3. DESCRIPTION OF DEVELOPMENT

The proposed development proposes a total of 3,006 no. residential bedspaces providing an overall gross floor area (GFA) of 98,275sqm.

It is noted that three existing structures, namely the Roebuck Castle, Roebuck Glebe and Crannog House, fall within the red line boundary, to which no works are proposed. Accordingly, it is not considered that these form part of this application and accordingly, the gross floor space of same (1,300sqm) has been excluded from overall gross floor area calculations.

The proposed accommodation will be arranged in a series of 7 no. Residential Blocks, which will vary in height from 5 to 10 storeys. Generally, the Blocks are centred on a courtyard. The courtyards will be linked visually and by a continuous pedestrian route to ensure integration between the proposed villages and also to facilitate linkages between the proposed accommodation and the existing student accommodation. The design and layout of the proposed development seeks to integrate and connect the existing residential communities at Belgrove, Glenomena, Melville, Ashfield and Roebuck.

Dedicated Residential Activity Hubs within the urban blocks with lounge, function and study spaces are provided to encourage interaction, creating a distinct lively quarter in the Belfield Campus permeated with open spaces and intimate urban streetscapes.

The proposed development also provides for an additional student facility centre, located within the Fulcrum Building, comprising a multifunction function hall and dining hall with studio accommodation and student residences support facility above and supporting shops and services.

The proposed development includes for the removal of recent additions to Roebuck Castle to the south and east. No other works are proposed to the Protected Structures (Roebuck Castle and Glebe Lodge). In time, it is envisaged that subject to the relevant consent, Roebuck Castle will serve as an amenity hub for students, accommodating reception functions, lounge areas, lecture and study spaces, practice and ensemble rooms and workshop spaces. Similarly, no works are proposed to Crannog Lodge.

The following car parking provision is proposed: 637 no. basement car parking spaces, 32 no. disabled spaces (at-grade), 225 no. spaces by extending the Little Sisters surface car park; and 100 no. spaces adjacent to the Sutherland School of Law.

A range of student amenity and common spaces will be provided and will comprise a mix of outdoors spaces within the courtyards and immediately adjacent to the respective Blocks, and internal spaces within each Block and at Roebuck Castle. An external sports area and outdoor active and passive amenity area on the eastern part of the site. The proposed development ensures the retention of the existing woodland and new landscaping will complement and enhance the amenity of the walkway.

A new, temporary construction access onto Fosters Avenue and associated construction parking for approximately 200 no. cars during construction are proposed for the duration of the proposed development. The development also proposes the widening of the footpath on Roebuck Road including for the removal of the existing boundary wall and provision of a new plinth wall with railing on top (overall height unchanged at c.2 m), and enhanced public realm landscaping within the curtilage of the site

A ten-year permission is sought.

3.1 Characteristics of Development

3.1.1 Demolition Work

The proposed development provides for demolition of approximately 5,291sqm of various existing buildings to the southern end of the application site. These buildings are located in the vicinity of Roebuck Castle and are modern buildings which are considered to be of no significant heritage interest.

The buildings proposed to be demolished include the Former Residence building to the east of Roebuck Castle (E); modern extensions to Roebuck Castle (D); the Southern Courtyard Range (C); the former Chapel (E); Outbuildings (J) and a single storey academic building (H) as identified in Figure 3.1 below.

Figure 3.1 Buildings to be Demolished

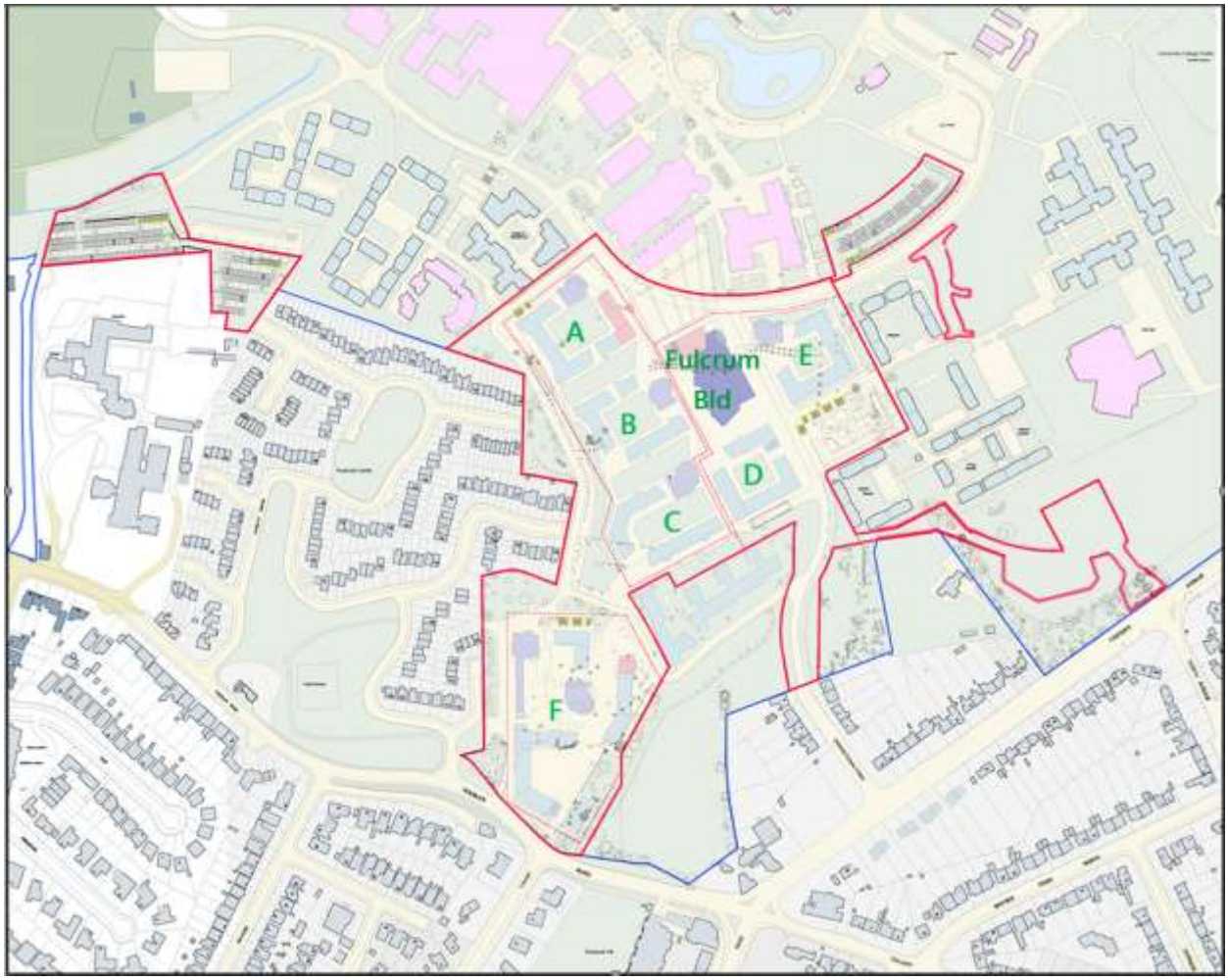
Roebuck Castle (a Protected Structure) including the West Wing (A & B, respectively) will be retained as part of the overall design, as will the Crannog Lodge (F) and the Glebe Lodge (G) (a Protected Structure). The demolition works that are contiguous to the Protected Structures (A & B) comprise modern extensions which have no significant heritage interest. The removals and reinstatements of the relevant elements will be undertaken in accordance with best conservation practice

3.1.2 Size of Project

The proposed development comprises of 7 no. Blocks which vary in height from generally 5 to 10 storeys. There are 7 no. predominately Student Accommodation Blocks including the Fulcrum Building which includes some wider student services at ground floor level with student accommodation and ancillary uses on upper levels.

The proposed site layout is indicated in Figure 3.2 below. The overall layout seeks to connect the existing Student Accommodation Blocks at Merville, Belgrove, Glenomena, Ashfield and Roebuck creating a distinctive residential quarter on campus. The Student Accommodation Blocks have been laid out each around a central courtyard space. The Fulcrum Building is located to the north of the site to integrate the residential quarter with the academic core to the north.

Figure 3.2 Overall Site Layout



The schedule of accommodation at Table 3.1 below provides details on the overall quantum of development:

Table 3.1 Schedule of Accommodation

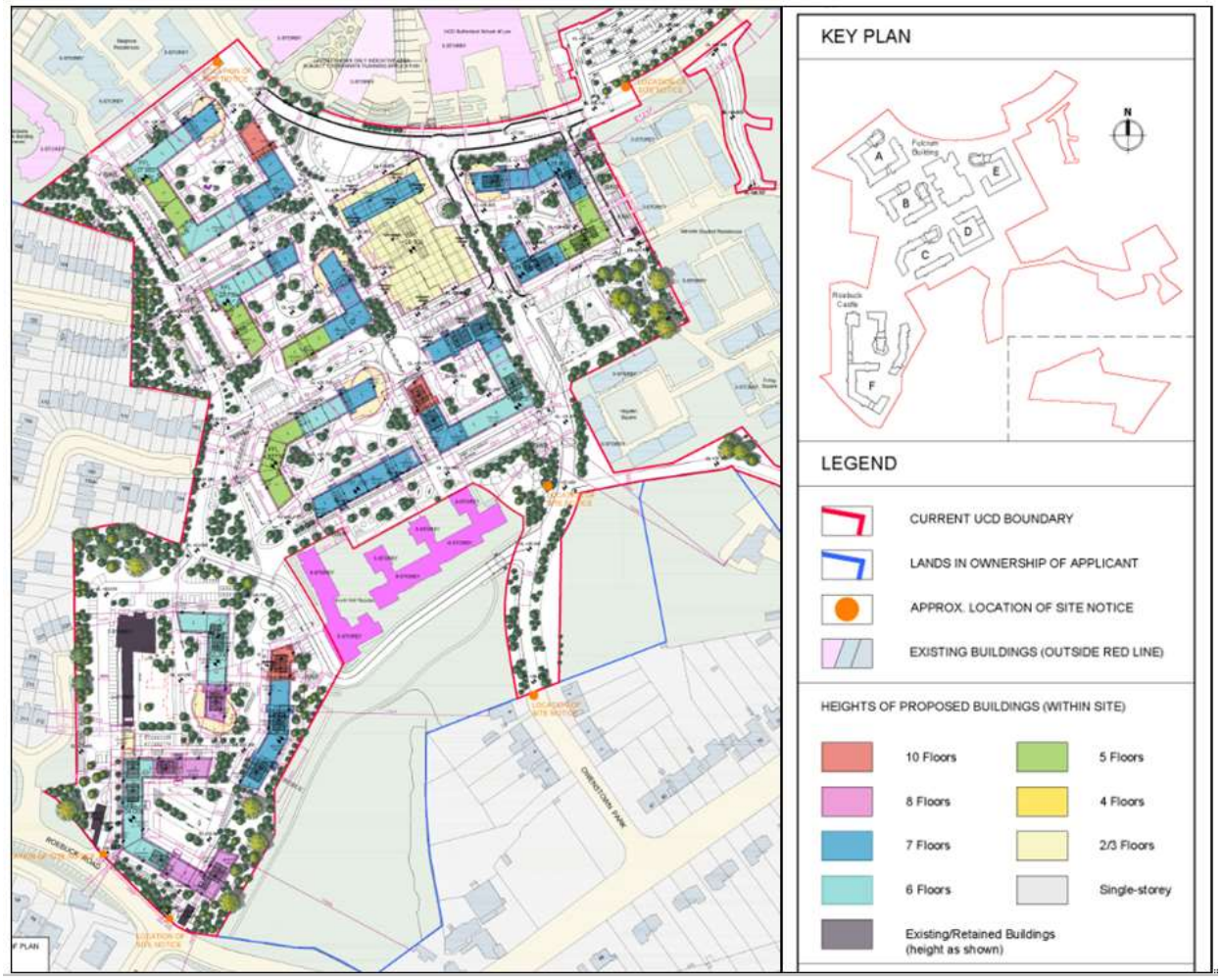
Total Site Area			
Site Area	12.95ha		
Total Gross Floor Area Proposed	98,275sqm		
Total Gross Floor Area Retained	1,300sqm		
Demolition Area	5,291sqm		
Footprint of Buildings (Proposed & Retained)	21,395sqm		
Plot Ratio	0.77:1		
Site Coverage	16.5%/19.8%[1]		
Open Space/Public Realm	121,883sqm		
Proposed Buildings	**GFA**	**Total Bedspaces**	**Total Amenity**
Block A	15,246 sqm	478	308 sqm
Block B	12,009 sqm	390	585 sqm
Block C	11,970 sqm	386	996 sqm
Block D	12,973 sqm	452	456 sqm
Block E	12,023 sqm	412	585 sqm
Block F	25,604 sqm (3 buildings)	828	1,301 sqm
Fulcrum Building	8,450sqm	60	5,720 sqm
Total GFA (excl. Basement Level, Plant Rooms, ESB Substations & External Bin Stores)	**99,495 sqm**	**3,006**	**11,207 sqm**
Summary of Uses		**GFA**	
Student Accommodation		94,022sqm	
General Campus Facilities		4,253sqm	
Car Parking	**Car Parking Spaces**		
Basement Level	637		
Surface Level (Accessible Spaces)	32		
Little Sisters Car Park	225		
Sutherland School of Law	100		

[1] 16.5% based on entire site area; 19.8% If surface car parks & construction access roads excluded

Building Height

Heights of the proposed building vary across the site. Building heights have been informed by existing structures on site; the need to make sustainable use of Campus lands and factors relating to proximity to site boundaries; residential amenity and topography of the site.

Figure 3.3 Proposed Heights & Massing Concept



Student Accommodation

The proposed accommodation is arranged in a series Blocks (Blocks A to F) together with the Fulcrum Building. Generally, the Blocks A to F accommodate between 400 no. to 600 no. students in a mix of student accommodation apartments (varying in size from 3 no. to 8 no. bed apartments); halls of residence (5 no. to 14 no. bedrooms, typically 10-14 no. bedrooms) with dining facilities); and studio apartments (1 bed apartments).

Blocks A to F have been designed to integrate with the existing courtyard style village developments on the campus. The central courtyard space provides an amenity gathering space and students will be encouraged to use these areas through the provision of an attractive public realm incorporating seating, shelter and

lighting. A significant degree of permeability is incorporated into the courtyards, both physically and visually, to facilitate links between the proposed development and the existing campus.

Each Block includes ancillary support services which serve the student residential populations. Such services include administration and support services as well as student amenity and study facilities. Ancillary support services are accommodated within a Local Hub in each of the Blocks (with the exception of Block D).

Table 3.2 Breakdown of Student Accommodation & Ancillary Facilities by Block

Block A:		
75 no. apartments	478 no. bedrooms	15,246sqm gross floor area
491sqm of ancillary hub comprising lounge area; study spaces; communal kitchenette, and a 20 machine laundrette.		
Block B:		
67 no. apartments	390 no. bedrooms	12,009sqm gross floor area
477sqm of ancillary hub comprising lounge area, study spaces, communal kitchenette, and a 20 machine laundrette		
Block C:		
57 no. apartments	386 no. bedrooms	11,970sqm gross floor area
725sqm of ancillary hub comprising lounge area, study spaces, communal kitchenette, and a 26 machine laundrette		
Block D:		
49 no. apartments and 12 no. Halls of Residence	452 no. bedrooms	12,973sqm gross floor area
118sqm student lounge		
Block E:		
67 no. apartments	412 no. bedrooms	12,023sqm gross floor area
451sqm of ancillary hub comprising lounge area, study spaces, communal kitchenette, and a 20 machine laundrette		
Block F:		
111 no. apartments and 12 no. Halls of Residence	828 no. bedrooms	25,604sqm gross floor area
953sqm of ancillary hub comprising lounge area, study spaces, communal kitchenette, and a 26 machine laundrette and 547sqm of kitchen and lounges associated with Halls of Residence		
Fulcrum Building:		
60 no. Studios	60 no. bedrooms	8,450sqm gross floor area
4,771sqm of ancillary student accommodation uses including lounge areas, study spaces, student residences support facility		
Total Student Accommodation:		
512 no. apartments*	3,006 no. bedrooms	94,022sqm gross floor area
* Includes Halls of Residence and Studios		

Other Support & Complementary Accommodation

The proposed Fulcrum Building is located centrally within proposed development and adjacent to the main academic campus. It provides an opportunity for the proposed residential quarter to interact with the academic campus core. The proposed Fulcrum Building includes some additional facilities which are complementary to the proposed student accommodation while also serving as a student amenity resource for the academic core.

Some further, limited complementary uses are proposed at ground floor level of Block A including 2 no. retail services units and 1 no. café unit (totalling approximately 403sqm) and 1 no. café unit at Block F (totalling 171sqm).

Supporting Retail and Services:
• 1 no. Retail Services – 172sqm • 1 no. Retail Services – 76sqm • 1 no. Café – 152sqm • 1 no. Shop/Café – 171sqm • 1 no. Convenience Store- 383sqm • 4 no. Retail Units – 98sqm each **Total Retail & Retail Services = 1,346sqm**
Student Facility Centre (Fulcrum Building):
• Auditorium with accommodation for approximately 290 seats (514sqm) • Dining Hall, with accommodation for approximately 160 seats, with ancillary Food Court & Kitchen (643sqm) • Central Social Space & Kiosks with accommodation for approximately 111 seats (1,303sqm) • UCD Contact Centre (344sqm) **Total Complementary Student Facility Provision = 2,804sqm**

Access & Car Parking

The proposed development provides for the minor re-alignment of the existing access road from the Owenstown entrance to the internal campus ring road. Access to and egress from the proposed new basement car park will be at the perimeter of the campus, adjacent to the Roebuck Residences, which will ensure that the majority of traffic will not travel further into the Campus.

Further north, the access road will be realigned and a new priority junction provided to suit the new block layout and will be designed as a shared surface (from the basement ramp entrance) with reduced traffic speeds to promote a more pedestrian friendly environment. A drop off point / taxi pick-up is provided to the northern end of the residences, close to the academic core, that will allow any traffic entering as far as this location to safely turn and exit the campus.

A new basement car park is proposed below three of the new residential blocks (A, B and C), which provides 637 no. spaces along with an additional 32 no. accessible spaces at surface level. It is also proposed to construct an additional surface car park adjacent to the Sutherland School of Law which would

provide an additional 100 no. surface parking spaces, including 5 no. accessible spaces, and to extend the existing surface car park at Little Sisters to provide an additional 225 no. spaces including 12 accessible spaces.

Approximately 2,104 no. short term cycle parking will be provided. Secure covered spaces will be provided in areas proximate and accessible to the proposed residences.

A new, temporary construction access off Fosters Avenue is proposed for the duration of the construction of the proposed development. An appropriate amount of construction parking will also be provided to ensure no overspill onto nearby residential areas.

Landscape & Public Realm

The UCD landscape is rich and verdant. It exudes the campus ideal of a centre of learning amidst a green parkland of woodland walks and mature landscape. The landscape strategy aims to set the scheme in to the receiving environment and to enhance the public realm of the campus.

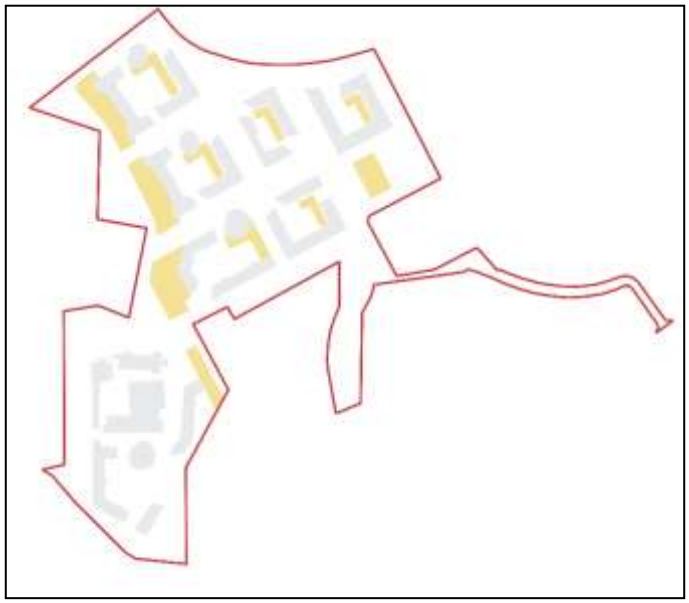
The strategy uses 3 landscape structures to generate a framework for the public realm spaces:

Shelterbelt and Woodland: Organised in a series of north-south bands, the western boundary of existing trees is supplemented with new planting to form a primary shelterbelt that also functions as a screen between the campus and the Roebuck Castle residential area. This primary shelterbelt sets up the main wind mitigation for the project. It is followed by three other bands of planting in a similar orientation, each adding to the mitigation and affecting localised microclimates within the scheme.

Figure 3.4 Indicative Shelterbelt Layout

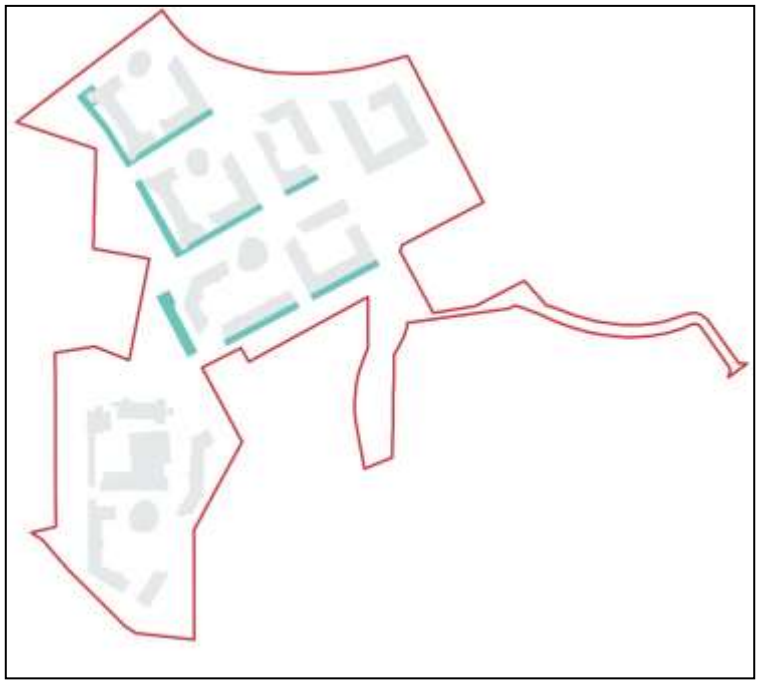
Microclimate and Aspect: The strategy is informed by the aspect and therefore microclimate created by the combination of tree planting and the existing and proposed buildings.

Figure 3.5 Indicative Microclimate & Aspect



Sustainable Design: Whilst biodiversity will be achieved throughout the project, mainly by the specification of plant types and landscape management, sustainable design is also expressed through the use of Sustainable Drainage Systems. Swales and French drains repeat through the landscape, linking the green roof systems with the attenuation lake system nearby. Swales are typically dry, with wet periods in floods. These areas are in places planted with damp loving plants which creates a new habitat type in the area.

Figure 3.6 Indicative Sustainable Design



The strategy is also divided in to 3 main spatial types, with a hierarchy of use and intimacy:

Civic and Amenity Spaces: The strategy is balanced with two main spaces; one civic space that becomes a multifunctional zone for everyday use and events such as a market or show at the interface between the academic and residential zones of the campus; the other is a recreational space with sports activities situated along the main entrance road of Owenstown Park – so the amenities are on display to people entering the campus. The space also includes social areas for people to view the recreation.

Recreation and Meeting Nodes: A series of three east-west 'green streets' are created between the proposed buildings forming recreational zones. These recreational streets cater for the incidental and programmed play of students and visitors, generating a community spirit and interaction. These are generally planted, are punctuated by meeting nodes at intersections, and are furnished with exercise and play equipment such as basketball hoops to encourage and inspire activity. The green streets also facilitate the linkages for the existing woodland perimeter walks through the campus, reinstating the Elm Walk route.

Courtyard Spaces: The semi open courtyards to the residential blocks are intended to have a quieter atmosphere that the green streets and civic and recreational spaces. Each are designed with a distinct identity along similar forms, corresponding to the architectural concept of unity in the form with individuality in detail or colour. These more passive spaces are also part of the circulation routes, so they are animated by people passing through them. They capitalise on the sheltered aspects of the spaces, generating seating and grasses areas for small groups and relaxation.

Landscape Design

The landscape design scheme mitigates the impact of the development by reinstating recreational and amenity uses within the frameworks of the sylvan campus setting.

The language of the hard landscape structure developed in recent years in the existing campus landscape, especially those associated with the recent attenuating lake, academic and residential buildings in the area, will give continuity to the palette of materials.

Resin bound gravel, modular block edging and punctuation, and permeable paving supported by swales and French drains are used in the proposed scheme. One of the main introductions is the shared surface along the ring road; much traffic will be decanted into the proposed underground car park, alleviating some of the traffic on the ring road. The shared surface dilutes the impact of the road as a vehicular corridor and as a barrier to the movement from the academic zone towards the proposed residential zone.

Street furniture is proposed in two ways; high quality, well designed products that tie in with similar design products on eth existing campus. Seating will also be incorporated into bespoke planters and edges as an integral part of the landscape, again following on the design precedence on campus.

Trees

Some 317 no. trees will be removed to facilitate the project and circa 670 no. trees will replace them. The trees to be removed are young, and some require felling due to condition, those in the Elm Walk will be relocated to the western boundary, and one mature lime will be removed. Some of these trees can be propagated to maintain some continuity of the tree species and varieties on site. Further details on the conditions of existing

trees are contained in the Tree Survey (see Appendix 10.A). New tree planting will range standards to specimen trees and from native to exotic depending on their location and prominence.

Site Services & Infrastructure

It is proposed to divert an existing 600mm diameter public surface water pipeline which enters the campus south of Roebuck Castle and runs under several existing buildings before exiting the site into the nearby Roebuck Castle Housing Estate. This pipeline will be diverted to the west so that it avoids all existing and proposed new buildings.

The proposed surface water drainage system for the development will comprise a combination of interception, treatment and attenuation storage features. It is proposed that the existing attenuation lake will be used to provide the necessary attenuation and treatment storage for the new development. Storm water from the existing Roebuck Hall student accommodation will be diverted into the new system.

It is proposed to connect the all of the foul drainage generated from the new development to the existing campus system.

For water supply, it is proposed to take a new 150mm diameter feed new off the existing 200mm diameter water main on Foster's Avenue to supply a new 180mm diameter ring main that will serve the development.

The proposed development also provides for 3 no. Double Substations each with up to 1.1MW capacity. Each new Substation will serve a phase of the Development.

3.1.3 Cumulative Impact with other Projects

The UCD Strategic Campus Development Plan 2016-2021-2026 provides a development framework for the future physical development of the Belfield Campus in terms of the facilities required to support the further growth and development of the University. The Campus Development Plan provides a plan-led approach to the future development of the campus and promotes an extensive programme of refurbishment of existing buildings together with investment in new development.

In addition to Campus development ambitions, the Campus Development Plan sets out a wider infrastructure framework that includes a green infrastructure plan which provides for storm water runoff and surface water attenuation for future buildings, and a commuting and mobility management plan which seeks to manage car parking demand associated with identified future development.

The proposed development has been set within the context of the UCD Strategic Campus Plan and therefore is responsive to future potential development of the campus as a whole.

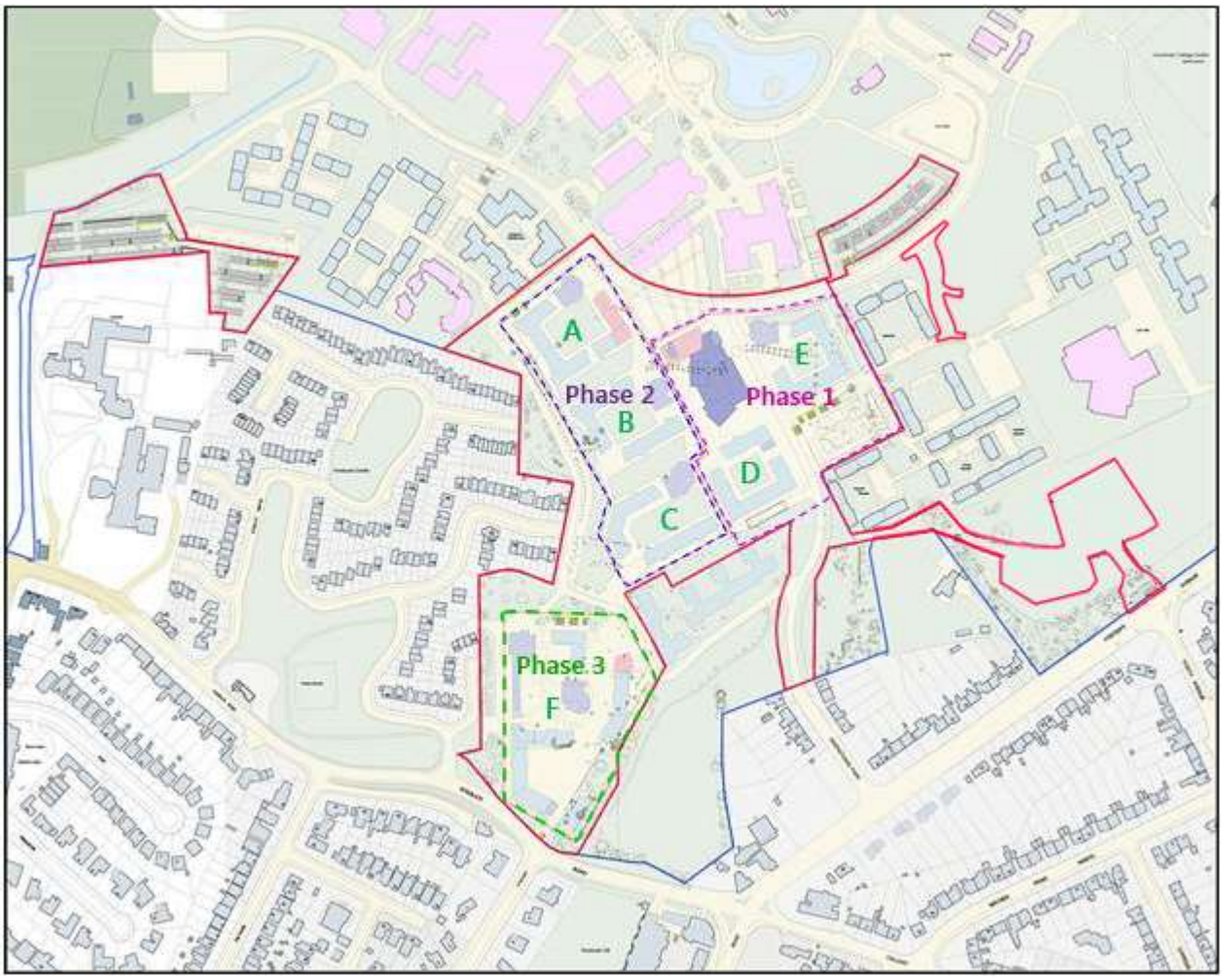
3.2 Description of Construction

3.2.1 Construction Phase & Land Use Requirements

The proposed developmental require general site clearance and preparation, excavations, stripping of organic material across the site, the removal and disposal of demolition waste from buildings and hardstanding areas.

It is envisaged that the development be constructed in three phases as indicated in Figure 3.7 below.

Figure 3.7 Proposed Phasing Strategy



The sequence and method of construction of each phase will be confirmed with the appointed Contractor prior to commencement on site. The Contractor will be required to prepare a detailed Construction Management Plan on foot of these proposals.

Construction traffic will access the site via a new dedicated construction access route from Fosters Avenue. This shall be the main access to the site during the construction stage of each phase. Construction traffic may also access the campus via the N11 and the UCD Main Gate at off-peak times only Road-barriers will be

in place which will restrict access to the dedicated construction access at Fosters Avenue at peak times. The access to each site compound within the campus will be flagman controlled.

All site compounds during the three phases will be located close to the construction activity of each phase. Contractor parking will be provided in two areas located off an existing haul road to the south east of the site and have a combined capacity of 200 parking spaces approximately.

It is proposed to park all construction-related traffic, when not in use, within the curtilage of the designated compound facilities for each phase.

3.2.2 Proposed Works

Phasing consists of 3 no. phases currently envisaged as follows:

Phase 1: Block D, Block E & Fulcrum Building, Surface Car Parks, Owenstown Road Realignment, Construction Access Road, Basement Ramp, and enabling works comprising various service diversions, new drainage, water, gas, electrical and services trenches all landscaping and public realm works associated with this phase of development. (see Figure 3.7)

Phase 2: Blocks A, B, & C, Basement Car Park Structure, and various drainage, water, gas, electrical and service trenches all landscaping and public realm works associated with this phase of development.

Phase 3: Demolition of existing buildings to the south of the development site and construction of new Block F buildings and various drainage, water, gas, electrical and service trenches all landscaping and public realm works associated with this phase of development.

There will be temporary car parking required when existing car park spaces are decommissioned to make way for development until the replacement permanent spaces are constructed.

A Traffic Management Plan will be prepared and agreed with the Transportation Department, Dun Laoghaire Rathdown County Council to provide for mitigation of the impact of construction traffic associated with the proposed development.

Construction plant used on site should comply with the relevant Irish regulations in relation to noise and vibration requirements. Noise will be minimised as far as possible, in particular by limiting the use of compressors and other plant to stated hours and by fitting and use of silencing devices wherever practicable.

Measures will be in place to ensure roadways are to be kept clean of muck and other debris. A road sweeping truck is to be provided if necessary to ensure that this is so. A wheel wash will be provided for the duration of the earthworks.

The appointed Contractor will be required to prepare a detailed Construction Management Plan on foot of any permission.

3.2.3 Duration & Timing

Given the scale and complexity of the proposed development a 10-year permission is being sought. It is anticipated that the first phase of development, principally the Fulcrum Building together with Blocks D & E, will be constructed over a 24 - 30 month period.

The Construction Management Plan will ensure that the balance of the application site and the overall campus can continue to function while various phases of development are being carried out and a high level of amenity for students is maintained throughout.

It is proposed that standard construction working hours will apply, 8am to 6pm Mondays to Fridays, and 8am to 1pm on Saturdays. Any works outside this period shall be strictly by agreement with the Local Authority.

3.3 Operation of the Project

The proposed development will provide on-campus student accommodation in various forms for a total of 3,006 no students together with a variety of ancillary amenity and facilities which include car parking areas, roads and amenity grassland within the existing Belfield Campus. The significant expansion of on-campus student accommodation will result in more sustainable travel patterns and enhance the vibrancy and sustainability of the Campus.

In addition to providing Student Accommodation, and to ensure the optimum use of the proposed development throughout the full calendar year, the accommodation is designed to be available as conference and visitor accommodation during off term periods.

As demonstrated in the following sections of this EIAR, post-construction, the operation of the proposed development is not likely to give rise to any significant additional impacts in terms of activities, materials or natural resources used or effects, residues or emissions which are likely to have a significant impact on human beings; flora and fauna, soils, water, air, climate, landscape.