KAVANAGH BURKE
CONSULTING ENGINEERS

Design Statement

to accompany

Planning Application for an Amendment to a Previously Permitted Industrial Scheme (South Dublin County Council Reg. Ref.: SD19A/0407). at

Site C,
College Lane, Greenogue
Rathcoole, Co. Dublin.

Job No:	D1658
Client:	Jordanstown Properties Ltd.
Date:	July 2021
Local Authority:	South Dublin County Council
Revision:	PL3

Calmount Park, Ballymount, Dublin 12.

Tel: 353 1 4500694
Fax: 353 1 4264340

www.kavanaghburke.ie

Ulick Burke & Associates Limited.
Registered In Ireland No: 233579.
V.A.T. Registration No: IE 82335791

Registered Address: Unit G3, Calmount Park, Ballymount, Dublin 12.
Directors: U.Burke, R.Burke, P.Kavanagh

Table of Contents:

I. Introduction

This document sets out a Design Statement as prepared by Kavanagh Burke Consulting Engineers in conjunction with Thornton O'Connor Town Planning and JBA Consulting in regard to the proposed alterations to a granted planning permission for warehouse development at Site C, College Lane, Greenogue, Rathcoole, Co. Dublin. The original planning permission as granted by South Dublin County Council under planning file Reg. Ref. SD19A/0407 was never implemented on site, therefore this application exists as a request for alterations to this permission prior to any commencement of construction on site.

The above is important as the general nature of the development remains as per the previous permission, i.e. warehousing development. This Design Statement is an updated version of that previously submitted for the granted warehouse, while considering the alterations set out in the current planning alteration description.

Adjacent to this site, 2 No. large warehousing blocks, (referred to as Blocks A & B) were granted planning permission and are now under construction. South Dublin County Council Planning Permission Reg. Ref. SD18A/0265 details these granted adjacent developments. The proposed unit will be similar in external finishes to both the granted blocks A & B and similar to the previously granted Block C on the subject site.

Some recently completed and occupied similar units are as follows;
Site 665 – Reg. Ref. SD15A/0274,
Site 527 – Reg. Ref. SD18A/0036,
Site 517A – Reg. Ref. SD17A/0016, SD17A/0008 & SD16A/0330.

This document provides further detail on the selection of the subject site and the design of the proposed building.

The *South Dublin Development Plan 2016-2022* sets out that:

> *"Enterprise and employment areas are characterised by a structure that is distinctly different to those of other urban areas. Most industrial estates are characterised by large functional buildings that are set back from the street, extensive areas of hard surfacing and security fences. A number of industrial estates, and in particular newer business parks, incorporate extensive areas of open space to create a more attractive parkland-like setting.*
>
> *The application of many of the approaches contained within the Urban Design Manual or Retail Design Manual may not be applicable in enterprise and employment areas unless the area is a transitional area. A Design Statement (see Section 11.2.1 Design Statements) accompanying development proposals in Enterprise and Employment (EE) zones should address the criteria set out in Table 11.18."*

The purpose of this document is to demonstrate the design principles and concepts that have been considered in the current proposal for a warehousing unit.

II. Rationale for Development and Site Arrangement

The rationale for the development is very similar to the previously granted Unit C (SDCC Planning Reg. Ref. SD19A/0407) to provide 1 No. large scale warehouse unit on appropriately zoned lands (which is essentially an extension of Greenogue Business Park), to accommodate demand for such facilities by employment generating users. The proposed development will further improve the employment opportunities available in the Greenogue Business Park area and will bring associated advantages to the local economy and local community.

The nearest residential dwelling is located 250m to the southeast on lands zoned for Enterprise and Employment. Careful consideration was given to the existing residential amenity in the recently granted planning application for similar units on the adjacent lands (i.e. the aforementioned planning permission, SDCC Reg. Ref. SD18A/0265). Specific separation, earth berms and planting were defined into the granted proposal which will not be altered or impacted on in any way by the inclusion of the proposed Site C development.

The revised design of the current site layout plan submitted with this alteration application has sought to harmonise the proposed building with those previously granted. The subject Site C structure will be located to the rear of the granted Block A, thus Unit C is setback approximately 200m from College Lane and receives a substantial screening from Block A (Block A is now completed – July 2021). The adjacent Block B is under construction and is 80% complete.

The building arrangement and design remains similar to the granted scheme having sought to provide a layout and elevational detail that creates a suitable identity for expanding industrial development in a significant Business Park and major employment node.

The setback nature of the subject site will result in a less prominent building to that of the adjacent Block A & B. The accompanying architectural elevations demonstrate the adjustments made to the original Block C elevations demonstrating the final building appearance when constructed. The overall building height will remain unaltered.

III. Site Analysis

The subject site is located to the southeast of Greenogue Business Park and to the west/south-west of the Aerodrome Business Park, in an established business location in South West Dublin situated in close proximity to the R120 and N7 roadways. The subject lands are zoned 'EE' ('Enterprise and Employment') which has the objective '*to provide for enterprise and employment related uses*'.

Development in the area predominately comprises light industrial and warehouse buildings with surface car parking. There are 2 No. dwelling houses situated adjacent to the greater area of zoned lands. It is noted that the houses are located on lands zoned for Enterprise and Employment uses. We note that one of these houses is due to be demolished as part of another granted warehousing development, SDCC planning application Reg. Ref. SD20A/0258.

The site is located within 300 metres of bus stops on College Road (located between the Greenogue and Aerodrome Business Park) which will facilitate easy access to and from the site, allowing employees to commute to work by public transport. The No. 68 bus serves locations such as Newcastle, Clondalkin, Red Cow, Bluebell Luas, Dolphin's Barn and Dublin City Centre including Camden Street, Aungier Street, Poolbeg Street, College Green, Exchequer Street and South Circular Road.

IV. Built Form and Corporate Identity

Table 11.18 of the *South Dublin Development Plan 2016-2022* states that:

- *"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."*

The subject site is located in a setback arrangement to the rear of recently granted industrial units which are subsequently adjacent to the roundabout forming the entrance to Greenogue Business Park. This location is also in close proximity to Aerodrome Business Park, therefore there are a significant number of industrial buildings of similar scale and form of construction in the locale.

This propsoal has been designed to be uniform with an identity created adjacent to a key entrance to Greenogue Business Park. The design of the warehouse is intentionally simple with a contemporary architectural finish and as such the proposed development can be easily assimilated into the surrounding context on designated enterprise and employment lands, providing an extension to the existing Greenogue Business Park as envisioned by the appropriate zoning of the lands.

The subject building is taller than adjacent Block A however the setback nature of Block C coupled with a specific colour scheme will create a non-intrusive existence for this industrial building in this expanding industrial environment. While taller than adjacent buildings, the overall height remains as per the aforementioned previously granted planning.

Please refer to Section VIII of this document "Design to complement Industrial Typologies in the Local Area" for further discussion on building height.

V. Open Space and Landscape

Table 11.18 of the *South Dublin Development Plan 2016-2022* also states that:

- *"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)."*

A scaled plan has been designed by a chartered landscape architect to illustrate all hard and soft surfaces, boundary treatment and features. Reference to engineering details is supplied. This landscape plan was initially defined for the aforementioned granted planning application for Blocks A & B, this scheme of planting and screening will continue within Site C. This continuity of design will provide uniformity and quality of soft landscaping features throughout the site.

The existing hedgerow (outside the red boundary) has been retained and is shown on the site plan along the southern and western boundaries. The existing hedgerow will enclose the site and reduce visibility for the surrounding residential properties and road users along Tay Lane (L603) looking towards the proposed warehouse. Proposed native woodland and shrub planting is proposed for the western boundary (2.2m wide) and southern boundary (2.5m wide) to supplement existing vegetation along the western and southern boundaries.

Medium height native shrub planting is also being proposed along the northern and part of the eastern boundary to match species previously included in planning applications for adjacent Sites A & B. Also, *Tilia cordata* 'Greenspire' has been proposed along the eastern boundary to match the existing species along the estate access road.

Pollinator-friendly shrubs and ornamental native tree planting have been included in every fifth car parking space, where possible, to add visual amenity and break up the hard surface. On the upper parking deck, raised planters with shrub planting have been proposed. Shade tolerant climbers have been proposed along the car-park support columns and walls to reduce the visibility of the structure from the west.

The planting plan incorporates a schedule that indicates species, quantities, plant size on planting and spacing. The planting plan has been checked against services and no conflicts exist to impinge on the proposed trees. Pollinator-friendly species have been selected for the car park. Native species have been selected for the scrub fringe. These will enhance the ecological habitats present and assist in reinforcing the ecological corridor benefiting small mammals and bats within the locality.

VI. Access and Movement

Table 11.18 of the *South Dublin Development Plan 2016-2022* states that:

- *"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 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.*
- *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."*

The proposed development comprises 1 No. warehouse with HGV access/egress and car access/egress clearly set out, so that the transport network is easily navigated. In order to facilitate both car parking and docking/loading bays, car parking is provided to the west of the site with the HGV yard located separately to the south and west. The car park is now provided both on-grade and part on-grade/part upper deck due to Client and Local Authority requirements. This double storey car park area is located in the most secluded corner of the site (south-east) in order for it to not have a visual impact from the entrance road.

As per the design approach for the granted Blocks A & B, a key consideration in the design was to locate the HGV yards as far as possible from adjacent residences and towards the rear of the proosed industrial buildings to obviate noise impacts.

This site is loacted further from the adjacent dwellings than the two recently granted warehousing units, therefore noise travel is not considered a sensitive issue given this greater separation. Noise studies were previously carried out for these neighbouring granted planning permissions and mitigation measures applied to the previous design. As previously noted, construction of the two granted blocks (A & B) is very far advanced with Block A only recently been completed, so both of these neighbouring units will be completed before any development is completed on the subject site.

The site will be accessed from the existing Greenogue Roundabout on a 4th arm as recently constructed from the granted planning permission for the A & B blocks. The access road serving these A & B blocks will be directly utilised for access to the subject Site C so there is no additional road infrastructure necessary to accommodate the subject proposal.

VII. Design to Complement Industrial Design Typologies in the Local Area

As per the same approach applied to the granted Block C on this subject site, the overall design objective is to provide a warehousing development which sits comfortably within its site whilst conveying an architectural language appropriate to the aspirations of modern warehousing business. Therefore, a limited palette of materials has been provided that will create a unified architectural language and a unified approach which assimilates with warehousing development in the local area. Examples of industrial design typologies in the local area are provide in Figures 7.1 and 7.2 below.

Figure 7.1: Photographs of Industrial Design Typologies at Greenogue Business Park

Note: Buildings of varying height – higher to the rear.

Note: Substantial difference in building heights.

Note: Tower block with light coloured cladding. Lower building with darker cladding assists in reducing the tall emphasis of the tower element.

Figure 7.2: Photographs of Industrial Design Typologies at Grange Castle Business Park

Figure 7.3: Photographs of Industrial Design Typologies at Horizon Business Park

As with any modern warehousing/bulk storage facility, clear internal height is a fundamental requirement, providing enough headroom to accommodate numerous levels of racking within a well-lighted dry environment. The requirement for increased clear internal height has increased over the past 20 years with warehousing progressively demanding heights of 7.5m, 9m, 12m and 15/17m. These heights can be more easily accommodated with the advancement in lifting equipment and design of super-flat industrial floors. Therefore, for modern warehousing facilities, clear internal height is a paramount feature which adds to the viability of the development.

Demands within the industry to increase internal heights to 20m has been realised with storage mechanisms advancing to "dark space warehousing" whereby the product positioning is carried out by automation and robotics. While human input is required to manage the incoming stock, operate the warehouse management system, manage the packing operations and outward stock, the automated robotics operate in a specialist racking system which demands heights between 18m and 20m clear internal. Efficiency of operations and environmental/energy advantages are benefits of this advanced system of storage.

Similar to increased height demands 20 years ago, current demands for further height increases must be met in order to secure contracts and related employment. Industry research suggests dark space warehousing will become more common, as common as the 6m to 16m height advances of recent years.

The recently granted adjacent warehouses, Blocks A & B have a clear internal height of 12.2m and 12.5m. The previously granted Block C on this subject site was designed at 20m clear internal space to accommodate dark space storage which still remains aa fundamental design requirement of this altered proposal. The overall height of this proposal remains identical to the previously granted scheme. Unit C is positioned to the rear of the recently completed Unit A. The elevation treatments are discussed below.

VIII. Materials and Finishes

The materials proposed are intentionally simplistic. Experience demonstrates that clear sharp lines, crisp functional detailing, a limited range of surface materials and a restricted palette of neutral colours combine most effectively to reduce the perceived mass of these types of buildings.

The appearance of the ancillary office blocks is enhanced with curtain wall glazing. Proposed colours and materials give smooth polyurethane coating to buildings that delivers aesthetic brilliance and guaranteed performance in variety of applications. This building cannot receive any warehouse glazing (either roof or wall) as the internal heated space is a temperature-controlled environment whereby the design demands an insulated cladding envelope only. We have designed the warehouse cladding with panels of different profile and colour to enhance the elevations while adopting this design requirement.

As the subject building requires 20m clear internal height, the external building height is approximately 23.7m. Typically, taller buildings can be perceived smaller in height by carefully selecting different shades of colour in a horizontal orientation. Examples of such cladding solutions are shown below;

Figure 8.1: New Lidl building in Newbridge, Co. Kildare

Figure 8.2: Altitude building with 21 m clear internal height in Gallagher Logistics Park at Magna Park, Milton Keynes, UK

Figure 8.3: Creative form and shapes & Variety of wall solutions

Keeping creative form, shape and image as key design factors, it is proposed to use Kingspan's insulated roof and wall system solutions. These roof and wall system solutions are proven for safe construction, structural integrity, fire safety, acoustics, and environment sustainability, providing both cost effective and high-quality solutions.

For a higher building, cladding orientation and colouring is an important design feature as discussed previously in this document. Structural massing and scaling can be effectively dealt with by screening from other buildings and/or vegetation and fading cladding colours towards the higher sections of elevations as demonstrated in previous examples.

Figure 8.4: Internal view on Curtain walling

These materials offer reduced maintenance and lower energy usage which minimise Carbon Dioxide emissions throughout the building's lifetime.

Existing recently completed Block A – located in front of the subject Unit C.

End of document.