

Design Statement

for

Warehousing Development

at

**Site R, Jordanstown Road,
Aerodrome Business Park,
Rathcoole, Co. Dublin.**

Job No:	D1693
Client:	Exeter Ireland Property IV B Limited.
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Calmount Park, Ballymount, Dublin 12.

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I. Introduction

A Design Statement that has been prepared by Kavanagh Burke Consulting Engineers in conjunction with Thornton O'Connor Town Planning and JBA Consulting regarding the proposed warehouse development at Site R, Jordanstown Road, Aerodrome Business Park, Rathcoole, Co. Dublin for applicants Exeter Ireland Property IV B Limited.

In preparing this design report we have considered the following;

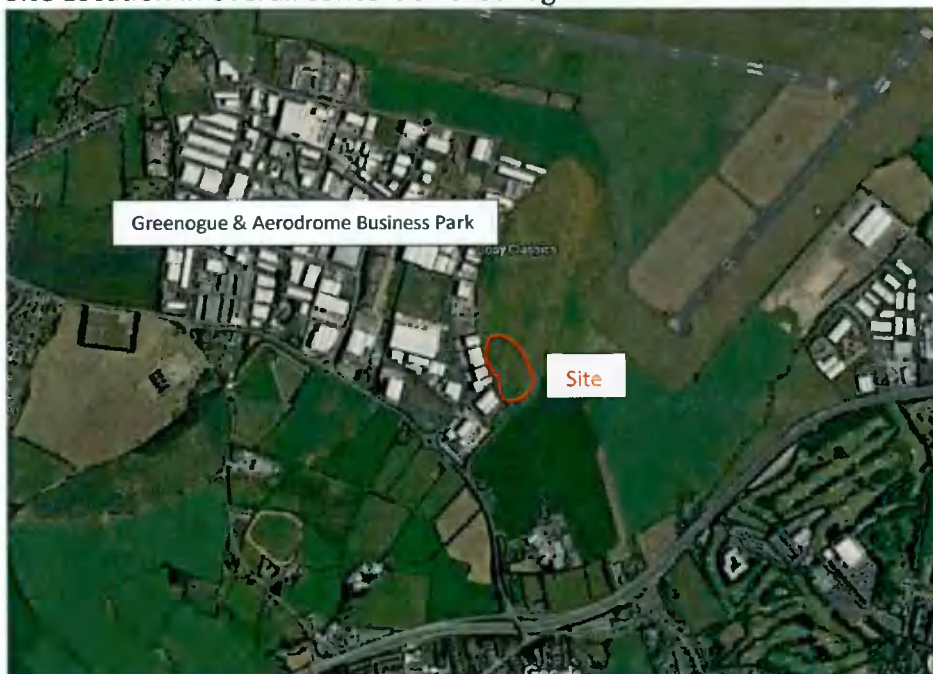
The *South Dublin Development Plan 2016-2022* sets out that:

“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.

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 subject proposal for an industrial development of a suitably zoned site directly adjacent to Aerodrome Business Park which adjoins Greenogue Business Park.

Site Location in overall context of Greenogue & Aerodrome Business Park.



Site Location: set back lands to rear of existing Aerodrome Business Park development:



Proposed Site Plan – for reference purposes.

II. Rationale for Development and Site Arrangement

The rationale for the development is to provide a single warehouse building on the subject site which is appropriately zoned. This site is located to the rear (east) of the mature Aerodrome Business Park. The proposed development will further improve the employment opportunities available in the general area and will bring associated advantages to the local economy and local community.

Access to the site is proposed by constructing a new access/egress road to the side of an existing site within Aerodrome Business Park. The long southern narrow portion of the site is partially zoned Enterprise and Employment and part Rural, therefore vehicular access will not be provided at this location. The existing Aerodrome Roundabout provides a safe junction to the overall Aerodrome Business Park, so utilising this roundabout is the most practical solution for site access.

The design goal to provide modern yet practical and appropriate building appearance at this location was carried through the design development to the presented proposal which forms this planning application. The building arrangement and design have therefore sought to provide a layout and elevational detail that creates a suitable identity for a development at this major employment node. As the site is setback from College Lane and accessed through Aerodrome Business Park, it is not prominent nor will the proposed warehouse be prominent on completion, however elevation treatments and site arrangements have been designed in a similar way to those recently constructed and under construction.

III. Site Analysis

The subject site is located to the east of Greenogue and Aerodrome Business Park with the vast majority of the existing zoned land in the area being developed to date. Casement Aerodrome is closely located to the North-East of the site. The nearby N7 National Primary Route – i.e. a major national east to southwest dual carriageway provides a beneficial logistics corridor for such warehousing developments that depend on both a quality road network and an available workforce to meet the demands of the career opportunities being created.

The subject lands are zoned 'EE' ('Enterprise and Employment') which has the objective '*to provide for enterprise and employment related uses*'.

As presented for many similar developments lodged recently in this area, these developments to date predominately comprise light industrial and warehouse buildings with surface car parking. As the site is on the outskirts of the existing industrial development, high quality boundary treatments will be important in providing the transition between newly developed lands and rural lands.

The southern, eastern and northern boundaries of the proposed development will be provided with a dense planted transition strip creating a strong boundary between the adjoining agricultural lands and the subject warehousing facility. This transitional strip has been given specific attention by the Design Team, in particular by the Landscape Architect where dense planting and raised earth berms are provided to soften the transition line.

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.*

When exiting the Naas Road (N7) and travelling northwestwards on the R120 towards Newcastle Village, the subject site is located to the north, set back from the public road. The completed warehouse facility will not be a prominent feature in the area. There are a significant number of existing industrial buildings of similar height, and form of construction to the immediate west of the subject site which will screen this development from the west. The building appearance used successfully in the locale will also be used for this facility, predominately industrial cladding appearance with curtain walling creating a modern industrial building appearance.

The design of the warehouse and integrated ancillary offices are 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 Aerodrome Business Park as envisioned by the appropriate zoning of the lands.

The use of different cladding profiles, colour shades plus horizontal and vertical placement of the panels have been carefully considered to work together to provide what are large metal clad warehouse buildings that are not perceived as intrusive or imposing in scale or height.

V. Open Space and Landscape

A scaled masterplan 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.

A 5m wide screen planting band with advanced heavy standards (16-18cm girth) and native understorey shrub planting including species as per the All-Ireland Pollinator Plan have been proposed along the eastern and southern boundaries to reduce visibility of the proposed building. The existing mature hedgerow along the southwest of the site is to remain and which will promote and preserve wildlife.

The northern boundary includes advanced heavy standards (16-18cm girth) within the grass verge to maintain the existing maintained character of Greenogue Business Park & Aerodrome Business Park.

Within the car park and along the western boundary we have included ornamental tree planting after every fourth parking space or at regular intervals along a stretch of parking in order to visually break up the paved area.

The plan has been checked against services and no conflict exist to impinge on the proposed trees, the location of internal lighting columns has been shown. A planting plan is also supplied indicating species, quantities, plant size on planting and spacing. Planting will be implemented in the first planting season after completion of the building and civils works on site.

VI. Appropriate Assessment Screening Report

As part of the Appropriate Assessment Screening Report ecological walkover surveys were conducted.

An ecological walkover survey was conducted on the 3rd of March 2021 by JBA Senior Ecologist Patricia Byrne and JBA Assistant Ecologist Mark Desmond. A habitat map is provided in the EclA prepared for the project. The site consists of predominately arable land used for crop growing. The eastern boundary/south eastern access corridor has increased variability in linear habitats. The proposed entry to the development via Jordanstown Road lies on vacant industrial land used as open storage for construction equipment and prefabricated buildings.

Project Zone of Influence

The project will primarily affect the site only, but a wider area of influence is used for impacts relating to noise disturbance (1km), air pollution (10km), surface water (15km), with an additional 2km from connecting transitional waters to coastal areas; and any supporting habitat for SAC/SPA species (15km).

Table: Natura 2000 sites located within the 15km (plus hydrological connectivity extension) Zone of Influence (Zol) of the proposed development.

Natura 2000 site	Site Code	Approximate direct distance from site
Glenasmole Valley SAC	001209	7.1 km
Rye Water Valley/Carton SAC	001398	8.0 km
Wicklow Mountains SAC	002122	8.4 km
Red Bog, Kildare SAC	000397	11.6 km
Wicklow Mountains SPA	004040	11.8 km
Poulaphouca Reservoir SPA	004063	12.5 km
North Dublin Bay SAC	000206	20.2 km
South Dublin Bay SAC	000210	17.2 km
North Bull Island SPA	004006	20.1 km
South Dublin Bay and River Tolka Estuary SPA	004024	17.2 km

The report describes each site briefs; Qualifying Interests; and project-relevant threats /pressures and their impacts and sources in relation to the Natura 2000 sites within the 15km Zol (plus hydrological connectivity extension).

Hydrological Pathways

There is no hydrological connection to Ryewater Valley SAC, Glenasmole Valley SAC and Poulaphouca Reservoir SPA, thus there is no potential impact on the water dependent habitats and species that are qualifying interest of these three SACs. Likewise there is no hydrological connection with Wicklow Mountains SAC and thus no impact on the water dependent Annex 1 habitats Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] and Natural dystrophic lakes and ponds [3160] or the water dependent Annex II species Otter *Lutra lutra*.

Due to the urban location and distance from Wicklow Mountains SPA it is assessed that there will be no significant impact on the QIs Merlin and Peregrine. Given the distance between the proposed site and Red Bog, Kildare SAC, it is not anticipated that the proposed development will have a significant impact on the qualifying interest Transition mires and quaking bogs [7140] for which the SAC is designated.

The four Natura 2000 sites that could potentially be impacted by the proposed project, due to the presence of surface water pathway, are:

- South Dublin Bay and River Tolka Estuary SPA (004024)
- South Dublin Bay SAC (000210)
- North Bull Island SPA (004006)
- North Dublin Bay SAC (000206)

Land and Air Pathways

Rye Water Valley/Carton SAC is within 10km of the proposed site and could be potentially impacted by air pollution. It is designated for Petrifying springs with tufa formation and two species of Whorl snail, which are sensitive to habitat change due to Nitrogen and Phosphorus input and acidification.

Therefore the one site that could potentially be impacted by the proposed project due to land and air pathways is:

- Rye Water Valley/Carton SAC

Cumulative Effects

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region that may induce cumulative impacts must also be considered at this stage.

The following projects or plans were identified as potential sources of cumulative impacts and were considered in the report:

- South Dublin County Council Development Plan 2016 - 2022
- Greater Dublin Drainage Plan
- River Basin Management Plan for Ireland 2018-2021
- Planning Applications

Concluding Statement

Following this initial screening of the proposed development at Aerodrome Business Park, Rathcoole, Co. Dublin, it can be concluded that significant impacts are not anticipated via surface water, groundwater, or land/air pathways on the following Natura 2000 sites:

- Rye Water Valley/Carton SAC (001398)
- North Dublin Bay SAC (000206)
- South Dublin Bay SAC (000210)
- North Bull Island SPA (004006)
- South Dublin Bay and River Tolka Estuary SPA (004024)

VII. Ecological Impact Assessment Report

An Ecological Impact Assessment Report (EIA) was completed by JBA ecologists Mark Desmond (BSc (Hons), MSc) and Malin Lundberg (BSc, MSc). The report has been reviewed by JBA Senior Ecologist Patricia Byrne (BSc (Hons), PhD, MCIEEM). These staff members thus fulfil the Environmental Impact Assessment (EIA) Directive personnel requirements of 'competent persons'.

This assessment was conducted in accordance with the following guidance documents:

- Guidelines for Ecological Impact Assessment in the United Kingdom and

Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management (CIEEM, 2018).

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (Draft) Environmental Protection Agency (EPA, 2017).
- Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009a).
- Best Practice Guidance for Habitat Survey and Mapping, The Heritage Council. (Smith et al. 2011).

The habitats recorded on site are listed in the table below.

Habitat	Fossitt Code
Hedgerows/Scrub	WL1/WS1
Drainage ditches	FW4
Treelines	WL2
Hedgerows	WL1
Arable crops	BC1
Recolonising bare ground	ED3
Dry meadows and grassy verges	GS2
Buildings and artificial surfaces	BL3
Spoil and bare ground	ED2
Earth bank	BL2

Impacts

The report highlights potential impacts:

- Degradation of treeline/hedgerow/scrub habitat and protected species that may inhabit it (breeding birds, mammals) through physical damage during the construction phase.
- Pollution of the drainage ditch and aquatic species it may host (amphibians, aquatic invertebrates).
- Disturbance of commuting and foraging terrestrial mammals and bats, as well as potentially accidental fatal entrapment for terrestrial mammals during construction.
- Disturbance of commuting, foraging and nesting for local breeding birds.
- Lighting impact on bats during operation.

Mitigation

Mitigation measures comprise:

- Sediment control measures
- Pollution Control and Spill Prevention

- Protective measures to avoid degradation of treeline/hedgerow habitat
- Avoidance measures to prevent disturbance/harm to species (mammals, bats, birds)
- Pre construction ground nesting bird surveys
- Measures to mitigate impacts on bats including a dark corridor to be retained along the southern boundary for commuting bats
- Biodiversity enhancement

Residual Impacts

Construction Phase

Preparation of the site for development will result in disturbance to the foraging and commuting habitat for protected species such as terrestrial mammals, bats and breeding birds. As Skylark could potentially be nesting in the arable field, the works could destroy nests and harm individuals of this ground nesting bird. There is potential for pollution during construction activities to discharge in the drainage ditch running along the southern border of the site which could degrade the water quality and impact on amphibians potentially using the habitat.

Mitigation measures to be implemented include sediment and pollution controls, protection of retained boundary treelines/hedgerows and general avoidance measures incorporating good site management and construction practices to minimise harm and disturbance to species. If works are to start during the breeding bird season, the ground will be surveyed for nesting Skylark by an ecologist prior to works commence and any nests found will be safe guarded. The mitigation in place will minimise any significant and/or permanent impact on the environment and residual impacts during the construction phase are not anticipated.

Operational Phase

The proposed mitigation, including dark corridors for local bat species; and enhancement measures of additional planting for the operational phase should act to improve existing habitats for all species and overall will have a neutral - negligible residual impact that will be positive in time following the maturing of the biodiversity enhancements.

EclA Conclusion

The construction of this proposed development has been shown to potentially impact a number of different habitats with local importance (treeline; hedgerow; scrub; and drainage ditches) and faunal groups (breeding birds; Badger; Hedgehog; Pygmy Shrew; bats; and amphibians) with local ecological importance.

Based upon the information supplied and provided that the development is constructed in accordance with the mitigation measures outlined above, there will be no significant impact in combination with other projects and plans, as result of the development and associated works on the ecology of the area and on any designated conservation sites.

Furthermore, supplementary tree and hedge planting is proposed along the boundary of the site and a strip of wildflower meadow is proposed along the western side of the warehouse, which is outlined in the landscape plan.

VIII. Flood Risk Assessment

JBA consulting has undertaken a detailed Flood Risk Assessment (FRA) of the proposed site on Jordanstown Road, Greenogue, Rathcoole. The proposed development is a light warehouse unit.

A review of the available historic information confirms that the site has not experienced historic flooding. However, the area has been subject to predictive flood modelling under the OPW Eastern CFRAM study. The resulting flood maps indicate flooding occurs at the eastern corner of the site during the 1% and 0.1% AEP events, while other areas of the site are shown to be affected for the 0.1% AEP event. The source of fluvial flooding identified for the site is the overland flows from the Camac River.

A site-specific hydraulic model has been developed for the study area that includes a local ditch with relatively high conveyance capacity (minimum 1m deep, 4 m wide) which runs along the south-eastern boundary.

The model has been used to confirm the 1% AEP and 0.1% AEP flood extents onsite and to appraise climate change events. Review of the results confirm that the majority of the site is within Flood Zone C. A minor section of the site along the eastern corner is located within Flood Zone A/B. No buildings will be located in this area and the flow path will be maintained, therefore it is not necessary to undertake the Justification Test.

The proposed design has been appraised against the following flood events: 1% AEP, 0.1% AEP, climate change. Review of the results confirm there is a low risk of inundation to proposed buildings on site during any flood event. The resulting FFL's provide a minimum freeboard of 500mm above the 1% AEP MRFS event.

The primary access route onto the proposed development is from the Jordanstown Road. The entrance of the site is on higher ground and it is situated within Flood Zone C.

Residual risk has also been assessed which includes partial blockage of the culvert under N7. Review of the results confirm that the proposed development will not be impacted from the blockage scenarios.

The Flood Risk Assessment was undertaken in accordance with 'The Planning System and Flood Risk Management' guidelines and confirms that the proposed development is appropriate from a flood risk perspective and is in agreement with the core principles of the planning guidelines

IX. Access and Movement

The Local Authority's Development Plans sets out the following design requirements;

- *“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 a warehouse development with HGV and car access/egress positioned to minimise impact on existing traffic flows so that the greater transport network is not impacted on by the inclusion of this facility. The existing Aerodrome Business Park roundabout and Business Park access road (Jordanstown Road) is utilised for access/egress to/from the subject site.

In order to facilitate both car parking and docking/loading bays, car parking access and circulation is separated from HGV activity. The building has been designed by taking into consideration the nature and scale of the facility and providing elevations with appropriate enhancement to a level that avoids both elevational monotony and over detailing. A key consideration in the design was to provide a strong landscaped transition between the agricultural lands and the enterprise and employment lands.

Pedestrian connectivity was also considered given the backlands setting of the site. Pedestrians can enter the site via a similar route to the cars/HGV's however to reduce the walk distance, the Traffic Engineer on this project has proposed that pedestrians can have the option to access the site through key-fob gate off College Lane through the long narrow southern portion of the site. This route would greatly shorten the pedestrian time in accessing the site if travelling from Rathcoole/N7 direction. This proposal is subject to the Local Authority accepting that pedestrians traverse a portion of the site zoned Rural in order to access from this more direct southerly location.

The Traffic & Transportation Consulting Engineers drawings and report that accompanies this submission prepared by Stephen Reid Consulting Engineers should be consulted regarding traffic numbers and related issues.

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

In a similar way to those warehousing facilities presented in recent planning applications, the overall design objective for this facility is to provide a warehousing development which sits comfortably within its site whilst conveying an architectural language appropriate to the aspirations of modern warehousing businesses. 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.

(The materials used within the proposed development will be similar composite insulated cladding panels of various colour shades, profiles and panel orientation with featured curtain wall panels to avoid large monotonous metal clad elevations).

Examples of industrial design typologies in the local area are provide in the following photographs;



Site 646, Greenogue Business Park



Site 517, Greenogue Business Park



Site 527, Greenogue Business Park - front



Site 527, Greenogue Business Park - rear



Typical clear open space warehousing facility



Site 665, Greenogue Business Park

XI. 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.

Glazing panels integrated into the sleek industrial cladding material are used to break long elevations and make them visually more appealing. The appearance of the integrated ancillary office accommodation is enhanced with curtain wall panels and strip glazing plus different colour shades of cladding panel. Proposed colours and materials give smooth polyurethane coating to buildings that delivers a pleasant aesthetic and guaranteed performance in variety of applications.

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.



These materials offer reduced maintenance and lower energy usage and lower solar gain which minimise carbon dioxide emissions throughout the building's lifetime.

In conclusion, this document should be read in conjunction with the Kavanagh Burke Consulting Engineers building elevation drawings for general building appearance, height, finish and colour.

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