Planning Report

Proposed Data Centre

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

On behalf of
Equinix (Ireland) Ltd.

July 2021

Brock McClure

Planning & Development Consultants
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1 Introduction

We, Brock McClure Planning & Development Consultants, 63 York Road, Dún Laoghaire, Co. Dublin, have prepared this planning report on behalf of Equinix (Ireland) Ltd, Unit 6 & 7 Kilcarbery Business Park, Nangor Road, Dublin 22 for a proposed Data Centre on a vacant site at Profile Park, Nangor Road, Clondalkin, Dublin 22.

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

The proposal has been subject of rigorous assessment by an experienced multi-disciplinary team. Furthermore, the Applicant has engaged with South Dublin County Council as part of a pre-application consultation process and the feedback received has informed the finalised design and layout.

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

1.1 Equinix (Ireland) Ltd.

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 Exchange™ (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 has consent of the property owner to make this application and a letter detailing their consent is enclosed.

1.2 Design Team

The scheme now before the Planning Authority has evolved following input from the following competent specialists:

- 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)
- Digital Dimensions (Visualisations)

The design team has engaged with several stakeholders including members of South Dublin County Council, Irish Water, Defence Forces and ESB/Eirgrid in the preparation of this application.

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 (RKD Architects)
- CGIs (Digital Dimensions)
- Civil and Drainage Drawings including Register (Pinnacle)
- Engineering Services Report (Pinnacle)
- Traffic and Transport Assessment (Pinnacle)
- Travel Plan (Pinnacle)
- Flood Risk Assessment (Pinnacle)
- Outline Construction Traffic Management Plan (Pinnacle)
- Outline Demolition & Construction Waste Management Plan (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)
- Energy Efficiency & Climate Change Adaption Statement (RED)
- Lighting Drawings and Design Report (RED)
- Archaeological Report (Reliqua)

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

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 3 no. 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)(g), this application is accompanied by a letter of consent from the landowner Moffash Limited.

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 refer to the accompanying cheque and electronic transfer receipt as confirmation of payment of the application fee.

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 Brian Connolly, SDCC on the 18 June 2021 (by phone), 6 no. copies of the application are submitted including 1 no. soft copy (usb) 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.

Figure 1 - Aerial Photo of Site outlined in Red

4 Pre-Planning Consultation Meetings

The proposal was subject of two no. pre-application consultation meetings with South Dublin County Council on the 16 March 2021 and 15 June 2021. Pre-planning Ref. PP013/21 refers.

We refer to Tables 1 and 2 below, which demonstrates compliance with all comments provided by the Planning Authority during the pre-planning consultation meetings.

Pre-Planning Meeting - 16 March 2021	
Key Points	**Applicant Comment**
1. Principle of proposal is acceptable.	Noted
2. Height needs careful consideration given proximity to Aerodrome. Department of Defence should be contacted.	We refer to correspondence provided by The Department of Defence confirming the acceptability of the proposal.
3. Visual impact needs to be carefully considered. Photomontages / CGIs required. Impact on nearby protected structures should be shown.	We refer to the accompanying CGIs of the proposed development.
4. Heat recovery should be investigated.	A waste heat recovery building is provided to the south west of the site should connection be made possible in the future.
5. Innovative ways of introducing GI should be considered.	The 8m wide green buffer created along the eastern and southern boundaries will protect and enhance biodiversity in the existing hedgerow and ditch. This space will consolidate green space with lands to the west at Grange Castle Gold Club. Furthermore, landscaped areas, berming and provision of an attenuation pond combined with extensive tree and shrub planting using a mix of native species will enhance the green infrastructure of the site.
6. Residential amenity also needs to be considered – applicant should liaise with EHO.	Generous setback distances of c.33m are provided between the data centre and the northern site boundary. The separation distance increases to c.80m to the nearest dwelling located beside the Circle K Filling Station. Ancillary plant equipment is sited away from public areas or visually and acoustically screened to protect the residential amenity of nearby dwellings.
7. Design Statement required under Section 11.3.1 of the CDP.	We refer to the accompanying design statement prepared by RKD Architects.
Roads	
8. Overall layout ok. Existing entrance needs upgrading to 2 way.	The entrance provides for 2-way vehicular movements. We refer to the accompanying drawings and reports prepared by Pinnacle.
9. Parking rates. 1 space per 100sq.m. 10% electric and 5% mobility.	Car parking (64 spaces) and bicycle parking provision (14 spaces) is considered acceptable. We refer to the accompanying traffic and transport assessment and travel plan prepared by Pinnacle Consulting Engineers.
10. Cycle spaces – 1 per 200sq.m and should be covered.	

11. Swept path required.	We refer to the accompanying swept path analysis drawings prepared by Pinnacle.
12. Following required: details of bin storage, CTMP, C&DWMP, MMP, TTA, Areas for Taking in Charge and public lighting.	We refer to the cover letter prepared by Brock McClure outlining the provision of all recommended reports and drawings. The development will be managed and maintained by the Applicant. No element of the development will be taken in charge by South Dublin County Council.
13. 2m footpath.	We refer to the accompanying drawings prepared by Pinnacle.
14. Pedestrian route for car parking.	We refer to the accompanying drawings prepared by Pinnacle.
Drainage	
15. Existing and proposed drainage layout needed.	We refer to the accompanying drawings prepared by Pinnacle.
16. Watermain to north – show wayleave. 8m separation.	The existing watermain is shown on all relevant drawings. No structures are proposed above the ESB or SDCC Watermain wayleaves. Landscaping and parking are provided at this location.
17. Surface Water attenuation calculations required.	We refer to the accompanying reports prepared by Pinnacle.
18. Hard standing should be broken with SuDS.	Hardstanding is interspersed with landscaped greenspaces, permeable paving and attenuation areas. We refer to the accompanying drawings/reports prepared by Pinnacle.
19. Need to consult with Casement Re: bunds and ponded areas. Consult with IAA.	The Department of Defence was consulted prior to lodgement.
20. Pre-connection enquiry with Irish Water required.	A pre-connection enquiry was submitted to Irish Water. No correspondence has been received at the time of lodgement.
21. 10m riparian strip required.	Given the ditch is considered 'dry' for the majority of the year, a biodiversity buffer of 8m is provided along the southern and eastern boundaries.
Parks	
22. LVIA required.	We refer to CGIs accompanying this application. The landscape visual impact is considered significant and positive.
23. Suitable boundary treatment required.	The existing black mesh fence to the north of the site will be retained. Given the security requirements of the Applicant, a robust 2.4-3m high mesh fence is provided along the development perimeter. The existing black mesh fence to the north of the site will remain insitu. A 1.5m metal railing is proposed at the site entrance.
24. Tree survey for site and immediate surroundings.	We refer to the tree survey, arboricultural impact assessment and plan prepared by Murray and Associates.
25. Soft SuDS. Any hardstanding within the site should be broken with soft	The parking areas to the north of the site are interspersed at regular intervals with tree planting. Underground attenuation is

landscaping. Large attenuation tanks are not preferred.	provided at two separate locations with an attenuation pond located to the south of the site.
26. Landscaping should connect to existing green infrastructure and create links.	The biodiversity present in the existing eastern and southern hedgerow/ditch will be protected and enhanced. Given the security requirements of the Applicant, it is not feasible or practical to provide pedestrian connections through the site for members of the public. Prospective staff and visitors, however, will be encouraged to use the landscaped space to the west of the data centre for passive recreation use.
27. Tree and hedgerow survey required. Also ecology and bat.	We refer to the tree survey prepared by Murray and Associates. An ecological impact assessment including site survey work was carried out by Malone O'Regan, and accompanies this application. No bat roosts or amphibian presence was found on site.
28. Landscape masterplan and detailed planting details required.	We refer to the landscape drawings and reports prepared by Murray and Associates for more information.

Table 1 - Pre-Planning Meeting Summary 16 March 2021

Figure 2 -Proposed Site Layout submitted at Pre-Planning

Pre-Planning Meeting - 15 June 2021	
Design	**Applicant Comment**
1. All ancillary structures to be incorporated in this application.	All ancillary structures have been carefully integrated into the site masterplan including substation, heat recovery building, waste storage and sprinkler pumps. We refer to the contiguous elevation drawings prepared by RKD Architects for more information.
2. Colourised materials sheet to be provided with the application.	A materials sheet is provided in the design statement prepared by RKD Architects.
Landscaping	
3. Investigate possibility of providing connections to surrounding open spaces as a key planning gain.	As outlined above, it is not feasible or practical to provide pedestrian connections through the site for members of the public due to safety and security concerns.
4. Landscaped space should be allocated for staff. BMC noted staff numbers are low but a suitably landscaped area adjoins DB8.	Prospective staff (14 no. full time) and visitors alike will be encouraged to use the landscaped space to the west of the data centre for passive recreation. The space is landscaped with tree and shrub planting, raised planters and seated areas. Ornamental and decorative planting will be balanced with native wildflower seed planting. The existing hedgerow will be enhanced with native birch, oak, maple and cherry trees. All landscaped areas located beyond the security fence are accessible to staff only.
Boundary Treatments	
5. Change the colour of the white screen surrounding the gen yard to green (facing Nangor Road).	Following careful consideration, the design team, with input from RKD Architects considered the suggested green colour would be visually jarring against the palette of materials used in the data centre façade. As such, a light grey colour is proposed as the boundary treatment surrounding the generator compound.
6. A 3m high quality perimeter fence would be acceptable as opposed to a palisade fence.	A 3m anti-climb dense woven mesh fence in black is proposed around the development perimeter, to complement the existing fence to the north of the site.
Biodiversity	
7. 8m wide biodiversity strip acceptable.	It is noted that the ditch along the eastern and southern boundary is considered "dry" and the 8m wide buffer is considered acceptable.
8. Climate adaptation and greening treatments to be used throughout and referenced in all relevant reports.	Several climate adaptation and greening strategies have been included in the proposal including pv panels at roof level which will be used as a complementary power source, biodiversity landscape buffers and berming along the perimeter

	and attenuation pond to the south of the site reducing surface run-off etcetera.
Car Parking	
9. Explanation required for the car parking to the front/north.	Parking is located to the north of the site as it was the most efficient use of the space on account of the sterilisation of the area created by the ESB and SDCC wayleaves. We refer to RKD's drawings for more information.
10. Break up the car parking with landscaped strips/planting.	We refer to the landscape drawings prepared by Murray and Associates and reiterate that parking is interspersed with tree planting.

Table 2 - Pre-Planning Meeting Summary 15 June 2021

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

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:

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. Permission was granted under Ref. SD16A/0148 for murals on the existing data centre building.

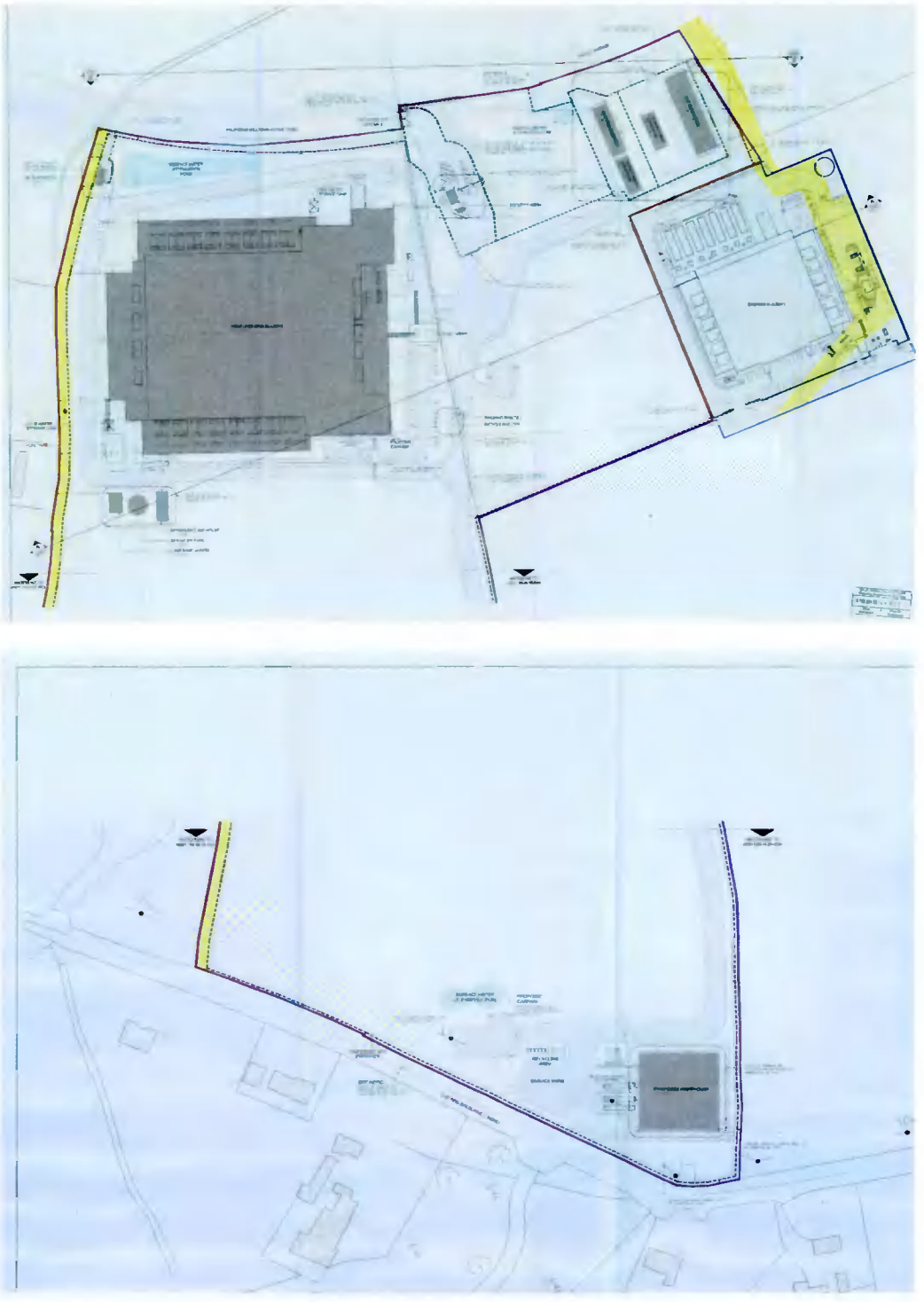

Figure 4 - Permitted Site Plan Ref. SD14A/0023 (Google)

Cyrus One – SD18A/0134, ABP 302813-18 and SD20A/0295

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. Permission and retention permission were granted under Ref. SD20A/0295 for revisions including modifications to the flues consisting of 16 in total grouped into 8 towers comprising 2 flues each (20m high).

Figure 3 - Permitted Site Plan Ref. SD20A/0295 (Cyrus One)

Digital Realty – SD12A/0002, 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

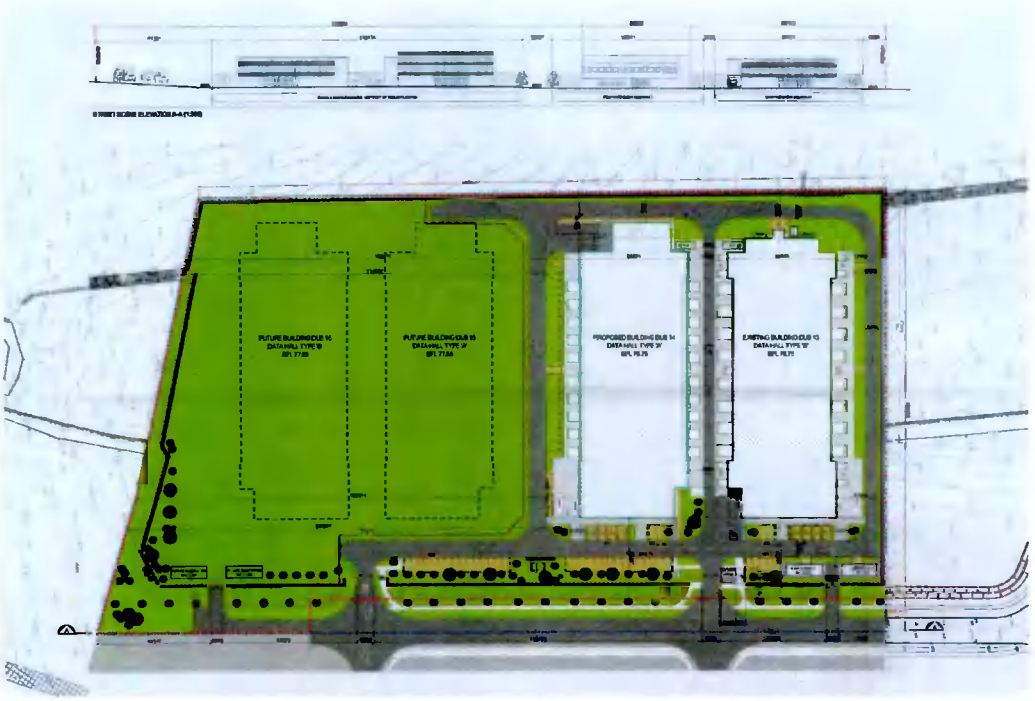

Figure 5 - Permitted Site Plan Ref. SD17A/0377 (Digital Realty)

EdgeConnex – SD21A/0042, 309951-21

Permission is being sought for demolition works and construction of 2 no. single storey data centres with an overall flue height of 25m and total GFA of 24,624sqm. The application is at further information stage. Permission is also being sought under ABP Ref. 309951-21 (SID) for the provision of two 110kV transmission lines connecting Coolderrig 110kV GIS Substation to Grange Castle - Kilmahud circuits. A decision has not been made at the time of writing this report.

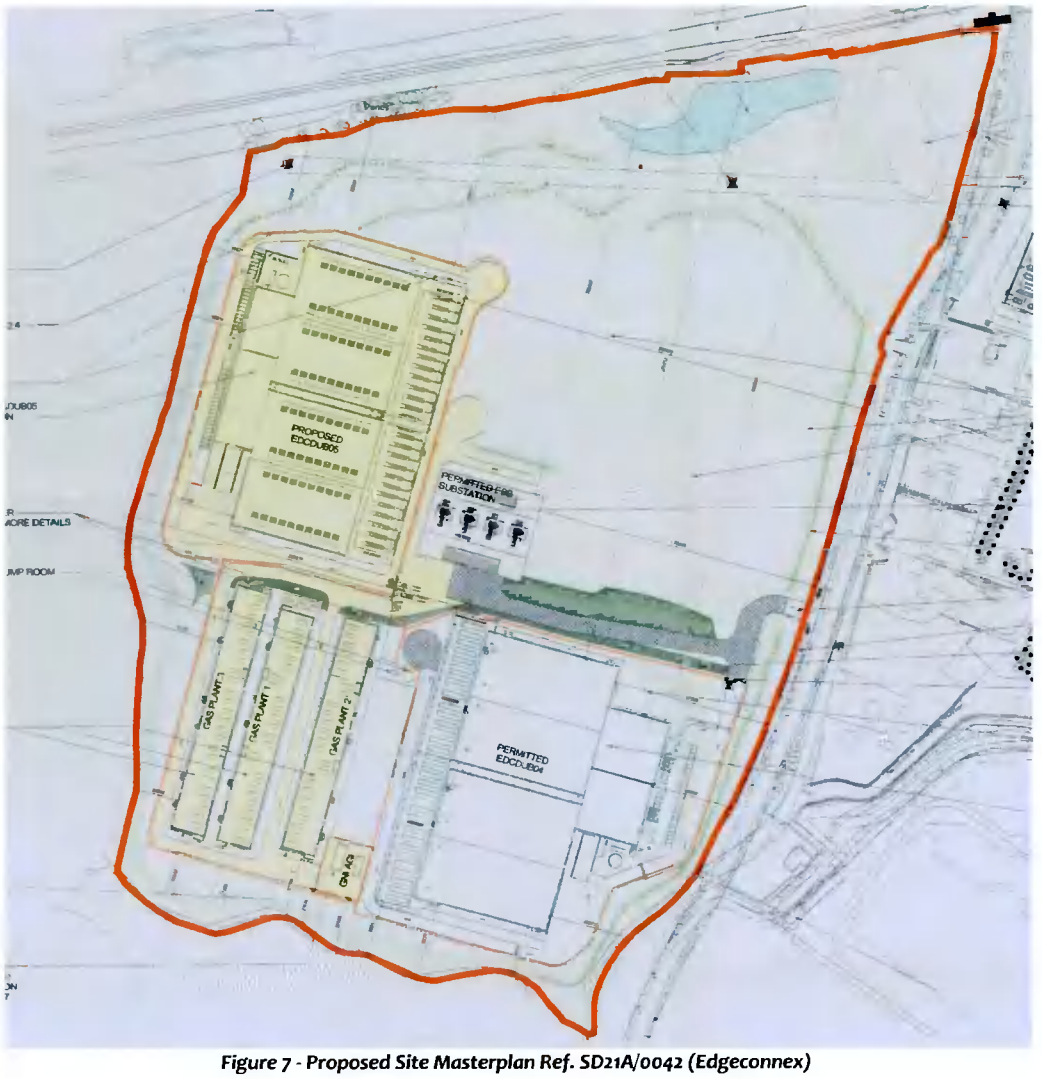

Figure 7 - Proposed Site Masterplan Ref. SD21A/0042 (Edgeconnex)

Amazon – SD20A/0121 and ABP 308585-20

Permission granted by SDCC for 3no. 2 storey data centres. Overall GFA 80,269m2 on a site of 16.5ha. Permission was granted under ABP Ref. 308585-20 for the Clutterland 110kV GIS Substation building and 2 underground single circuit transmission lines.

Figure 6 - Permitted Site Masterplan Ref. SD20A/0121 (Amazon)

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. The most recent approved permission relates to application ref. SD20A/0283.

SD20A/0283 - Permission was granted on the 10 May 2021 for demolition works and construction of a 1-4 storey administration building and 2 no. 2 storey data centre buildings. Total GFA 59,766sqm. The max building height is c.19m with flues c.25m.

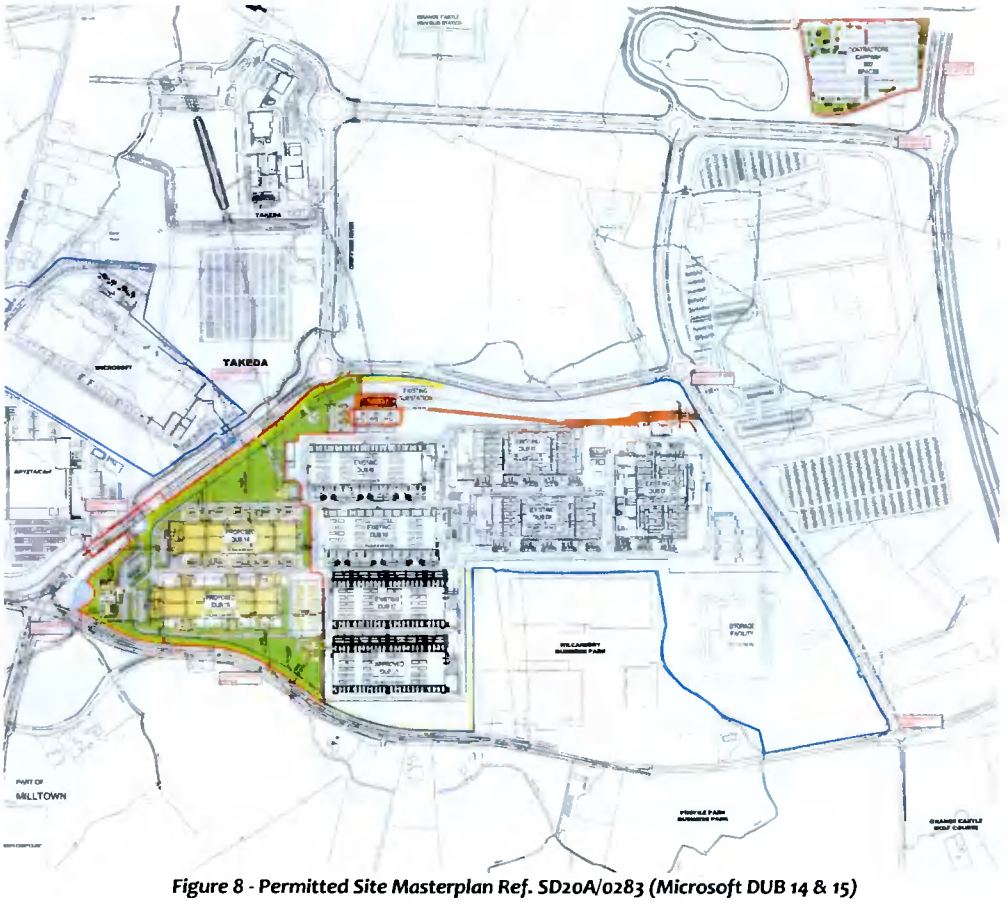

Figure 8 - Permitted Site Masterplan Ref. SD20A/0283 (Microsoft DUB 14 & 15)

We also note that a Gas power Power Plant has recently been permitted on Grange Castle lands (**SD20A/0058**) and there is a current application before 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 a Data Centre in this location is particularly supported by the similar established development to the west and north.

6 Rationale for the Proposed Development

The proposal complies fully with the 'EE' zoning objective of the site *"to provide for enterprise and employment uses".*

The site has been identified by the Applicant as being suitable for the proposed use due to its location in a Business Park, well removed from residential development and the availability of necessary services and utilities.

As outlined in Section 5 above, data centre use is well established in the area and is supported by the policies and objectives of the County Plan.

The proposal complements the pattern of development in Profile Park which prescribes large industrial and commercial development.

The proposal is designed by award winning RKD Architects. Having regard to the prominent location of the site at the entrance to Profile Park Business Park fronting Nangor Road, the proposal reads more as a commercial office building with glazed front of house areas sited towards the public road.

The overall site has been designed as part of a masterplanning approach. It is intended that a second data centre will be located to the south west of the site overlooking Falcon Avenue estate road. All roads, services, biodiversity features and landscaping take into account the next phase of development.

The eastern and southern site boundaries respect the historic townland boundary and protective measures will ensure the existing hedgerow and ditch are maintained. Moreover, the biodiversity buffer will create green connections with the existing Grange Castle Golf Course to the east.

Notwithstanding the zoning of the site and lands to the north and west of the site, pockets of residential dwellings are noted, namely to the north of the site adjoining the Circle K Filling Station. The setback of c.80m from the proposed data centre combined with the visual and acoustic attenuation measures seek to minimise any potential adverse impacts to the amenity enjoyed by existing residents.

To this end, it is considered the proposal accords with the economic and employment objectives of the County Plan.

7 Proposed Development

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

- 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.9,601sqm. The overall height of the data centre ranges from c.16m to c.20m to roof parapet level and up to c.24.48m including roof top plant, flues and lift overrun;
- Provision of 5 no. external generators, 8 no. fuel tanks and ancillary plant contained within a plant yard to the north of DB8;
- Provision of a water tank plant room, air cooled chillers and ancillary plant contained within a chiller plant yard to the south of DB8;
- Provision of a water sprinkler pump room (c.23sqm), 2 no. sprinkler tanks (c.12m high each), heat recovery plant room (c.17sqm), ESB substation (c.44sqm), waste/bin stores (c.52sqm). Total floor area of ancillary structures and plant (c.303sqm);
- Provision of a delivery yard and loading bays, 64 no. car parking spaces, 5 no. motorcycle spaces, bicycle shelter serving 14 no. spaces, smoke shelter, internal access roads and footpaths, vehicular and pedestrian access to the west from Falcon Avenue and closure of an existing vehicular entrance from Falcon Avenue;
- All associated site development works, services provision, drainage works including attenuation, landscape and boundary treatment works including berming, hedgerow protection areas and security fencing;
- No buildings are proposed above the existing ESB wayleave and SDCC watermain wayleave to the west and north of the site;
- The area to the south west of the site (temporary meadow) is reserved for a future data centre, subject of a separate application to South Dublin County Council;
- This application is accompanied by a Natura Impact Statement.

The proposal has been designed by RKD Architects, with extensive experience in Data Centre projects in Dublin. The figure below details the extent of the site layout currently under consideration.

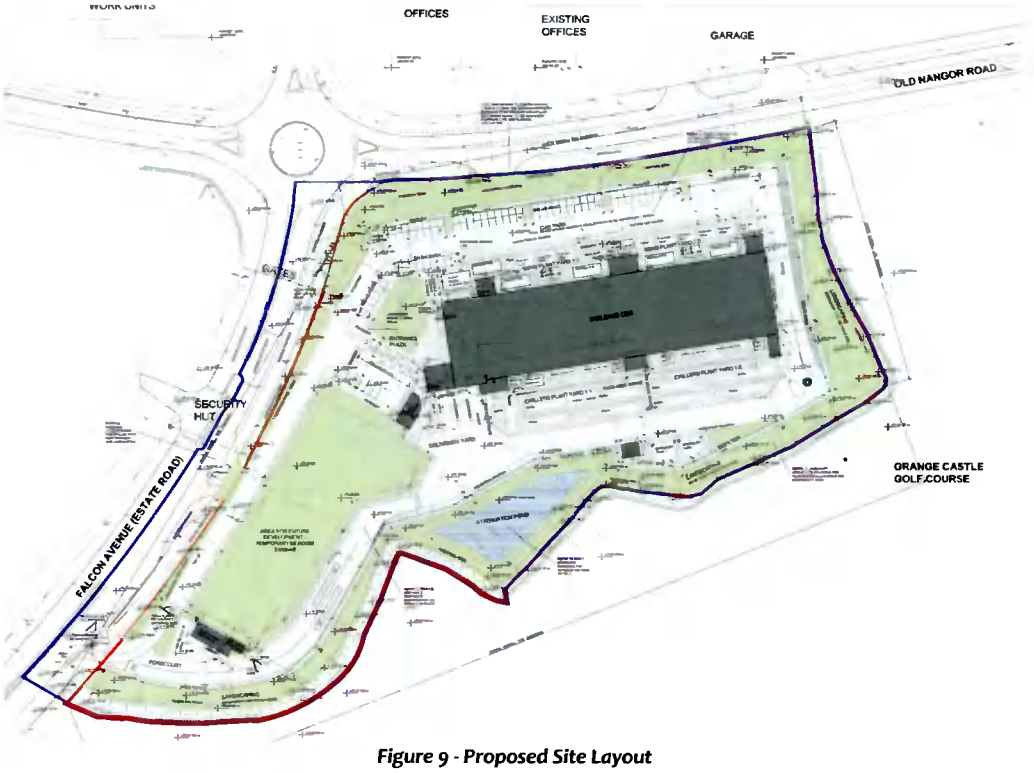

Figure 9 - Proposed Site Layout

The development of this site will ultimately follow a Masterplan, as follows:

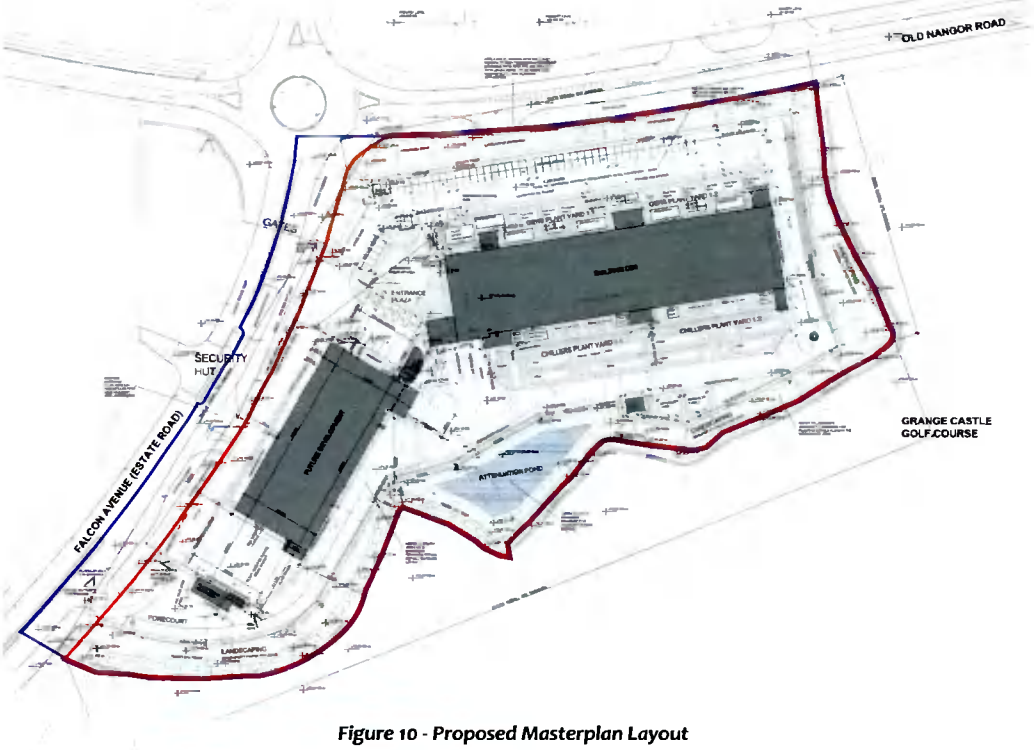

Figure 10 - Proposed Masterplan Layout

The site has capacity for another data centre building south of the current scheme, which is shown a 'reserved masterplan area' in the proposed site layout plan above. This masterplan is shown for the information of the Planning Authority and to demonstrate how the site may ultimately be developed. However, in the first instance the planning application will be seeking permission for a 3 storey building addressing the Nangor Road with part 4 storey front of house area.

The proposed development generally comprises:

- Data Hall and Front of House 9,601sqm
- ESB Substation
- Heat Recovery Building
- Car parking, bicycle parking and motorcycle spaces
- Landscaping, attenuation and boundary treatment works

Data Centre

A Data Centre is a centralised computer server system designed to provide information storage, management and distribution functions to individuals and businesses. With ever increasing levels of online activity requiring large volumes of data, the global demand for data storage is growing rapidly.

There is a requirement for the Data Centre to be monitored by staff on a round the clock basis. The staff would be located in the 'front of house' area where the space would comprise reception, office areas, meeting rooms, staff facilities and ancillary areas.

Architectural Approach

The building is being designed to ensure that the new development makes a positive contribution to the quality of architecture at Profile Park and Grangecastle. Massing studies have been undertaken and it is envisaged that the final form will assimilate successfully into the built environment. Full details on proposed materials and finishes are included in the design statement accompanying this application.

Given the prominence of the site overlooking Nangor Road, the visual impact of the proposal was of a key consideration for the design team. The proposed design as illustrated in the accompanying CGIs and Figure 11 below, illustrates the integrated approach between the built form and surrounding natural environment.

The office block facades are visually differentiated from the data centre core. The office block features a 4-storey tall curtain wall which extends across the north and west façade. Glazed mullion feature fins similar to fins used on the data centre elevations visually connect the building. Solid sections of the front of house facades are clad with fibre-cement cladding panels, with vertical grooved texture. Panels are shown in mid-grey colour ('granite'). Curtain wall framing will be in in selected grey colour to match the cladding.

The building entrance is the focal point of the office block facades and has been accentuated by a metal clad canopy in anthracite grey with red underside. An area of smooth fibre-cement panels are provided beside the entrance, in anthracite grey colour. The panelling will be customized with a diagonal random pattern at detail design stage.

Ancillary plant is screened or sited away from public areas, where possible. The hot air plenums to the north of the data centre are external to the building itself but read as part of the building. The continuity of materials assimilates the data centre core with more functional aspects of the building.

The potential landscape and visual impact of the proposal has been considered in preparing this application. We refer to the accompanying CGIs prepared by Digital Dimensions for more information. It is noted that there are no protected views on or near the site. The overall massing and height of the structure (ranging from part 3 to part 4 storeys) is proportionate to the existing built form in the area and considerate of the streetscape. The importance of the site location is reflected in the architectural quality of the design presented by RKD Architects. The western elevation and front of house areas act as a landmark to the entrance of Profile Business Park.

The proposal is most prominent in Views 2, 3 and 4 from Nangor Road. Overall, the landscape visual impact of the development is moderate and positive, respecting and enhancing the characteristics and values of business parks in the area. The landscape design assimilates the natural and built environment.

Figure 11 – Proposed CGI front the Roundabout on the Nangor Road at Profile Park

Figure 12 – Top: 3D View of the Data Centre from the north western site corner. Bottom Entrance detail.

The Applicant endeavours to create data centres of a high quality in terms of architectural materials and design. Please consider this CGI from a recently permitted Equinix Data Centre in Ballycoolin.

Figure 13 - Precedent Reference Image – Equinix DB5, Ballycoolin

Building Height

The Development Plan states that the prevailing building height should be maintained and that buildings over 5 storeys should only be located in key identified areas.

In this case, 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 as stated in IE8 Objective 5 of the Plan:

> *"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."*

As illustrated in Figures 14 and 15 below, the data centre ranges in height from c.16m to c.20m to roof parapet level and up to c.24.48m to top of roof plant and flues.

None of the above structures exceeds 25m above ground which has been accepted in the recently approved planning application for UBC data centre in the South Grange castle Business Park (about 900m to the west of the proposed development).

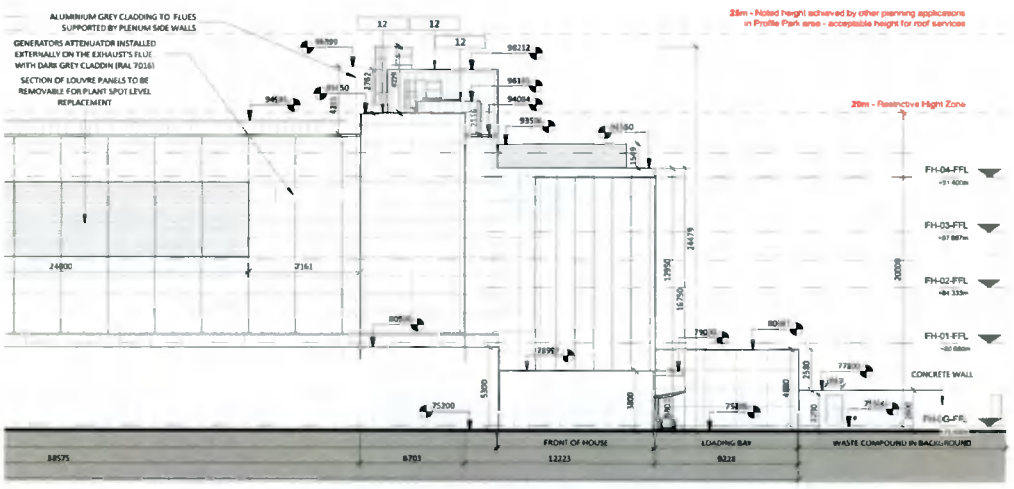

Figure 14 – Partial View of the Proposed North Elevation (Facing Nangor Road)

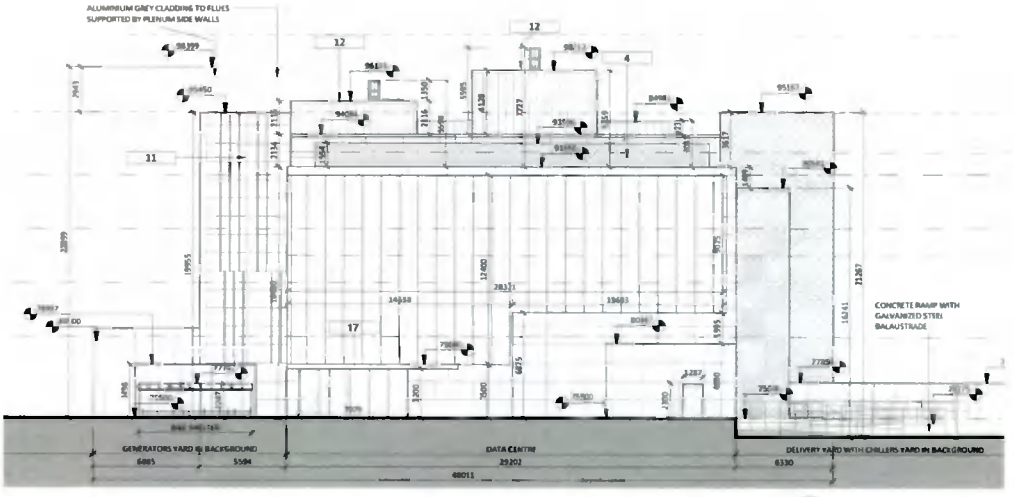

Figure 15 –Proposed West Elevation (facing Falcon Avenue)

It is noted that the proposal was assessed by the Department of Defence in relation to aviation safety and was considered acceptable in principle.

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.

We refer the Planning Authority to the design statement prepared by RKD Architect for more information.

Plot Ratio

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, landscape berming and biodiversity buffer surrounding the site.

Landscaping & Lighting

The proposed building will be set back from the boundaries as much as possible with particular attention to landscape and boundary treatment. The protection of the historic townland boundary and dry ditch is evident in the c.8m wide proposed biodiversity buffer to east and south.

Figure 16 – Landscape Masterplan and Sample Planting

A key feature of the proposed land use is security and landscaping around the perimeter of the facility will be designed to include discreet measures to protect the site. The buffer provides a dual function by encouraging biodiversity while maintaining a high level of security on site.

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 and Parking

The site is currently served by two access points on Falcon Avenue estate road. The subject proposal utilises the existing entrance to the south west for motorists, pedestrians and cyclists. The second access will be closed as part of this application.

The Planning Authority will note the existing entrance to the north on Nangor Road is blocked by a black fence. A grass verge is located on either side of the splay and no pedestrian footpaths connect with Profile Park. The area is outside the control of the Applicant and its removal will be subject of separate discussions with South Dublin County Council in the future.

The Applicant has a sister site which is of similar size, location and accessibility to public transport located in North County Dublin. Based on the numbers of employees and visitors at the sister site, the Applicant estimates that there will be a need for 64 no. car parking spaces with 25 no. spaces for the future development. These spaces will be reserved for staff, visitors and 'clients' of the co-located data halls. Of the 64 spaces provides, 5 no. are accessible spaces and 8 will be provided for electric vehicle charging. 5 no. motorcycle spaces are provided to the north of the building. A dedicated bicycle shelter serving 14 no. spaces adjoins the building entrance.

A proposed pedestrian access gate will be provided on Falcon Avenue connecting DB5 with Profile Park via the landscaped entrance plaza.

Figure 17 – Car Parking Layout Interspersed with Tree Planting

Services Infrastructure

Civil Infrastructure

The new development proposed to connect to the public wastewater and water supply network. Surface water will be attenuated on site via underground attenuation tanks and surface attenuation pond.

We refer the Planning Authority to the drawings and reports prepared by Pinnacle Consulting Engineers for more information.

Services Building Infrastructure

The building shall comprise a data centre, and shall contain associated building services equipment including: plant; switchboards; ups units; electrical distribution systems; power and lighting systems; Air conditioning and ventilation equipment; public health systems and fire detection and protection systems.

We refer the Planning Authority to the enclosed Sustainability and Energy Statement prepared by RED Consulting Engineers. This statement describes the mechanical and electrical systems and associated energy strategy being designed for implementation.

The results of the energy and sustainability assessment conducted by RED predict the following:

- The Energy Performance Coefficient (EPC) was calculated as **0.88**. The calculated EPC of the building was found to be less than the Maximum Permitted Energy Performance Coefficient (MPEPC). The MPEPC is **1.0**.

- The Carbon Performance Coefficient (CPC) was calculated as **0.88**. The calculated CPC being less than the Maximum Permitted Carbon Performance Coefficient (MPCPC). The MPCPC is **1.15**.

- The Renewable Energy Ratio (RER) was calculated as **0.1**, which is considered a significant level energy provision from renewable energy technologies. This target is achieved through use of **heat pumps** and **photo-voltaic panels**.

The document also explains the specific reasoning for the selection of certain technologies and systems so that this facility represents a very low energy solution whilst still retaining a practical method of exporting significant quantities of waste heat for reuse elsewhere.

Low grade waste heat energy is available from the cooling water system serving the data halls. This heat could be recovered via a plate heat exchanger. Presently there is no district heating network in the vicinity of the site. However, should a local district heating network become available the cooling system has been designed so that it can supply to supply heat into the district heating network.

Noise Assessment

A 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) – 38 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 have been assessed for three scenarios including Day to Day Operations, Emergency Operations and Generator.

The noise model predictions conclude the relevant adopted noise criteria are satisfied in all instances. Several mitigation measures will be employed relating to construction noise and vibration including the following:

- Limiting the hours during which site activities likely to create high levels of noise;
- Monitoring typical levels of noise and vibration;
- Selection of plant with low inherent potential for generation of noise and/ or Vibration;

- Placing of noisy / vibratory plant as far away from sensitive properties as permitted by site constraints, and;
- Regular maintenance and servicing of plant items.

We refer to the noise assessment prepared by AWN for more information.

Air Assessment

The assessment was carried out the determine the ambient air quality impact of the site and any air quality constraints that may be present. It was determined that as the proposed diesel generators will be used solely for emergency operation (i.e. less than 500 hours per year) the emission limit values outlined in the Medium Combustion Plant Directive are not applicable to the diesel generators on site.

A number of modelling scenarios were investigated for the purposes of this assessment. Normal day-to-day testing operations were considered as well as emergency operations. Normal testing operations involved the diesel generators operating for up to 1-hour on a weekly basis at 100% load with no more than one generator tested at the same time. Emergency operations was based on 200 emergency hours modelled according to the USEPA methodology.

The modelling study has concluded that provided the stacks are built to a height of 20m and the emission enveloped assumed for this study is complied with then emissions from the diesel generators will be in compliance with the ambient air quality standards which are based on the protection of the environment and human health.

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.

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 Flood Risk Assessment prepared by Pinnacle for more information.

Waste Disposal

All aspects of waste arising from site clearance and construction works have been considered as part of the proposal. We refer to the Operational Demolition and Construction Waste Management Plan prepared by Pinnacle accompanying the application.

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.

8 National Planning Policy Context

8.1 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.

8.2 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 proposal creates a compact and efficient development that utilises existing site services and road infrastructure.
- As part of the masterplanning exercise, the second data centre (subject of a separate application) has been considered as part of the design process.
- 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.

8.3 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.

9 Local Planning Policy Context

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 is due to be published in July 2021.

9.1 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.

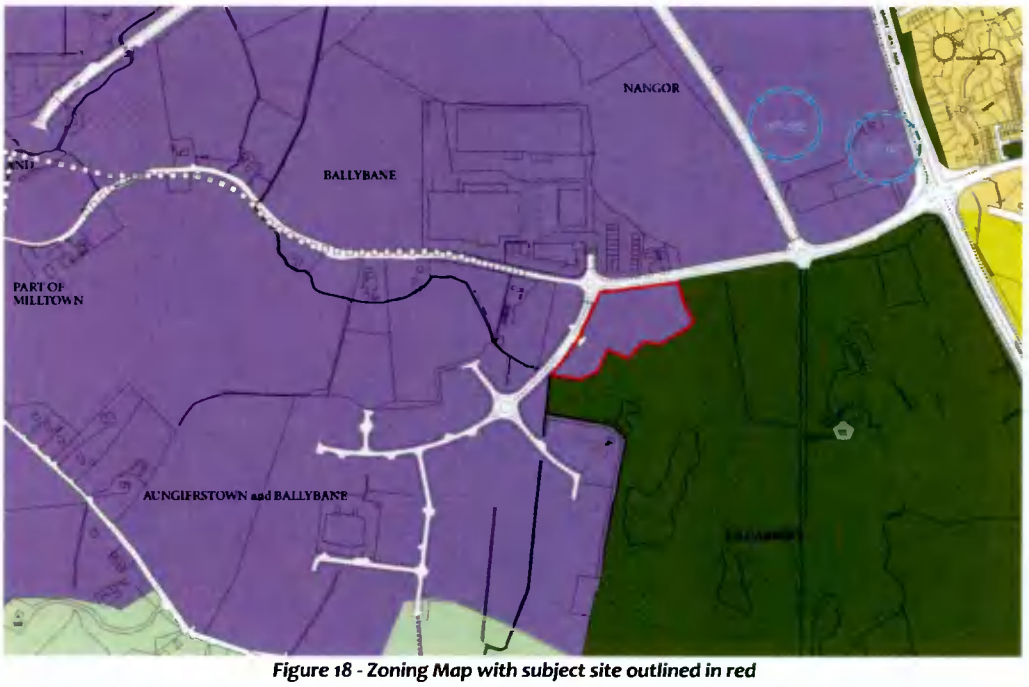

Figure 18 - Zoning Map with subject site outlined in red

The Planning Authority is aware of several existing and permitted data centres in the Grange Castle area. As such, data centre use is well established in the area and is supported by the policies and objectives of the County Plan.

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.

9.2 Planning Policy Pertaining to EE Zoned Lands

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.*

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.

Table 3 - Key Principles for Development within Enterprise and Employment Zones

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. Furthermore, the enclosed Planning Sustainability & Energy Statement prepared by RED Consulting Engineers, demonstrates how the proposed development will comply with relevant policies.

9.3 Green Infrastructure

Specific Objectives pertaining to green infrastructure are as follows:

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 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.*

G2 Objective 6: *To protect and enhance the County's hedgerow network, in particular hedgerows that form townland, parish and barony boundaries, and increase hedgerow coverage using locally native species.*

G2 Objective 7: *To incorporate items of historical or heritage importance in situ within the Green Infrastructure network as amenity features.*

The proposal supports the above objectives through the protection and enhancement of the existing townland boundary (hedgerow and ditch) including the 8m wide biodiversity buffer and creation of a parkland setting through extensive tree/shrub planting, berming and attenuation areas.

9.4 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 will be provided through a directly metered 10kV supply from the local energy provider ESB Networks. Emergency back-up power will be provided by the generators. 5 no. external generators including 1 maintenance/temporary generator are provided in the generator yard. Internally, 4 no. generators are contained in the electrical plant room at second floor level.

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.

9.5 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 design 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.

9.5.1 EIAR Screening

EIA comes from EU environmental policy. The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. Directive 2011/92/EU has been amended in 2014 by Directive 2014/52/EU. Together these comprise the EIA Directive.

The EIA Directive aims to ensure a high level of protection for the environment and human health. It requires that an assessment of the likely significant effects a project will have on the environment is carried out, where relevant, before development consent is given.

The EIA Directive is transposed into Irish legislation by the Planning and Development Act 2000 (as amended) 3 and the Planning and Development Regulations 2001 (as amended).4 Both the EIA Directive and Irish legislation set out in detail the entire EIA process.

For the purpose of screening, it is considered that the development is sub-threshold under Part 2 Schedule 5 of the Planning Regulations, 2001 (as amended) relating to infrastructural projects.

(a) *Industrial estate development projects, where the area would exceed 15 hectares.*

(b) *(iv) Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.*

A preliminary examination has been undertaken in relation to the nature, size and location of the proposal.

Nature

The site is located on a greenfield site in an established business park known as Profile Park. The site is predominantly made up of compacted bare ground and recolonising bare ground with some hardcore areas identified near the existing entrance. It is not of value to any Annex I or Annex II species or Red listed birds.

The production of construction and demolition waste are considered temporary for the duration of construction and will be managed in accordance with the submitted waste management plan and construction and environmental management plan.

Air and noise emissions arising from the proposal fall within acceptable limits and are managed and mitigated through design processes, as outlined in the accompanying reports prepared by AWN.

Size

The proposed development is c.2.65ha in area. The subject application includes the development of a 3 storey (part 4 storey) data centre with a total floor area of 9,904sqm.

The next phase of development, subject of a separate application will include a second data centre. It is noted that air and noise modelling for the second data centre has been included in the overall assessment of the site.

There is no real likelihood of significant cumulative effects of phase 2 on the surrounding environment.

Location

The Site is not located within or directly adjacent to any Natura 2000 sites. However, the boundaries of the five (5No.) SACs and two (2 No.) SPAs are located within 15km from the Site.

The Baldonnell Stream adjacent to the south western corner of the site, is a tributary of the Griffeen River which discharges into the River Liffey before its final discharge into Dublin Bay.

There are no Natural Heritage Areas (NHA) located within 5km of the Site. No evidence of bat roosting or amphibian presence was detected on site.

The site is considered low ecological value. 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.

The established hedgerow and dry ditch along the east and southern boundaries will be retained and enhanced through landscape and protected species enhancement measures, where possible. An 8m wide biodiversity buffer will protect and maintain the area.

The Natura Impact Statement accompanying this application 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.

We refer to the EIAR Screening Statement prepared by Malone O'Regan accompanying this application, for more information.

9.5.2 Natura Impact Assessment

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. The potential for adverse effects on Natura 2000 sites and qualifying features of interest within a 15km radius of the site have been examined in detail.

The site is not located within or directly adjacent to any Natura 2000 sites, however, the boundaries of the five (5No.) SACs and two (2 No.) SPAs are located within 15km from the Site.

Six (6No.) sites were screened out given the lack of impact pathways and the distance separating the Site from the Natura 2000 sites - Glenasmole Valley SAC, Wicklow Mountains SAC, Rye Water Valley / Carton SAC, Red Bog, Kildare SAC and the Wicklow Mountains SPA.

The site is hydrologically connected to the South Dublin Bay SAC, the South Dublin Bay and River Tolka Estuary SPA via the Baldonnel Stream which discharges into the Grifeen 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 ca, 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 Natura 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 will be undertaken to avoid impairment to water quality.

In terms of 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 Natura 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 Alternatives Solutions) is not considered necessary.

We refer to the Natura Impact Statement prepared by Malone O'Regan accompanying this application, for more information.

9.6 Parking Provision

The Development Plan does not provide car or bicycle parking requirements for data centre use. Maximum car parking requirements for development on lands zoned enterprise and employment is 1 per 100sqm (warehouse) and 1 per 50sqm (office/manufacturing).

Having regard to relatively low employment figures on site (14 no. permanent staff, up to 6 no. contract staff and 44 no. visitors) combined with access to bus and rail transport nearby, parking provision of 64 no. spaces is considered acceptable.

The overall layout includes parking provision for the future data centre to the south west of the site (subject of a separate application).

Electric charging spaces are provided at a rate of 12.5% (8 no. spaces) of all parking spaces, exceeding the 10% requirement outlined in the Plan. 5 no. accessible spaces are provided proximate to the building entrance and landscaped plaza.

Similar to car parking requirements above, data centre use does not have a specific bicycle parking requirement and the number of permanent staff shall be used to inform the quantum provided. 14 no. permanent staff are estimated on site and this is reflected in the bicycle shelter adjoining the building entrance which serves 14 no. bicycle spaces. The overall quantum of parking is based on the Applicant's experience of other data centres across the Dublin region.

9.7 Services Infrastructure

Specific Objectives pertaining to water services are as follows:

IE2 Objective 3: *To maintain and enhance existing surface water drainage systems in the County and promote and facilitate the development of Sustainable Urban Drainage Systems (SUDS), including integrated constructed wetlands, at a local, district and County level, to control surface water outfall and protect water quality.*

IE2 Objective 5: *To limit surface water run-off from new developments through the use of Sustainable Urban Drainage Systems (SUDS) and avoid the use of underground attenuation and storage tanks.*

In response to the objectives above, sustainable drainage systems in the form of attenuation tanks and pond, use of permeable asphalt paving and extensive landscaped green areas help to minimise surface run-off to public network.

10 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 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 development will be powered from national grid via a 10kv supply provided by ESB with supplementary power 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. The above measures seek to meet the Council's objectives at climate change adaptation.
- The global demand for data storage is growing rapidly. With increasing levels of online activity, data centres are considered essential infrastructure that facilitate safe information storage, management and distribution for businesses and individuals alike. ICT enables a more efficient way of working and learning, facilitating remote access while also reducing the need to travel thus contributing to a more sustainable and efficient environment.
- 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.