

Planning Application

Design and access statement

DUB 13- Falcon Avenue

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Figure 1 - Development Plan

1. Introduction

This Design Statement refers to the planning application for a proposed Data Centre called DUB 13 (Figure 2, outlined in red). Part of a logical continuation of the previously permitted development Ref: SD21A/0241, lodged with SDCC on 31st August 2021.

Building DUB 13 is located on a triangular piece of land bounded by Falcon Avenue and New Nangor Road, which influenced the rational around the site selection and the building location.

The Design Statement should be read as part of the full suite of documents and drawings submitted for this Planning application. It documents the application's compliance with the principles contained within the South Dublin County Development Plan 2022-2028.

Appendix A contains a Drawing List indicating the full list of architectural drawings submitted with this application.

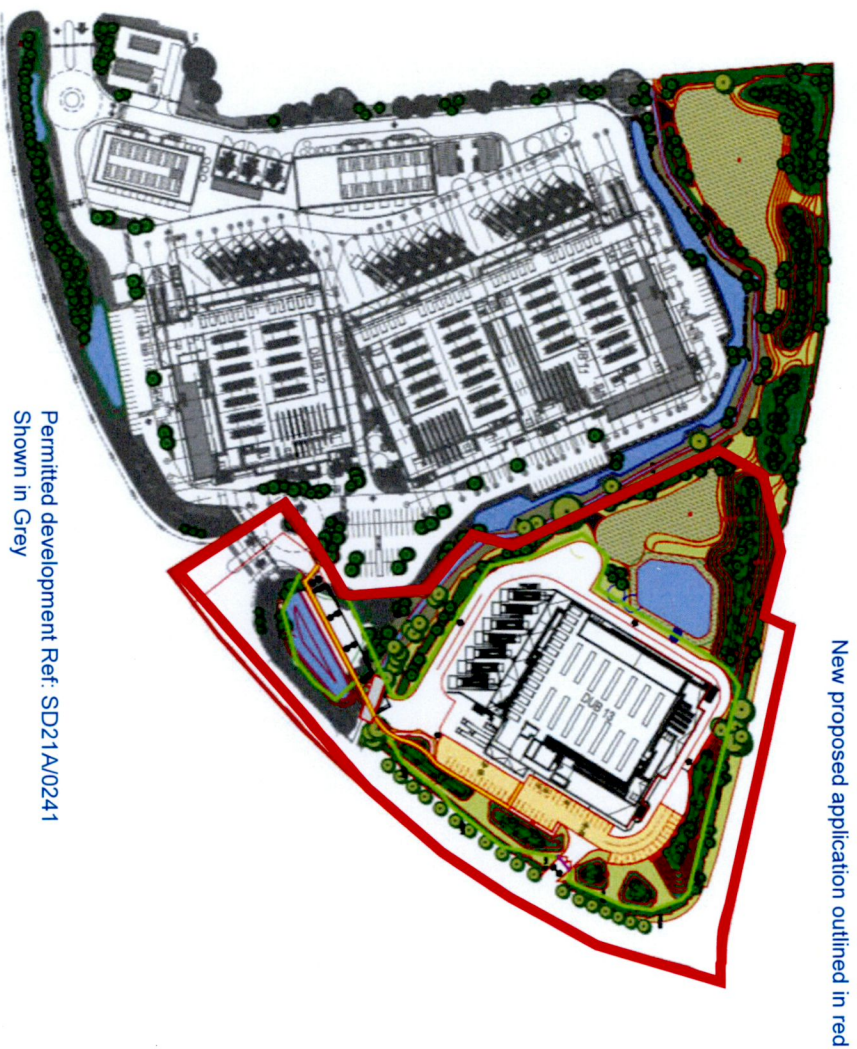


Figure 2 - Campus Plan

2. Zoning

ZONING

Located within an industrial area, where multiple companies including Microsoft, Amazon, Google, Cyrus One, Edge Connex and Digital Reality have operational data centers within the immediate vicinity of the site, with a further number under construction.

The site is contained within lands zoned as Objective EE, "To provide for enterprise and employment related uses." in the South Dublin County Development Plan 2022-2028. The Development Plan identifies data centres as being open for consideration under the zoning.

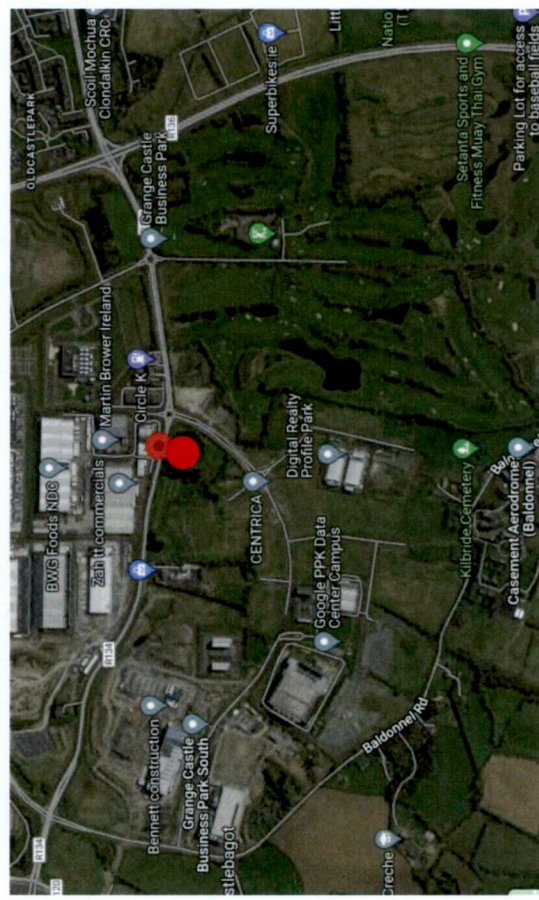


Figure 3 - Site Location's Surrounding Developments

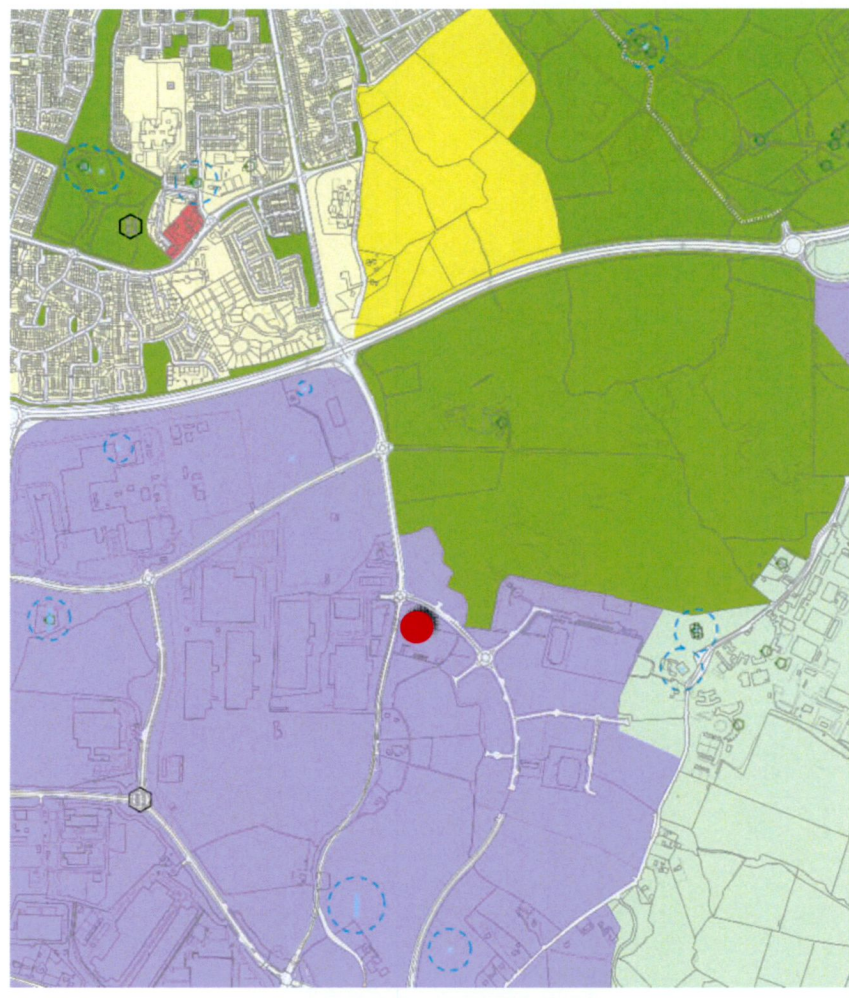


Figure 4 - Site Zoning, per South Dublin County Council 2022-2028 Plan

3. Site Location and Context -The Plan Approach

SDCC DEVELOPMENT PLAN QDP2

In line with SDCC Development Plan QDP2, the site has been reviewed to ensure the achievement of successful and sustainable neighbourhoods have been addressed under the following overarching principles:

- The Context of an Area
- Healthy Placemaking
- Connected Neighbourhoods
- Public Realm
- The Delivery of High-Quality and Inclusive Development
- Appropriate Density and Building Heights
- Materials, Colours and Textures
- Mix of dwelling types(excluded due to the nature of the development.)

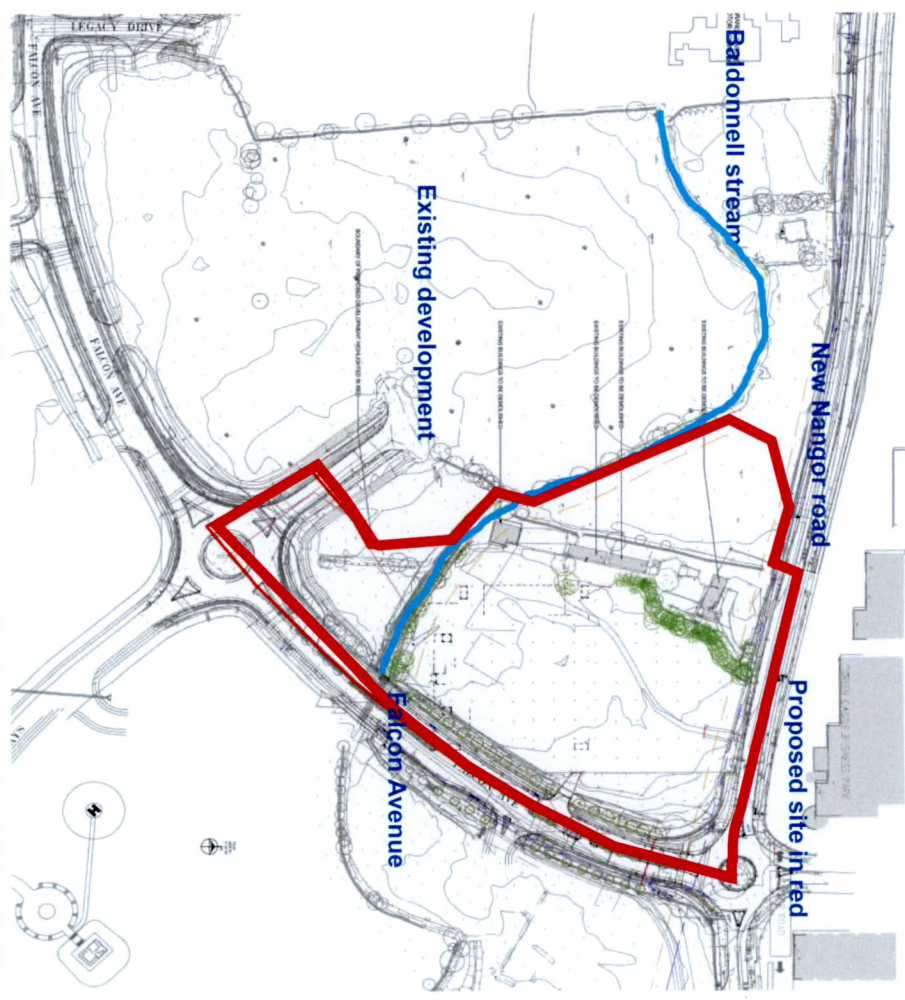


Figure 5 - Existing Site Plan, with Proposed Site outlined in Red

3. Site location and context of the area

EXISTING SITE

The site, area of 3.79 hectares, is undeveloped land within the Profile Park Business Park, a privately enclosed Business Park of 40.5 hectares with controlled access. Situated on a corner site, it overlooks the roundabout accessing Kilcarbery Park, to the North, and Falcon Avenue, the main route through Profile Park, which in turns forms the Eastern and Southern boundaries.

PREVIOUS LAND USES

The land is undisturbed agricultural land, with a recently occupied two-storey house and outbuildings fronting New Nangor Road. According to recent archaeological investigations in the Grange Castle area, there is no evidence of any previous settlement within the site.

ADJACENT LAND USES

The lands beyond Falcon avenue are undeveloped, however have been zoned for Objective EE under the South Dublin County Development Plan 2022-2028. There are multiple Data Centres and industrial buildings along the New Nangor Road as well as in the adjacent Grange Castle Business Park.

The land to the West has been granted planning under application SD21A/0241 with the lands further west occupied by Bolands Garage, a vehicle repair business.



Figure 6 – Photograph of Neighbouring Building in the Immediate Vicinity of the Proposed Development



Figure 7 – Photograph of Neighbouring Building in the Immediate Vicinity of the Proposed Development



Figure 8 – Photograph of Neighbouring Building in the Immediate Vicinity of the Proposed Development

4. Healthy Placemaking Landscaping

The landscaping and planting strategy is a continuation of the previously approved strategy, SD21A/0241, for the campus. To assist with the enhanced SuDS requirement of the site, the attenuation ponds sizes have been increased, a minor adjustment to the original application.

It is proposed to use natural screening solutions, including soft landscaping and a SuDS drainage design, which offer benefits to ecology and the environment, which underpin Chapters 7 and 8 of the County Development Plan. These are described in further detail in the Civil & Structural Engineers Report, prepared by Pinnacle Ireland, and the Landscape Report and drawings, prepared by Kevin Fitzpatrick Landscape Architecture.

The view of the Data Centre is largely to be screened behind large berms, with planting and attenuation ponds creating a wildlife habitat. With select views available from Falcon avenue, as per Figure 9.

Landscape screening



Figure 9 – Site Plan showing the Landscape Screening and Views into the Site

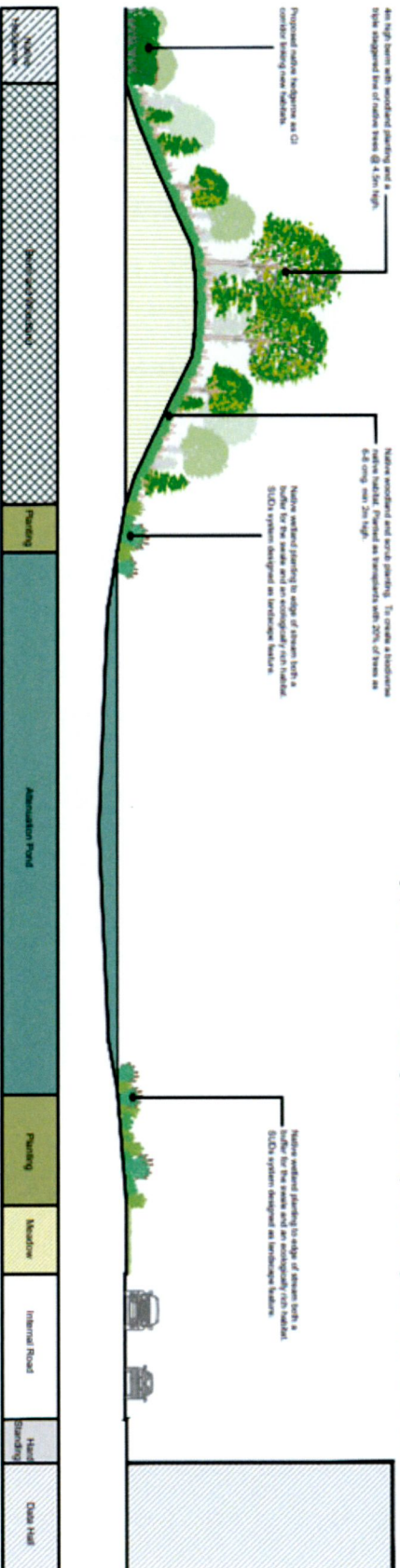


Figure 10 – Extract of KFLA's landscape screening detail

5. Enhancement Of Green Infrastructure

The Design Team have undertaken a thorough review of the site layout to minimize any alteration to the Baldonnel Stream.

To protect the stream and provide suitable habitats for biodiversity a minimum of 10 meter riparian margin has been preserved along the length of the stream measured from the top of each bank.

A culvert is being proposed across the stream, adjacent to Falcon avenue to provide access for heavy vehicles and cranes as required to install and remove rooftop plant, which would be kept separate from daily office traffic.

See Green Infrastructure Plan – Drawin No. 105 – Prepared by Fevin Fitzpatrick Landscape Architecture For further information.

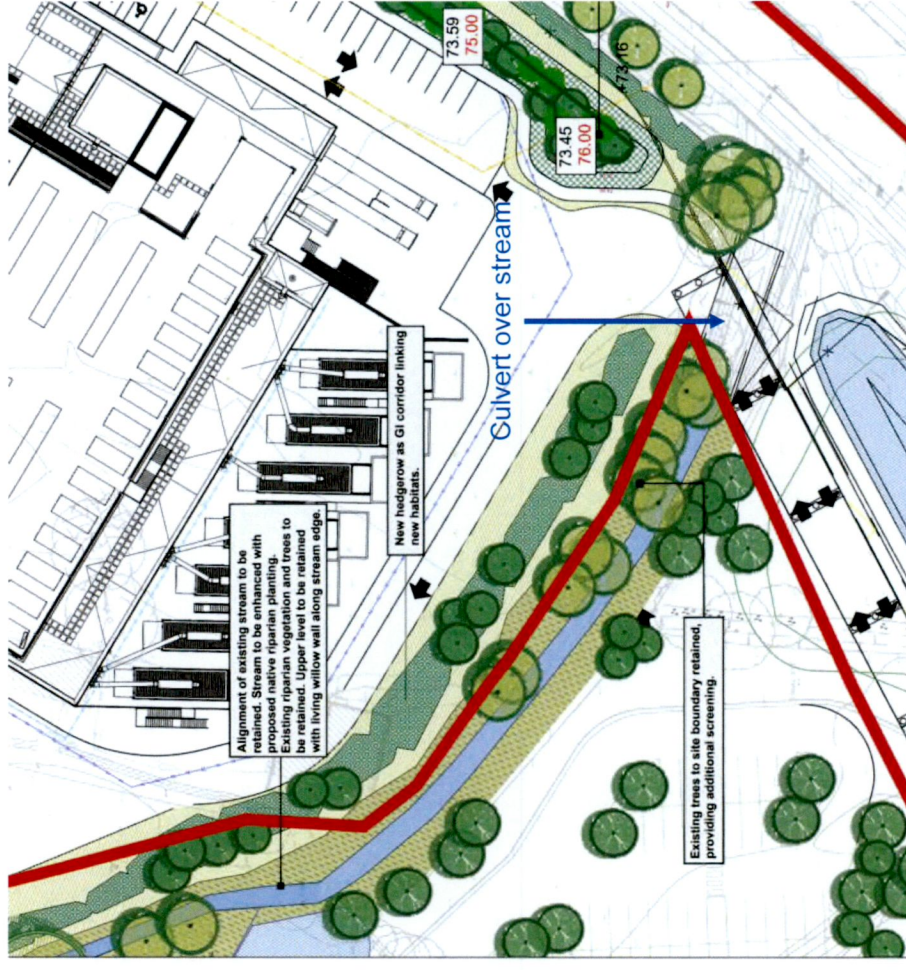


Figure 11 – Extract from Site Layout showing the proposed Protection of the Baldonnel Stream

6. Visual Impact of the Development

Through the utilization of planting and berming the view of DUB 13 is greatly screened from the New Nangor road. Gabion walls have been introduced along the internal road, to the New Nangor Road, which assists to increase the height of the berm and provide greater screening.

Figures 13 and 14 show the existing and proposed views of the Northwest corner of the building, where the external stair is expressed as a semi-transparent element with a green wall growing on same.

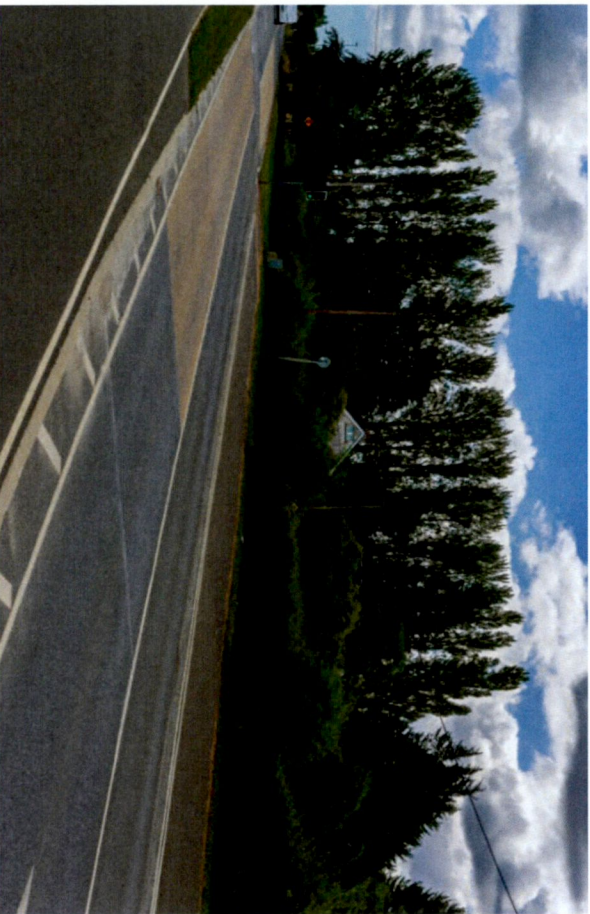


Figure 13 – Existing View to the Northeast corner of the Site

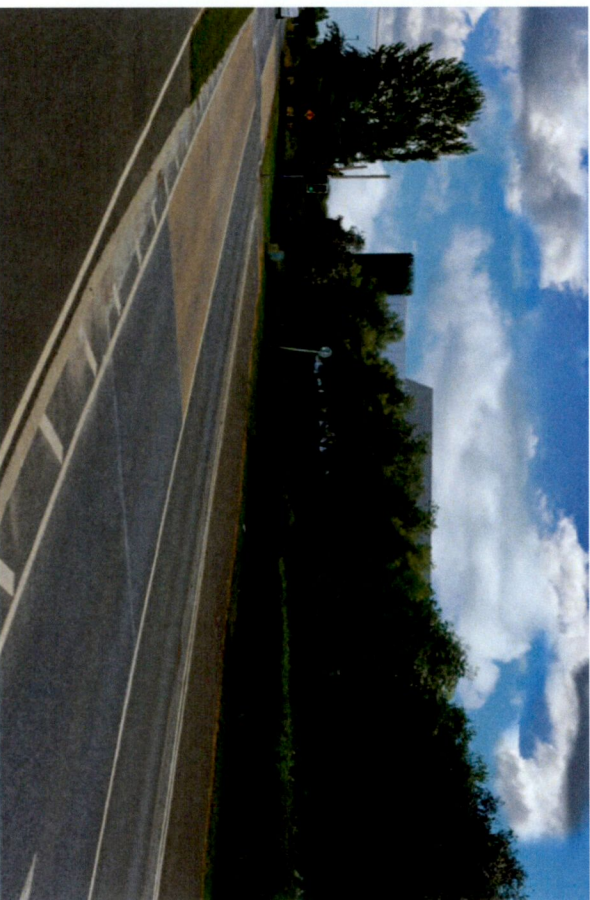


Figure 14 – Proposed View to the Northeast corner of the Site and DUB 13 Building



Figure 12 – Extract of KFLA's landscape gabion wall screening detail.

6. Visual Impact of the Development

Localised views into the site have been created from the roundabout and along Falcon Avenue, by reducing the berm heights and less dense tree planting.

Select views of the front façade are available from the entry to Profile park and along Falcon avenue. This allows the passerby to catch glimpses of the building façade and have a direct connection with the glazed entrance.

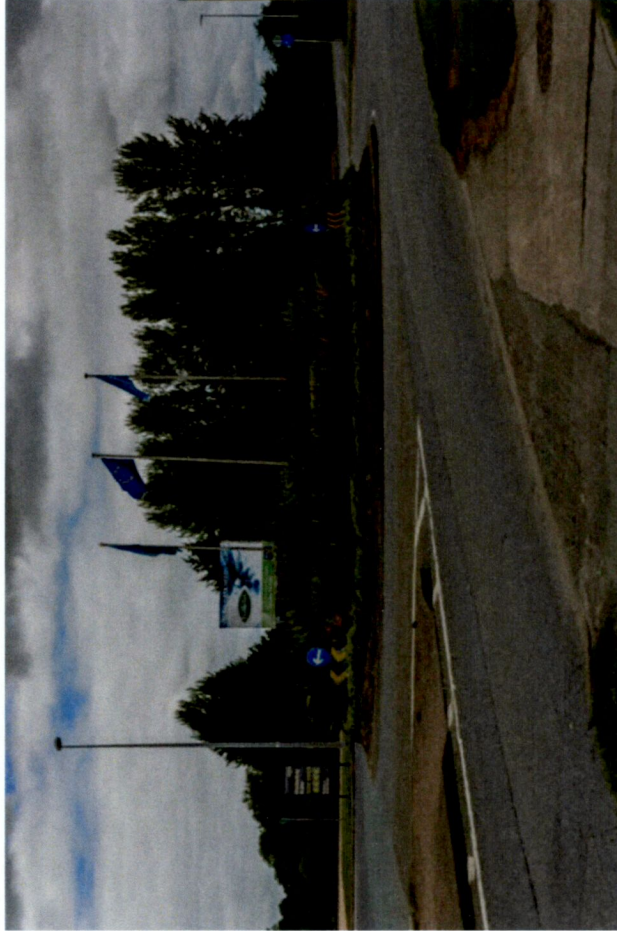


Figure 15 – Existing View from the Roundabout and Falcon Avenue



Figure 16 – Proposed View from the Roundabout and Falcon Avenue

7. Connected Neighbourhoods

ALTERNATIVES TO THE CAR

QDP5 Objective 2: To promote measures to improve pedestrian and cycle safety and convenience, including new or enhanced permeability links within all areas and pedestrianisation within identified centres.

The proposed layout allows the use of sustainable forms of transport such as walking, cycling and public transport, with clearly defined footpaths and cycleways linking all buildings and public areas. The location of public spaces are close to public transport connections and interchanges or other major linkages.

The scheme has been laid out to provide easy access for staff to the existing infrastructure on the New Nangor Road.

BUS ROUTES

The site is well served by public transport with Dublin Bus stop number 3415 located on the New Nangor road. From here buses run to and from Dublin city centre every 12 minutes throughout the day.

CYCLING

The site is also well connected to existing cycling infrastructure along the New Nangor Road.

34 bicycle parking spaces have been provided within the scheme in two dedicated shelters. Shower facilities have also been provided within the proposed building should the staff require them.

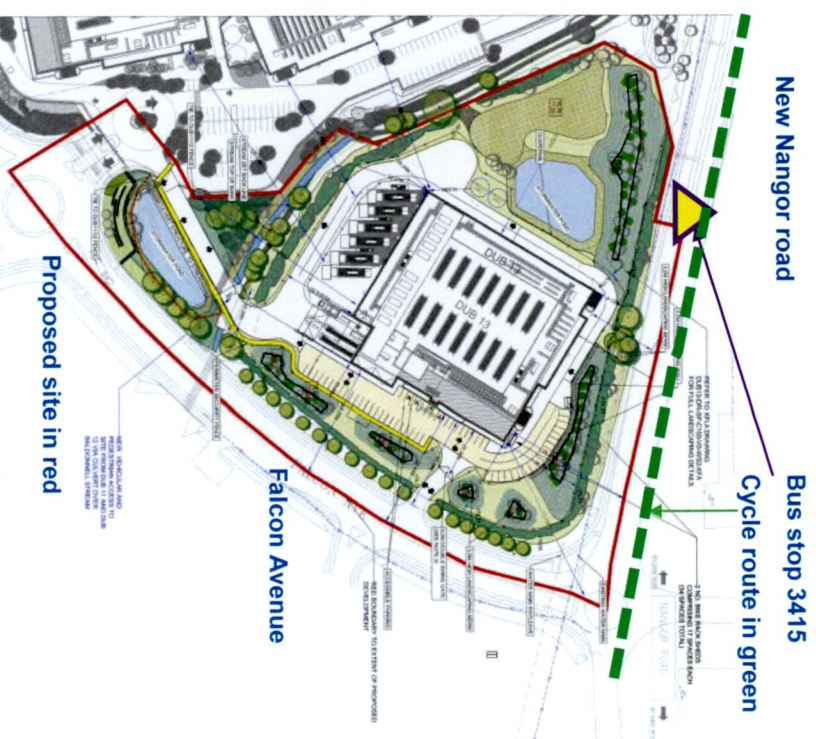


Figure 17 – Site Layout showing the location of Cycle Routes and Bus Stops in Locality of the Proposed Site

9. Materials, Colour, Texture and Massing

SDCC DEVELOPMENT PLAN QDP3

Policy QDP11: Materials, Colours and Textures Promote high-quality building finishes that are appropriate to context, durable and adhere to the principles of sustainability and energy efficiency.

QDP11 Objective 1: To require the use of high quality and durable materials and finishes that make a positive contribution to placemaking.

QDP8 Objective 1: To assess development proposals in accordance with the Building Height and Density Guide set out in Appendix 10 of this Development Plan and associated planning guidelines.

MASSING

The site is located within the area zoned Objective EE, with typical buildings in this area being 2 storey industrial units, with heights ranging from 12m to 20m.

The main mass of the proposed building has a prevailing height of 12m, with plant rooms and chimney flues extending upwards to 22m. The same heights that were permitted in development Ref: SD21A/0241. There are no increased heights beyond the norm proposed in this development.

TPOLOGY

The building typology within Profile Park and surrounding areas, is long format industrial building, typically two story, with some three-story accentuation. Typically set back from the main road behind a security barrier. With a simple utilitarian design of flat roofs, cladding panels and carparking out the front.

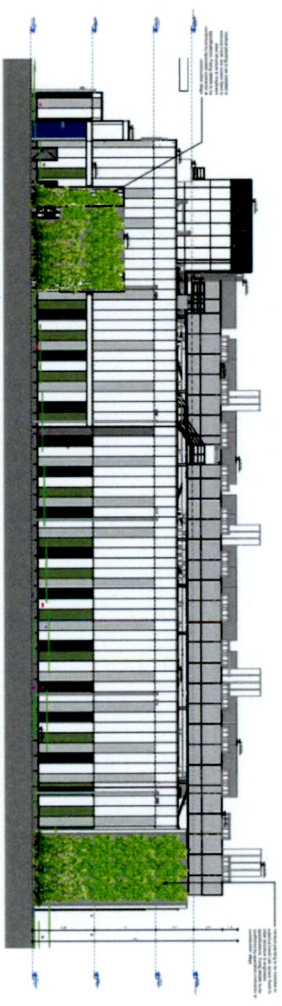


Figure 19 – Elevation To New Nangor Road



Figure 20 – Elevation To Falcon Avenue

9. Materials, Colour, Texture and Massing

The overall scale of the building has broken down through the expression of each separate component using a variety of materials, colours and massing.

The glazed entrance area has been extruded out from the main mass and emphasized with a horizontal overhang. With sedum "green" roofs introduced over the office and non-critical areas of the Data Centre.

Whilst the stair cores have been expressed with curved perforated metal mesh panels, which will allow planting to grow up same becoming green walls, adding texture and visual interest, as well as contributing to the biodiverse habitat of the landscaping. This gives more visual interest and affords staff and visitors an attractive view over the landscaped stream and berms.

In addition, we have introduced living Green Walls in front of the loading bay and the generator compound, to further increase biodiversity and soften the building at street level.

The main façade is proposed to be made up of high-quality insulated panels with a powder-coated finish. Using a rhythmic colour pattern of grey/green/white to the façade, strengthening the visual impact at ground level, whilst diminishing as the elevation progresses through the first level, eventually reverting to a solid white cladding at parapet level, reducing the visual bulk.

Further broken up through the introduction of a canopy at first floor level, breaking up the visual massing at street level.

The rooftop plant has been recessed back from the roof parapet and screened with a dark grey mesh panels.



Figure 21 – Glazing To Be Used On Front Entrance



Figure 22 – Green Wall To External Stair Core



Figure 23 – Example of Proposed Green Wall System



Figure 24 – Proposed Grey Metal Panels Proposed



Figure 25 – Example of metal Panel

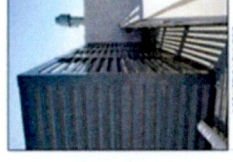


Figure 26 – Screening To Plan on Roof

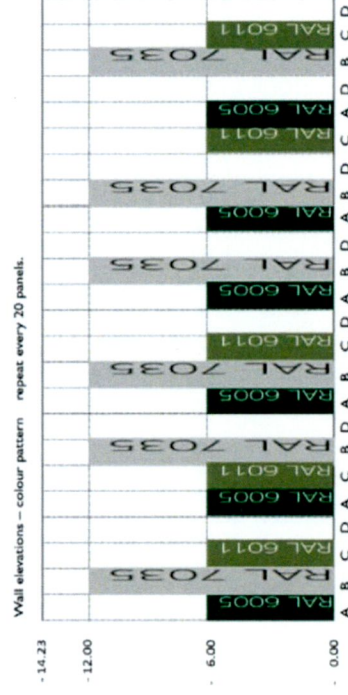
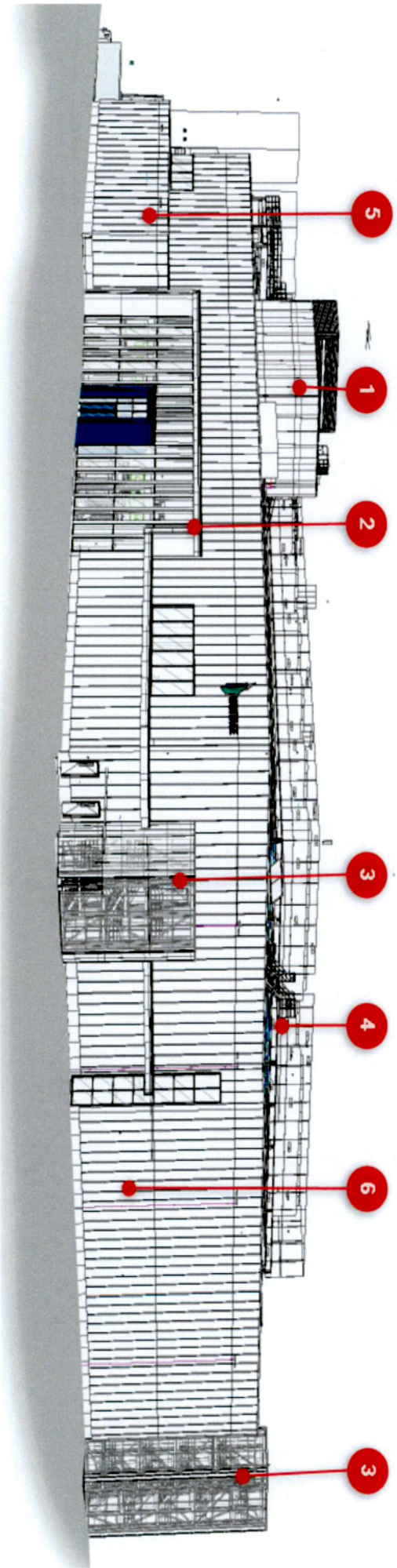


Figure 27 – Proposed Panel Design

9. Materials, Colour, Texture and Massing

1. Plant room recessed from the front façade and expressed as an individual element.
2. The scale of the main façade and side are reduced by a horizontal canopy which corresponds to the change in colours of the façade and encloses the glazed curtain walling.
3. Escape staircase expressed as individual transparent elements and softened with planting climbers.
4. Roof plant recessed and screened
5. Office and storage elements on the ground floor projected out and softened with a green wall.
6. Darker coloured panels at low level with white panels above.



10. Basis of Design

DESIGN BRIEF

Every new project follows a defined sequence of steps. The starting point is an appraisal of the opportunities and constraints of the development site, both physical and regulatory against the development objectives of the investor.

Below is a re-cap of the design process leading to the original application.

DEVELOPMENT OBJECTIVES

The specific development objectives for this development are to:

- Add to the National IT and data storage infrastructure;
- Create employment;
- Provide additional data modules of the Vantage hyperscale model;
- Create a high-quality Business Park environment;
- Increase biodiversity;
- Enhance the ecological value of the Baldonnel Stream; and
- Increase capacity of the local electrical grid network.

ALTERNATIVE OPTIONS

Three alternatives were considered:

1. The 'Do-Nothing' alternative;
2. Alternative locations and uses; and
3. Alternative design/layouts of the proposed development.

1. Do-Nothing:

This option was briefly considered and rejected on the basis that

- The land under the Local Plan is intended to be re-purposed to an Employment Use
- A consent is already in place for a similar storage use
- The area has excellent fibre connectivity
- Do-nothing does not meet any of the Developer's objectives.

There would be a substantial loss of economic opportunity value

10. Basis of Design

2. Alternative Locations

No alternative sites have been considered by the Applicant for the following reasons:

- The site is owned by the Applicant and therefore the Applicant dismissed alternative sites which are the property of a third-party;
- Alternative sites in the Dublin area may lack adequate power distribution;
- Alternative sites in the west of Ireland may lack fibre connectivity;
- The site is located within an area identified in the South Dublin County Development Plan 2022-2028 as an area for enterprise and employment uses (as previously stated);
- The site would provide a key development opportunity to contribute to the regeneration of an under-utilised site and with the land use identified in ROP 8.25;
- The site sits within a wider area dominated by data centres which has good network provision and fibre suppliers, that suit the needs of the site and is thus an ideal location for the proposed development to be situated;
- There is no evidence of site contamination; and
- The level terrain is suitable for large floorplate buildings.

3. Alternative Design & Layouts

Data Centres are in general, simple buildings with complex and dense services for IT, power distribution and mechanical cooling, all requiring a high input of engineering design and project management. This experienced developer has evolved standard designs to achieve consistently high-quality reliable facilities. Repetitive design helps improve safety at all levels for construction and management. A characteristic of the Vantage model is a single data-hall module with associated plant that can be replicated on a global basis.

This forms the building block for evaluating each site, matching the business case and achieving a best-fit outcome. The steps on the next page illustrate how this process has been applied to the Profile Park site.

11. Universal design

QDP7 Objective 8: *To promote and support a Universal Design Approach to residential and non-residential development – having regard in particular to the universal design principles and guidance in relation to Buildings for Everyone, Housing and Shared Space as promoted by the Centre for Excellence in Universal Design at the National Disability Authority – ensuring that all environments are inclusive and can be used to the fullest extent possible by all users regardless of age, ability or disability consistent with RPO 9.12 and 9.13 of the RSES.*

The Universal Design concept of creating an environment that can be used by all people, regardless of their age, size, disability or ability has been applied to this development from first principles. . .

The design and layout of the scheme, public realm and community infrastructure have incorporated universal design insofar as is feasible, having regard to the provisions of the National Disability Authority 'Building for Everyone: A Universal Design Approach - Planning and Policy' (2012).

The following provisions have been made throughout the scheme

- Provision of designated accessible parking and set down points for people with disabilities;
- Level pedestrian routes with sufficient width;
- Use of surfaces suitable for wheelchairs and buggies;
- Use of tactile and blister paving;
- Use of colour contrast, particularly in the public realm;
- Ensuring level access to buildings from the street that is suitable for wheelchairs and buggies;
- Toilets and showers for disabled staff;
- DDA compliant lifts (see GA drawings); and
- Ambulant disabled stairs.

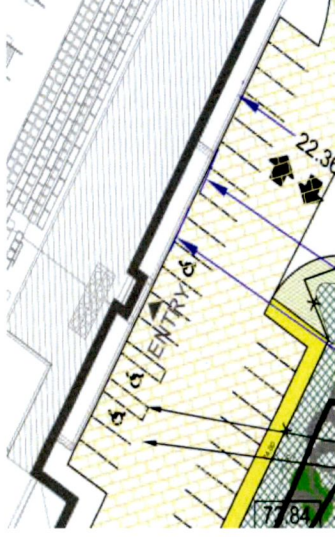


Figure 29 – Disabled Parking at Primary Entrance



Figure 30 – Accessible Toilets and Ambulant Disabled Toilets on Ground Floor. In Close Proximity to Lift

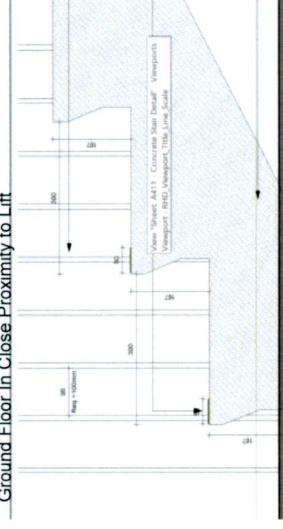
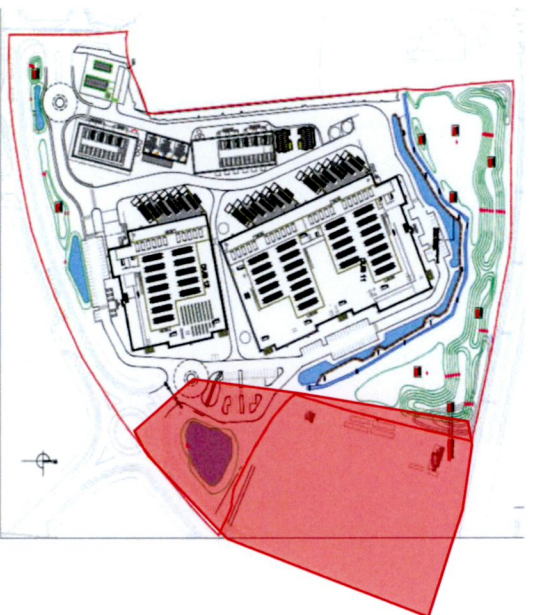


Figure 31 – stairs in full compliance with TGD Part M, K and B

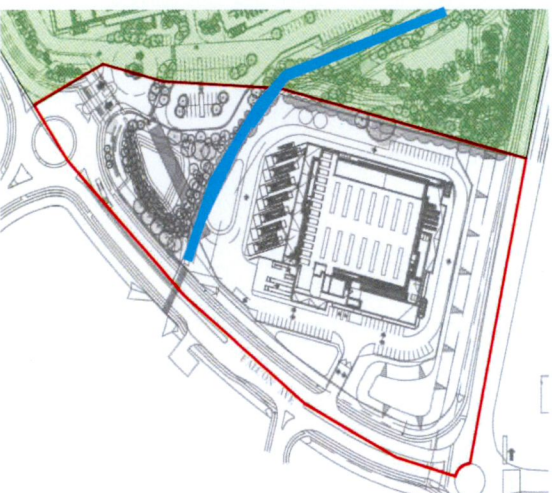
12. Design Evolution

Step 1 – Planning Application
lodged on adjacent site for
DUB11/DUB 12 and MFGP



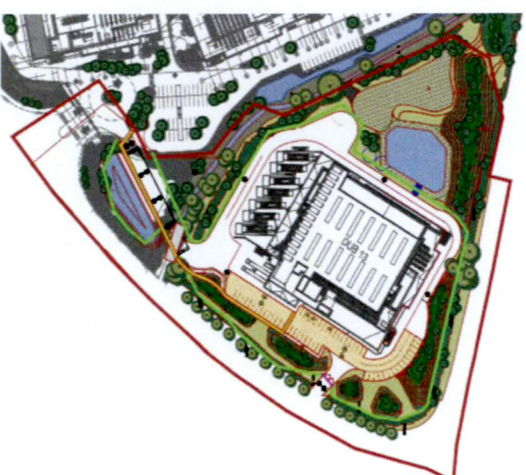
Outcome: granted scheme on adjacent land by client Ref: SD21A/0241 Proposed development will complete the final parcel of land at the Northwest Entrance to profile park.
Subject site in red hatch.

Step 2 – Extension of Campus
Option 1



Outcome: Scheme 1 had the building orientated parallel to the New Nangor road
Fail: The surrounding road would impinge on the riparian strip along the Baldonne Stream

Step 3 – Proposed Option 2



Outcome: The building is reorientated to run parallel to Falcon Avenue, this achieves a frontage onto Falcon Avenue and preserves the riparian strip along the stream.
The site is extended to create a new attenuation area to the North west

13. Phasing of the Campus

The overall campus will be built in three phases, starting with the previously granted planning permission buildings. The sequence will start with site infrastructure, the North Multifuel Generation Plant and the associated landscape works, to give the maximum time possible for the new green planting to mature. DUB11 will be the first Data Centre built, with a phased interior fit out of the Data Modules to match customer demand.

Phase 2 sees construction of the DUB12 Data Centre and South Multifuel Generation Plant.



Figure 32 – Site Phasing at Completion of DUB11 Building



Figure 33 – Site Phasing at Completion of the DUB12 Building

13. Phasing of the Campus

Phase 3 sees the construction of the DUB13 Data Centre and any remaining siteworks.



Figure 34— Site Phasing upon Completion of DUB13 Building

Drawing List – Architectural

DUB13-DR-ZZ-A020-V0-PL-HYP-SITE LOCATION MAP
DUB13-DR-00-A100-V0-PL-HYP-EXISTING SITE PLAN
DUB13-DR-00-A105-V0-PL-HYP-PREVIOUSLY APPROVED SITE PLAN
DUB13-DR-00-A106-V0-PL-HYP-PROPOSED SITE PLAN
DUB13-DR-00-A107-V0-PL-HYP-ARCHITECTURAL PROPOSED FENCING PLAN
DUB13-DR-ZZ-A108-V0-PL-HYP-PROPOSED CONTIGIOUS ELEVATION
DUB13-DR-00-A150-V0-PL-HYP-DUB13 GROUND FLOOR - PLANNING
DUB13-DR-01-A151-V0-PL-HYP-DUB13 FIRST FLOOR - PLANNING
DUB13-DR-02-A152-V0-PL-HYP-DUB13 CHILLER DECK - PLANNING
DUB13-DR-ZZ-A201-V0-PL-HYP- DUB13 ELEVATIONS - EAST AND WEST
DUB13-DR-ZZ-A202-V0-PL-HYP- DUB13 ELEVATIONS - NORTH AND SOUTH
DUB13-DR-ZZ-A205-V0-PL-HYP- DUB13 PROPOSED SIGNAGE DRAWING
DUB13-DR-ZZ-A250-V0-PL-HYP- DUB13 PROPOSED BIKE RACK
DUB13-DR-ZZ-A300-V0-PL-HYP- DUB13 SECTIONS A-A, B-B
DUB13-DR-ZZ-A301-V0-PL-HYP- DUB13 SECTIONS C-C
DUB13-DR-ZZ-A800-V0-PL-HYP- EXISTING HOUSE DEMOLITION DRAWIN
DUB13-DR-ZZ-A801-V0-PL-HYP- SHED 1 DEMOLITION DRAWING
DUB13-DR-ZZ-A802-V0-PL-HYP- SHED 2 DEMOLITION DRAWING
DUB13-DR-ZZ-A803-V0-PL-HYP- SHED 3 DEMOLITION DRAWING