separating the site from Grange Castle Golf Club lands, which will be retained and reinforced as part of the proposal. The site is largely greenfield in nature with some hardcore and bare ground in areas.

Access to the site is provided to the west from Falcon Avenue with a secondary (unused) entrance located further south on the estate road. A splayed entrance is provided to the north on Nangor Road. Access via this northern entrance is prohibited due to the presence of a high metal railing surrounding the northern site perimeter.

An ESB wayleave and SDCC Watermain wayleave are located to the north and west of the site running parallel with Falcon Avenue and Nangor Road. No above ground structures are proposed at these locations.

The pattern of development in the vicinity comprises light industrial and office buildings. The use mix ranges from data centre use to pharmaceuticals and food manufacturing.

The nearest residential dwelling is located adjacent to the Circle K Filling Station c.50m from the site. Two detached units to the west of the site are either vacant/derelict and or planned for demolition. There are some residential areas to the east at Oldcastle Drive, including traveller accommodation c.600m distant. Casement Aerodrome is located c.800m south of the subject site. The site is approximately 5km west of the M50. There is a QBC route on the Nangor Road and Profile Park provides feeder bus services to connecting public transport options including LUAS.

The site has the benefit of permission for a data centre under Application Ref. SD21A/0186.

Figure 1 - Aerial Photo of Site outlined in Red

4 Pre-Planning Consultation

The proposal was subject of pre-planning (email correspondence) between Colm Harte, South Dublin County Council and Brock McClure Planning and Development Consultants on the 13 May 2022. No pre-planning reference was provided with the Planning Authority's feedback.

Pre-Planning Commentary	
Key Points	**Applicant Comment**
Proposal consists of: 1. Gas power generator	-
Key planning points:	
2. Applicant should set out whether the proposal is a 'Public Service' and how / if it will connect to the grid in the future. Any links to the permitted development, i.e. the data centre should be set out.	ESB have confirmed to the Client that it would be 6-8 years before the development would be considered for connection to the grid. The Client has decided to proceed with a proposal to provide On Site Power Generation (OSPG) Plant without a grid connection. It can therefore be assumed that this proposal is not a 'Public Service' until such time that ESB can confirm terms and conditions for a grid connection. The OSPG will operate Off-Grid, and will supply primary power to the permitted data centre development. The proposal is for Private facility and there is a future space at the entrance to the site for 2 x Ring Main Units to enable a future permanent grid connection. Furthermore, on the 11000V switchgear there will be 2 no 11000V Circuit Breakers c/w electrically interlocked to prevent both devices being closed at the same time. 1 no Circuit Breaker allows OSPG power supply connectivity, the other shall be used when grid power is available.
3. Applicant should be aware and make comment on the following guidance in their submission: - The Commission for Regulation of Utilities recently published *'CRU Direction to the System Operators*	**Dispatchable Generation** No grid connection is proposed as part of the application. The OSPG will be powered by natural gas supplied by Gas Networks Ireland.

related to Data Centre grid connection processing', on the 23rd of November 2021, a decision regarding the connection policy for data centres in Ireland, outlining an approach to connection applications that will now include assessment criteria encompassing location and the ability to contribute to security of supply. - Circular PL 12/2021 Government Policy Statement on Security of Electricity Supply was published. This circular states that applications for electricity related infrastructure should be considered having regard to a new Policy Statement of Security of Electricity Supply. - Climate Action Plan 2021 published the 4th of November 2021. Indicates that the government will review its strategy on data centres to ensure these align with sectoral emissions ceilings and renewable energy targets.	The proposed OSPG is designed for off-grid operation and is therefore sized to continuously serve the entire load of the data centre. Should the Client receive a proposal from ESB for a grid connection, with operating terms and conditions, then the plant could be designed with a view to storing energy or exporting power to the ESB network. The proposed OSPG solution comprises a total of 10 no 1.3MW generators that shall be installed in an N+1 configuration, 5 no Low Pressure Powered Generators shall be installed during the first phase, with an additional 5 installed in phase 2. The OSPG plant has been configured in an N+1 configuration to ensure security of the OSPG generated power supply. Gas is seen as a transitional fuel source as we move to more renewable solutions over the coming decades. In addition to the above, the proposed modification application reduces the number of fuel tanks serving the back-up generators in the data centre building, minimising reliance on diesel fuel. The proposal has been carefully considered having regard to government guidance and policy including the Climate Action Plan 2021.
4. The following details would be required: - Details of renewable sources investigates as part of the proposal - Details of site servicing for energy and gas and details of relevant connection agreements	The options of renewable resources have been investigated and the only available option was to run the OSPG plant on a low pressure, natural gas supply provided by Gas Networks Ireland. Other fuel sources such as hydrotreated vegetable oil were considered but due to limited space availability on the site it is not possible to store the large volumes of fuel that would be required to run the OSPG plant.

- Details of any flues	We can confirm that a connection agreement for the supply of gas on site has been reached between the Applicant and Gas Networks Ireland, prior to lodgement. *Gas Networks Ireland (GNI) have confirmed that the permitted development will receive a 45MW Connection @400mbar.* *This low pressure gas supply will be served through two streams:* **Stream A:** **Outlet set pressure = 400mbar.** **Relief set pressure = 592mbar.** **Slamshut set pressure = 643mbar** **Stream B:** **Outlet set pressure = 360mbar.** **Relief set pressure = 592mbar.** **Slamshut set pressure = 693mbar** Details of flues serving the OSPG are shown in the accompanying drawings prepared by RKD Architects.
5. The redline for the proposal should include all areas that would be impacted by the development and not just the building footprint	Noted, the red line encompasses the overall development site and corresponds to the Site Location Map/Layout Plan submitted with parent permission Ref. SD21A/0186. All works relating to the modifications of the data centre buildings and the OSPG are highlighted and annotated for ease of reference.
6. Significant Green Infrastructure / SuDS and biodiversity enhancements should be provided across the development – applicant should refer to SDCC SuDS guidance.	The OSPG covers a site area of 2604m². The runoff generated from this area and surface water storage requirements have already been included in the site attenuation pond and overall drainage scheme of the site, as granted under Planning Reg. Ref.SD21A/0186. Thus, no additional attenuation storage elements are required for the proposed OSPG development, in order to meet the GDSDS requirements. The OSPG will drain by pipes, gulley's and channels towards the central pond where storage capacity for a 1:100yr storm event + 20% climate change has already been catered for. The central pond provides a storage volume of circa 756m³ and is adequately sized to cater for this development, particularly as this area was considered as being 100% hardstanding under the aforementioned granted application and now, as can be seen, this area consists largely of concrete plinths and gravel type surfaces - refer to Dwg. No.'s DB080-PIN-00-ZZ-DR-C-PLAN-1207 Rev. P04 & DB080-PIN-00-ZZ-DR-C-PLAN-1295 Rev. P04. The overall site QBar is 3.9l/s and the total site surface water drainage will be restricted to this discharge rate. Please also refer to the CFI Response letter dated 24 February 2022, as attached in Appendix A, which describes the overall sites hydraulic, drainage, SUDS features and storage requirements.

7. Applicant should detail any impact on natural features, e.g. trees, ditches.	All significant landscaping works are permitted under the parent permission. We refer to the Tree Protection Strategy prepared by Murray and Associates for more information. The Applicant is committed to protection and maintenance of existing natural site features including trees and ditches. We invite a suitably worded condition relating to same.
8. Applicant should consider if the proposal would consider in EIAR	Based on the findings of this EIA screening assessment prepared by Malone O'Regan submitted with this application, 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.
9. Applicant should set out if any SID would be required to connect the proposal to the grid.	No grid connection is being proposed and no element of the application is considered SID.
10. Applicant should be aware than any permission may be temporary to enable review of the need for the proposal and reconsideration of impacts in the future.	Noted. However, the Applicant is seeking a 10-year permission in order to carry out the development and facilitate the installation of all necessary equipment relating to the Data Centre and OSPG.
11. EHO should be contacted prior to submission of application.	It is understood that AWN contacted the EHO and no response was received at the time of lodgement.
Roads 1. The applicant should contact the Roads section of SDCC, prior to submission of application.	No changes are being proposed to the permitted access points and internal roads. We note that SDCC Roads Department had no objection to the previously permitted layout. No new access points are being proposed onto Falcon Avenue or Nangor Road as part of this application. The 2 no. access points to the OSPG Compound are located within the site and will not have any significant impact on the surrounding road network. On the basis, no prior contact was made with SDCC Roads Department.

To this end, we consider all points raised at pre-planning have been adequately addressed in this comprehensive planning application to South Dublin County Council.

Any outstanding items can be dealt with by way of a further information request by South Dublin County Council.

5 Planning History

5.1 Subject Site

SD21A/0186
Construction of a 3 storey (part 4 storey) data centre known as 'DB8' to include data halls, electrical/plant rooms including internal generators, offices, lobbies, ancillary staff areas including break rooms and toilets, stores, stair/lift cores throughout and photovoltaic panels at roof level; the total gross floor area excluding hot air plenums and external staircase is c.9,601sq.m.
A final grant of permission was issued by SDCC on 5 May 2022.

SD12A/0150
Erection of a 2.4m high perimeter fence along Nangor Road boundary (approximately 250m long) with separate entrance gates for vehicular, bicycle and pedestrian access; construction of a single storey security hut with security barriers.
Permission granted 22 October 2012.

SD118/0001
Part VIII application for new access road off the Nangor Road, Clondalkin.

SD06A/0568 (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 1,675 metres of internal distributor roads consisting of 267 metres to dual carriageway standard (at the main entrance) with a further 1,408 metres 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.

Permission granted and extended on 13 January 2012.

5.2 Surrounding Area

The immediate area has an extensive history of Data Centre uses:

Vantage Data Centres -
Cyrus One – SD18A/0134, ABP 302813-18
Permission granted by SDCC and upheld on appeal for a 2 storey data centre with 3 storey office block. Overall GFA 35,426m2 on a 9.2ha site. The development had an overall height of 15.9m to parapet level and 64 exhaust flues grouped into 16 towers that are 20m in height.
Google – SD14A/0023, SD16A/0148
Permission granted by SDCC for a 2 storey data centre. Overall GFA 30,361m2. The development had a building height of 20m with 25 no. stacks at 25m.
Digital Realty – SD12A/002, SD17A/0377
Permission granted by SDCC for 4no. Data halls (c.25,000m2) on a 3.85ha site. Buildings have a max height of 9.1 meters
Amazon – SD20A/0121
Permission granted by SDCC for 3no. 2 storey data centres. Overall GFA 80,269m2 on a site of 16.5ha.
Microsoft Campus
There have been numerous applications for the development and expansion of the Microsoft Data Centre Campus. The max building height appears to be 24m with flues that are 27m in height.

We also note that a Gas power Power Plant has recently been permitted on the Peamount Road,

Newcastle (**SD20A/0058**). Permission is currently being sought for a gas fired power plant with an electrical output of up to 125MW at Profile Park (**SD21A/0167**)

Permission was granted by An Bord Pleanala (**309146-21**) for a new 110kv GIS substation and transmission lines within Grange Castle South Business Park to serve CyrusOne Data Centres.

5.3 Planning History Conclusion

The planning history of the subject and adjacent sites is supportive of the provision of a Data Centre on these lands. The principle of the development is supported by the similar established development to the west and north and permitted development on site.

6 Proposed Development

The proposed development is described as follows in the statutory notices:

- Modifications to the permitted data centre granted under SDCC Reg. Ref. SD21A/0186 comprising the following:
  - Reconfiguration and alterations to the data centre building to include removal of front of house offices at third floor level, alterations to floor levels at second floor to provide consistency between front of house and data halls, parapet height increase of front of house to c.16.8m, provision of storage at second floor level in lieu of relocated internal generators to the external generator yard and associated elevational alterations.
  - Extension of loading dock at ground floor level by c.60sqm in area with minor height increase to c.5.3m .
  - Removal of 3 no. air plenums to the front (north) elevation and provision of screening to generator flues in lieu of omitted plenums.
  - Alterations at roof level to include removal of 2m high gantry screening.
  - Alterations to the permitted generator plant yard to the north of the data centre to include the removal of fuel tanks, reconfiguration of plant and generators, provision of 2 no. additional external generators (increase from 5 to 9 no. external generators), provision of 4 no. additional external plant rooms, provision of diesel pump tank cabinets and stepover, relocation of generator yard doors and enlarged generator yard to accommodate the proposed modifications. Increase in plant areas by c.77sqm.
  - Reconfiguration of plant within the permitted chiller plant yard to the south of the data centre.
  - Removal of 1 no. sprinkler/water tank and removal of stairs and door to the side of the waste compound.
  - Reconfiguration of car parking and motorcycle spaces and removal of 1 no. accessible space. 64 no. total number of car parking spaces.
- The proposal also includes provision of on-site gas power generation compound (c.2,604sqm in area) in the area previously reserved for a future data centre. The compound comprises 7 no. modular plant rooms (totalling c.180sqm in area), 10 no. gas fired generators and associated flues c.14.7m high, gas skid, associated modular plant, boundary treatment surrounding the compound c.6.5m high and 2 no. vehicular access points including general and emergency access.
- All associated site development works, services provision, drainage works, access, landscaping and boundary treatment works.
- No buildings are proposed above the existing ESB and SDCC wayleaves to the west and north of the site.
- The overall Gross Floor Area of the development is reduced by c.44sqm to c.9,795sqm from previously permitted under SDCC Reg. Ref. SD21a/0186.
- The application is accompanied by a Natura Impact Statement.

Figure 2: OSPG Compound (south west of the overall site)

Modifications to the Data Centre

The proposed modifications to the data centre have evolved as part of the detailed design process. The reconfiguration and amendment of plant areas in particular provide design and operational efficiencies within the site. The additional proposed floor areas in the data centre building and OSPG account for an increase of 317sqm. The removal of the third floor offices balance the quantum of proposed and permitted development and the overall gross floor area is reduced by 44sqm to 9795sqm from previously permitted under Ref. SD21A/0186.

The removal of the protruding air plenums to the front of the building at Nangor Road is seen as having a positive visual impact when viewed from the surrounding public road network. Similarly, the removal of 1 of the permitted sprinkler tanks (ancillary structures) reduces visual impact when viewed from Falcon Avenue.

Proposed On-Site Gas Generation

On Site Power to Building DB8 shall be provided by 10 no. gas powered generators with flues selected for low emission capable of operating on low and high pressure natural gas. The compound includes associated plant rooms to the west of the generators. The design is to install a reliable standby rated gas-engine power system to accommodate the full site electrical load in the event of a mains power failure or individual failure of a distribution transformer. The generators shall be enclosed to reduce the acoustics effect to the site.

The electrical supply system shall be deployed as a block redundant N+1 with 10 no. primary LV package switch rooms, comprising of 8no. 'eWalls' serving IT, 1no. R-Blocks acting as a back-up to the 'eWalls' and 1 no Front of House. Power throughout the site will be distributed at 11kV to each eWall, R-Block and Front of House, 50hz, 5 wire distribution (3P+N+PE). 2.0MVA private stepdown transformers shall be installed on site for each package switch room allowing for 11kV HV to be stepped down to 400V. The electrical distribution arrangement shall be concurrently maintainable in all modes of operation i.e., utility supply or via generators, the design will be such that all IT equipment shall be provided with a dual UPS electrical supply emanating from a separate electrical string.

Emissions and Noise from the electrical generators have been modelled and Air Quality Impact Assessment and Noise Impact Assessment Report is provided herein. The proposed total thermal input to the site will not exceed 35MW we understand an application is not required to be made to the Environmental Protection Agency (EPA) for a greenhouse gas emissions (GHG) permit in accordance with Regulation 7 of the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 (S.I. No. 490 of 2012).

With respect to the EU Energy Efficiency Directive Article 14, transposed into Irish law through SI 426/2014 EU Energy Efficiency Regulations 2014, in accordance with Part 1(5) these regulations do not apply to persons holding a greenhouse gas emissions permit.

Elevations, Height & Massing

The generator compound and plant/flue design is guided by the functional needs of the data centre. The generator flue height of c.15m and compound enclosure c.6.5m high, is considered acceptable having regard to the setback from Falcon Avenue created by the permitted internal access road. None of the above structures exceeds 25m above ground.

All construction works including crane usage will adhere to strict safety protocols. The Applicant will engage with the Air Corps Air Traffic Services prior to development. We invite a suitably worded condition relating to same.

The palette and materials for the external cladding will reflect the main data centre building to visually assimilate all buildings on site. Full details on proposed materials and finishes are included in the planning application.

The visual impact of the compound is reduced by the proposed green walling as demonstrated in the accompanying elevations prepared by RKD Architects.

Figure 3: Proposed CGIs

Landscaping & Lighting

The proposed building is set back from the boundaries as much as possible with particular attention to landscape and boundary treatment. A key feature of the proposed land use is security and landscaping around the perimeter of the facility is designed to include discreet measures to protect the site. We refer to the west facing elevation drawings prepared by RKD Architects which illustrates extensive proposed tree planting along the western site boundary.

Sustainable urban drainage systems have been incorporated into the landscape design. The attenuation pond to the south of the site integrates with the biodiversity buffer along the eastern and southern perimeter. Berming is proposed along the northern site boundary.

A landscaped space to the west of the data centre will serve future staff and visitors alike. The space includes tree and shrub planting including relaxed seating areas. The parkland setting created by the berming, biodiversity buffer zone, landscaped open area and interaction with Grange Castle Golf Club lands contribute to a strengthened green Infrastructure network within the County

Lighting of the development will be controlled and external lighting shall be switched off outside of working hours apart from necessary security lighting that would be sensor controlled. The building will not feature any up-lighting and all luminaires used will have shielded sources to ensure light is directed only where it is required.

Access

Access and egress to the site is via the permitted Falcon Avenue entrance. The internal access road running parallel with Falcon Avenue separates the site edge from the OSPG compound. Two no. access points are proposed to the OSPG Compound.

While parking is reconfigured as part of this application, no changes are proposed to the overall quantum of permitted car parking spaces – 64 no. in total.

Services Infrastructure
Civil Infrastructure
The new development will require access to surface water, foul and water main infrastructure.

The area earmarked for future development and subject of this OSPG application was designated as hardstanding for the purposes of attenuation calculations and included in Pinnacles Engineers report accompanying application Ref. SD21A/ 0186.

The proposed OSPG and associated compound hardstanding catchment will drain to the central pond/attenuation area. The permitted pond therefore has sufficient capacity to attenuate run-off from the new application area.

Services Building Infrastructure
The compound shall comprise 10 no. generators and associated plant rooms, as detailed in the OSPG Section above.

Noise Assessment

The following conclusions are presented in relation to this noise assessment:

- The existing noise environment in the vicinity of the nearest noise sensitive locations is dictated by local and distant road traffic movements and a degree of plant noise. Review of preliminary noise monitoring and noise data to hand from nearby sites indicates that background noise levels at the nearest noise sensitive locations fall in the range of 38 dB(A) to 40 dB(A) during night-time periods.

- A review of best practice guidance has identified the following noise criteria that are considered likely to be appropriate in terms of any planning application progressed in relation to the site:

Day to Day Operation (Noise Sensitive Daytime) – 55 dB LAeq,15min
Day to Day Operation (Noise Sensitive Evening) – 50 dB LAeq,15min
Day to Day Operation (Noise Sensitive Night) – 37 to 40 dB LAeq,15min
Day to Day Operation (Commercial) – 55 dB LAeq,15min
Day to Day Operation (Grange castle Golf Couse Boundary) – 55 dB LAeq,15min
Emergency Operation (Noise Sensitive) – 55 dB LAeq,15min
Emergency Operation (Commercial) – 65 dB LAeq,15min

- Noise predictions for the following scenarios have been presented and commented upon in the following sections:

Scenario A Day to Day Operations
Scenario B Emergency Operations
Scenario C Generator Testing

- The noise model predictions conclude the relevant adopted noise criteria are satisfied in all instances.

- Comment is presented in relation to construction noise and vibration impacts along with typical mitigation measures that will be employed.

We refer to the accompanying report prepared by AWN Consulting for more information.
Air Assessment

The air quality modelling study concludes that provided the gas generator stacks are built to a height of 14m and the emission envelope assumed for this study is complied with then

emissions from the gas generators will be in compliance with the ambient air quality standards which are based on the protection of the environment and human health.

We refer to the accompanying report prepared by AWN Consulting for more information.

Flood Risk Assessment

The subject site is located in Flood Zone C which is characterised as having a low flood risk. The proposal does not pose any flooding issues to the subject site, surrounding area or properties located downstream. We refer to the Flood Risk Assessment prepared by Pinnacle and submitted with the parent permission for more information.

SuDS measures have been incorporated in the form of a surface water attenuation tanks and pond reducing surface run-off. Furthermore, a Hydrobrake mechanism has been installed to restrict the outflow into the existing network accordingly. Water quality is maintained as the outflow passes through approved Petrol / Oil Interceptor. We refer to the report prepared by Pinnacle Engineers accompanying this application for more information.

Waste Disposal

No changes are proposed to the waste disposal arrangements on site. We refer to the Operational Demolition and Construction Waste Management Plan prepared by Pinnacle Engineers submitted with the parent permission for more information.

Archaeology

We refer to the archaeology assessment prepared by Reliqua Limited accompanying this application. The historic Ballybane and Kilcarbery townland boundary will remain in place and enhanced, where appropriate.

It is noted that extensive archaeological fieldwork has been undertaken in the wider area to date. Excavations in nearby Grangecastle Business Park and Grangecastle South Business Park revealed a range of archaeological features from the Neolithic to the Medieval eras.

The Applicant invites a suitably worded condition relating to potential archaeology on site and any monitoring required during site clearance and construction.

7 National Planning Policy Context

7.1 Government Statement on The Role of Data Centres in Ireland's Enterprise Strategy (2018)

The Department of Business, Enterprise and Innovation released a statement on the Role of Data Centres in Ireland in 2018 in which it sets out the role and significance of data centres in Ireland's wider enterprise policy objectives.

The statement outlines the presence of data centres in Ireland has raised the Country's visibility internationally as a technology-rich, innovative economy. The statement goes onto state that data centres directly contribute to job creation and generate significant added economic benefit by providing a range of services to other firms.

A significant proportion of existing, permitted and proposed data centres are located in the Dublin Region. The statement notes that *"The potential cost benefits which could be provided by data centres are dependent on location, existing network capacity and the infrastructure required to supply the site."*

The statement goes onto note *"A consistent and supportive whole of government approach will be brought to the realisation of the transmission and distribution assets required to support the level of data centre ambition that we adopt."*

The Covid-19 pandemic has highlighted the urgent need for improvements in ICT and the roll-out of high speed broadband nationwide. Many bricks and mortar businesses are already trading and conducting business online to safeguard and continue daily operations. Across all sectors, work environments will be permanently altered with employees expected to continue working from home following the pandemic. The need for high quality data centres is therefore essential to the recovery of the Country and economy post-Covid-19.

7.2 Project Ireland - National Planning Framework (2040)

The National Planning Framework (NPF) is the Government's high-level strategic plan for shaping the future growth and development of our country out to the year 2040.

The NPF sets out that the Eastern and Midland part of Ireland will, by 2040, be a Region of around 2.85 million people, at least half a million more than today.

Compliance with Key National Policy Objectives

The following National Policy Objectives are considered to apply to the site.

National Policy Objective 55- *"Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050."*

National Policy Objective 64- *"Improve air quality and help prevent people being exposed to unacceptable levels of pollution in our urban and rural areas through integrated land use and spatial planning that supports public transport, walking and cycling as more favourable modes of transport to the private car, the promotion of energy efficient buildings and homes, heating systems with zero local emissions, green infrastructure planning and innovative design solutions."*

Under the National Strategic Outcome 5 – A Strong Economy Supported by Enterprise, Innovation and Skills, Ireland is being prompted as a suitable international destination for ICT infrastructure.

"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 centres. 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. There is also greater scope to recycle waste heat from data centres for productive use, which may be off-site."

It is our considered view that the current proposal together with development permitted to date complies with and exceeds the vision of the National Planning Framework on the following basis:

- The proposal makes the most efficient use of the site. The multi-storey nature of the permitted data centre and proposed OSPG creates a compact and efficient development that utilises existing site services and road infrastructure.
- The overall development is appropriately located in South West Dublin with excellent connectivity to the N4, N7 and M50. Public transport services operate in the area with several bus services stopping to the east of the site on the R134 (Castle Grange Stop c.750m/10 min walk distant) and Clondalkin/Fonthill Rail Stop c.3.4km distant.
- The proposal will contribute to the emerging digital infrastructure of the area that helps to support a strong Irish economy through its enterprise, skills and innovation sectors.
- The proposal will continue to maintain high quality international connectivity, that Ireland is quickly becoming renowned for.
- Renewable technologies include use of photovoltaic panels, heat pumps and provision of waste heat building to facilitate future connection to a district heating system.

Having considered the above, it is submitted that the current proposal will deliver on key objectives contained within the NPF.

7.3 Regional Spatial and Economic Strategy (2019-2031)

The *Regional Spatial and Economic Strategy for Eastern and Midland Regional Assembly* (RSES) has recently been published and adopted.

The RSES provides a:

- Spatial Strategy - To manage future growth and ensure the creation of healthy and attractive places to live, work, study, visit and invest in.
- Economic Strategy - That builds on our strengths to sustain a strong economy and support the creation of quality jobs that ensure a good living standard for all.
- Metropolitan Strategy - To ensure a supply of strategic development areas for the sustainable growth and continued success and competitiveness of the Dublin Metropolitan Area.
- Investment Framework - To prioritise the delivery of key enabling infrastructure and services by government and state agencies.
- Climate Action Strategy - To accelerate climate action, ensure a clean and healthy environment and to promote sustainable transport and strategic green infrastructure.

Key RSES Provisions

The subject site located within South Dublin is identified as falling within the Dublin Region of the RSES.

The Growth Strategy for the Eastern and Midlands Region is to:

- Support the continued growth of Dublin as our national economic engine.
- Deliver sustainable growth to the Metropolitan area.
- Target growth to regional growth centres of Athlone, Drogheda and Dundalk
- Support vibrant rural areas with a network of towns and villages
- Facilitate the collaboration and growth of the Dublin – Belfast Economic Corridor
- Embed a network of Key Towns through the region to deliver sustainable regional development
- Support the transition to a low carbon, climate resilient and environmentally sustainable region.

One of the Guiding Principles for Investment Prioritisation in Placemaking for Enterprise Development is to *"Align to national strategy and approach for data centres – right location for use and energy demand."*

RPO 8.25 of the RSES states that 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 centres and associated economic activities at appropriate locations.*
- *Promote Dublin as a demonstrator of 5G information and communication technology.*

Grangecastle in South Dublin have significant capacity for high tech manufacturing, research and development in campus style settings.

It is intended that Grangecastle will be supported by additional bus connections under The South - West Corridor (Kildare line, DART expansion and Luas red line).

It is submitted that the current proposal and wider development site is supportive of the growth strategy and growth enables for the metropolitan region of the RSES.

8 Compliance with Statutory Plan

The relevant planning context for the site and development proposal is the South Dublin County Development Plan 2016-2022. We note that the Draft County Development Plan 2022-2028.

8.1 Zoning

The site is zoned Objective EE "provide for enterprise and employment uses".

Under this zoning objective, light industrial uses, offices and science and technology based enterprise uses are permitted in principle.

The site abuts Grange Castle Golf Club lands to the south and east of the site zoned Objective OS *"To preserve and provide for open space and recreational amenities."*

No protected structures are located on or near the site nor is the site located within an architectural conservation area. No specific local objectives apply to the subject site. Furthermore, there are no known recorded monuments on or near the site.

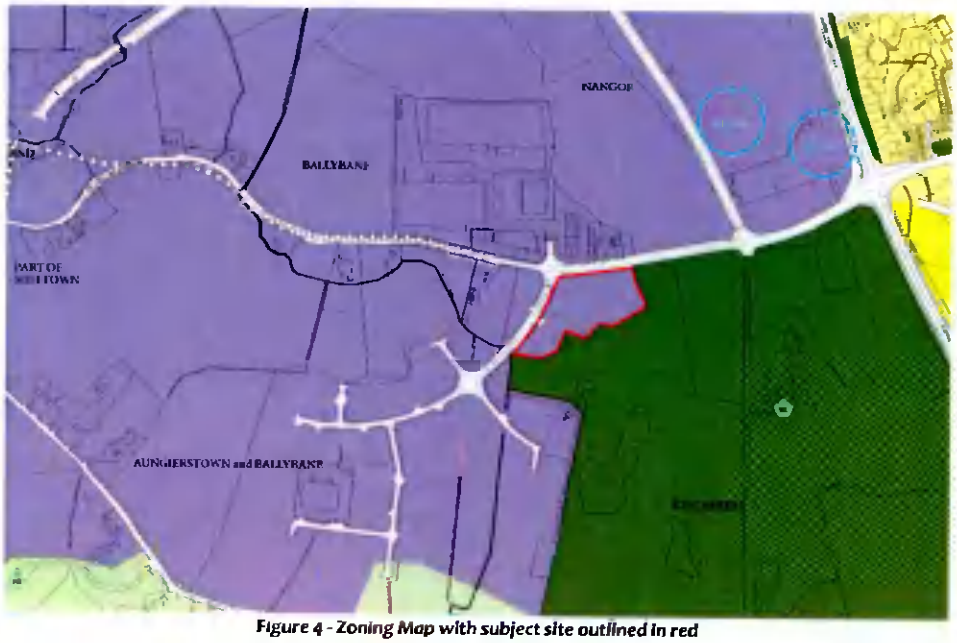

Figure 4 - Zoning Map with subject site outlined in red

Data centre use with ancillary structures is well established in the area and is supported by National policies and objectives.

It is submitted that the proposed use accords with the Council's objectives for EE zoned lands. Data Centres are a crucial aspect of the digital economy, providing for the safe storage of data for national and international companies. Over a quarter of Ireland's GDP is from software and data services underpinned by Irish Data Centre facilities. The land use contributes to Ireland's economic development with the job multiplier effects extending well beyond the actual infrastructure.

It is worth noting that up to 100-120 people could be employed on site during the construction phase of this project (single phase up to 2 years), with 14 people employed directly during the operational stage. The staff will range from technicians, to security

personnel and office workers. It is estimated up to 6 contractors and 44 visitors will also attend the site on a regular basis.

The wider IT industry will also benefit from the development, having regard to the storage services provided.

8.2 Policy

It is the policy of the Council to facilitate and support the regeneration of underutilised industrial areas that are proximate to urban centres and transport nodes and to promote and support more intensive compatible employment and/or residential led development in regeneration zones. Enterprise and Employment (EE) zoned lands will accommodate low to medium intensity enterprise and employment uses.

Enterprise and Employment zoned lands to the west of the County in the vicinity of the Grange Castle and Citywest economic clusters have the capacity to attract high tech manufacturing and associated strategic investments, due to the availability of large sites that are supported by high quality infrastructure and services.

Specific Objectives pertaining to EE zoned land are as follows:

ET3 Objective 1: To ensure that there is a sufficient supply of zoned and serviced Enterprise and Employment zoned land at suitable locations, to accommodate a diverse range of low to medium intensity enterprise and employment uses in the County.

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 3: To support the phased expansion of the established Business and Technology Cluster to accommodate strategic high-tech manufacturing investments, research and development and associated uses.

ET3 Objective 4: To direct light industry and logistics uses to enterprise and employment zones that are proximate to the strategic and national road network.

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.

It is submitted that the proposed development accords with the key policy objectives listed above.

KEY PRINCIPLES FOR DEVELOPMENT WITHIN ENTERPRISE AND EMPLOYMENT ZONES		
	Key Principles	**Compliance with Key Principles**
Access and Movement	Major links to and through a site are provided as identified within a local plan, Masterplan and/or as determined by a site analysis process.	✓
	The street network is easy to navigate and a clear a hierarchy is applied, identifying the function of each street.	✓
	Individual streets are designed in accordance with the requirements of the Design Manual for Urban Roads and Streets.	✓
	Large areas of parking (in particular staff parking) are located to the rear of buildings and screened from the street. Smaller areas of parking **can be located to the front of buildings provided they are well designed** (including areas of planting) and do not result in excessive setbacks from the street.	✓ Parking and landscaped berming is considered an appropriate use given the presence of an ESB and SDCC Watermain precluding development along the northern boundary.
	The design and layout of new business parks should promote walking, cycling and the use of public transport, including adequate provision of cycle and pedestrian linkages.	✓
Open Space and Landscape	Creation of an open space network with a hierarchy of spaces suited to a variety of functions and activities.	✓
	Development within business parks maintain and promote a parkland-like setting with high quality landscaping.	✓
	Important nature features of the site such as trees, hedgerows and watercourses are retained, integrated within the landscape plan and reinforced with the planting of native species.	✓
	Natural buffer zones and defensive planting are used to define private space and the use of fencing to the front of buildings minimised. Where fences interface with the public domain they should be of a high quality and incorporate elements of landscaping (for screening).	✓
Built Form and Corporate Identity	Building heights respond to the surrounding context with transitions provided where necessary and reinforce the urban structure with taller buildings located along key movement corridors, gateways and nodes.	✓
	Individual buildings should be of contemporary architectural design and finish (including use of colour). Various treatments should be employed to reduce the bulk, massing and scale of larger buildings.	✓
	The layout and design of buildings maximise frontages onto the public realm and enclose private external spaces (such as service yards and car parks) and storage areas behind them.	✓
	Signage should be simple in design and designed to integrate with architectural feature and/or the landscape setting (see also Section 11.2.8 Advertising, Corporate Identification and Public Information Signs).	No signage proposed as part of this application.

It is submitted that the proposed development accords with the key policy objectives listed in Table 3 above as demonstrated through the supporting material lodged with the planning application.

8.3 Building Height

The limit on height arises from the location of the site within the Department of Defence Inner Zone due to its proximity to Casement Aerodrome. This places a general limit of 20m on buildings. The adjoining data centre has an overall height of 22m.

The proposed OSPG has an overall height of c.6.5m. The generator flues have an overall height of c.15m.

The application will include photomontage views which demonstrate that the new building will assimilate successfully into the site and wider business park context and is visually appropriate. We would appreciate specific comment from the Planning Authority on this issue.

8.4 Plot Ratio/Site Coverage

It is noted that the SDCC Plan does not contain specific policies on plot ratio or site coverage and that development will be assessed on a case-by-case basis.

The subject proposal presents a plot ratio of 0.37 which is considered wholly appropriate having regard to the surrounding context and landscape buffer around the site perimeter.

8.5 Energy and Sustainability Strategy

Specific Objectives pertaining to energy efficiency and sustainability are as follows:

CORE STRATEGY (CS) Policy 8 National Climate Change Strategy: *It is the policy of the Council to support the implementation of the National Climate Change Strategy and the National Climate Change Adaption Framework Building Resilience to Climate Change 2012 through the County Development Plan and through the preparation of a Climate Change Adaptation Plan in conjunction with all relevant stakeholders.*

ENERGY (E) Policy 1 Responding to European and National Energy Policy & Legislation
It is the policy of the Council to respond to the European and National Energy Programme through the County Development Plan – with policies and objectives that promote energy conservation, increased efficiency and the growth of locally based renewable energy alternatives, in an environmentally acceptable and sustainable manner.

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.*

E4 Objective 1: *To ensure that medium to large scale residential and commercial developments are designed to take account of the impacts of climate change, including the installation of rainwater harvesting systems, and that energy efficiency and renewable energy measures are incorporated in accordance with national building regulations, policy and guidelines.*

E5 Objective 1: *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.*

In response to the above objectives, the proposal employs several innovative sustainable technologies. The power requirements for the proposed development is provided through the proposed OSPG. Emergency back-up power will be provided by the generators in the data centre building and external yard. We note that the diesel fuel storage is reduced as part of the subject application.

Supplementary power is provided by the pv roof panels. A Heat recovery building is also provided in the event future connection can be made to a district heating system in the area. The above measures seek to meet the Council's objectives at climate change adaptation.

The IT cooling system is a water-cooled system which cools water via free cooling air cooled chillers. From the chillers water is circulated into data hall fan arrays which distribute cooled recirculated air back into the data hall.

8.6 Environmental Considerations

Specific Objectives pertaining to environmental requirements are as follows:

IE7 Objective 1: *To implement the provisions of EU and National legislation on air, light and noise control and other relevant legislative requirements, as appropriate, in conjunction with all relevant stakeholders.*

IE7 Objective 2: *To implement the recommendations of the Dublin Regional Air Quality Management Plan to protect people from the harmful health effects associated with air pollution, to preserve good air quality where it exists and to improve air quality where it is unsatisfactory.*

IE7 Objective 4: *To ensure that future developments are designed and constructed to minimise noise disturbance and take into account the multi functional uses of streets including movement and recreation as detailed in the Urban Design Manual (2009) and the Design Manual for Urban Roads and Streets (2013).*

IE7 Objective 5: *To ensure external lighting schemes minimise light spillage or pollution in the immediate surrounding environment and do not adversely impact on residential or visual amenity and biodiversity in the surrounding areas.*

In response to the objectives above, we note that the proposal has been designed in strict accordance with all relevant guidelines pertaining to noise and air emissions. We refer to the accompanying reports prepared by AWN for more information.

8.6.1 EIAR Screening

We refer to the EIAR Screening statement prepared by Malone O'Regan for more information.

8.7 Draft County Development Plan 2022-2028

Proposed Material Amendments

It is noted from the Chief Executive's Report (23 May 2022) on the Proposed Material Amendments to the Draft Plan (13.3) recommended that the motion to ban data centre development under EE zoning is reversed and should be included as an 'open for consideration' use.

EDE7 Objective 2 - Space Extensive Land-Use

To require that space extensive enterprises demonstrate the following:
- The appropriateness of the site for the proposed use having regard to EDE7 Objective 1;
- Strong energy efficiency measures to reduce their carbon footprint in support of national targets towards a net zero carbon economy, including renewable energy generation;

- Maximise on site renewable energy generation to ensure as far as possible 100% powered by renewable energy, where on site demand cannot be met in this way, provide evidence of engagement with power purchase agreements in Ireland (PPA);
- Sufficient capacity within the relevant water and, wastewater and electricity networks to accommodate the use proposed;
- Measures to support the just transition to a circular economy;
- Measures to facilitate district heating or heat networks where excess heat is produced;
- A high-quality design approach to buildings which reduces the massing and visual impact;
- A comprehensive understanding of employment once operational;
- A comprehensive understanding of levels of traffic to and from the site at construction and operation stage;

Provide evidence of sign up to the Climate Neutral Data Centre Pact

Section 11.5 Electricity Infrastructure

In line with government policy, the development of energy networks in a safe and secure way to meet projected demand levels and to ensure a long-term, sustainable and competitive energy future for Ireland will be critical to our economy and to enabling the relevant grid connections for renewable energy. The protection of existing networks as well as expansion, where necessary, will enable energy service providers to deliver their statutory function. It is recognised that natural gas, particularly renewable and indigenous gas, will have a role to play in the transition to a low carbon economy. As such, renewable energy developments may require support from such sources in times of high energy demand

Policy IE6 Electricity Infrastructure
Protect the existing electricity infrastructure and support the development of a safe, secure and reliable supply of electricity and the development of enhanced electricity networks as well as new transmission infrastructure projects subject to the relevant environmental assessments.

IE6 Objective 1: To support roll-out of the Smart Grids and Smart Cities Action Plan enabling new connections, grid balancing, energy management and micro grid development in line with RPO 10.19.

IE6 Objective 2: To support the reinforcement and strengthening of the electricity transmission and distribution network to facilitate planned growth and transmission/distribution of a renewable energy focused generation in line with RPO 10.22

IE6 Objective 3: To support the sustainable development of Ireland's offshore renewable energy resources in accordance with the Department of Communications, Energy and Natural Resources 'Offshore Renewable Energy Development Plan' and any successor thereof including any associated domestic and international grid connection enhancements in line with RPO 10.24

IE6 Objective 4: To ensure that the design of energy networks achieves the least possible environmental impact and that where such impacts are inevitable, they are mitigated to the greatest possible extent.

IE6 Objective 5: To protect existing infrastructure and strategic route corridors, where they have gone through appropriate social, environmental and cultural impact assessment, for identified energy networks from encroachment by development that might compromise the performance of the networks.

The permitted data centre will be powered by the proposed gas OSPG. Gas is seen as a transitional fuel source as we move to more renewable solutions over the coming decades. In addition to the above, the proposed modification application reduces the number of fuel

tanks serving the back-up generators in the data centre building, minimising reliance on diesel fuel. The proposal has been carefully considered having regard to government guidance and policy including the Climate Action Plan 2021.

9 Conclusion

We invite the Planning Authority to grant permission for the development as proposed having regard to the following:

- The proposed development accords with the requirements of South Dublin County Council Development Plan 2016-2022.
- The proposed development maximises the potential of this zoned greenfield site located within Profile Business Park, whilst providing a bespoke building to meet specific requirements, as provided for Policy Objectives ET3 of the Development Plan. All ancillary structures have been thoroughly assessed and designed as part of a masterplanning approach for the site.
- The proposed development has been holistically designed incorporating sustainable urban drainage systems, biodiversity protection measures and landscape elements, making the most efficient and sustainable use of the site. The quality of the built and natural environment is reflected in the design treatments and materials proposed.
- The proposed development (notably the OSPG Building and associated flues) accords with the height restrictions relating to Casement Aerodrome, having regard to precedent examples set by permitted developments in the wider Grange Castle Area.
- The proposal would allow the Applicant to progress to construction in an efficient and timely manner.

We confirm we act for Equinix (Ireland) Ltd. and request that all future correspondence in this matter is directed to this office.

We trust that the Planning Authority will look favourably on the proposed development and grant permission for the proposal as appropriate.