Environmental Impact Assessment Report Non-Technical Summary

Student Accommodation Complex

at

University College Dublin
Belfield
Dublin 4

on behalf of

University College Dublin

Declan Brassil & Company Ltd
chartered planning consultants

September 2017

Environmental Impact Assessment Report
Non-Technical Summary

September 2017

In respect of development within the Administrative Area of:

Dun Laoghaire Rathdown County Council

For

Development of a Student Accommodation Complex

Provision of 3,006 Student Bedspaces in 7 no. Blocks together with a Student Facilities Building comprising a total 98,275 sqm GFA above ground level; Basement level (including underground Car Parking comprising 637 no. spaces and ancillary plant and storage areas), 3 no. ESB Substations, New Bicycle parking for c. 2,104 no. spaces, New surface level Car Parking (within a net increase of 315 no. surface spaces); Demolition of existing buildings 5,291sqm and all associated site & development works

At

University College Dublin Campus

Belfield, Dublin 4

On behalf of:

University College Dublin

Prepared by:

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NON-TECHNICAL SUMMARY

(I) INTRODUCTION

This document provides a non-technical summary of the Environmental Impact Assessment Report (EIAR) that has been submitted in support of a planning application for a Student Accommodation Complex at a site within the University College Dublin (UCD) Belfield Campus.

UCD currently has a student residential accommodation portfolio which extends to approximately 3,179 no. bedspaces on the campus. The proposed development will increase student residential accommodation by 3,006 no. bedspaces, and provide ancillary and complementary facilities to create a living campus community in a new residential village connected to and integrated with the existing residential villages.

This document provides a summary in plain English and free of technical jargon, describing the likely environmental impacts and inter-relationships between environmental factors as a result of the proposed development. This summary reflects the findings of the main EIAR document that accompanies the planning application submitted to An Bord Pleanála in accordance with Planning and Development (Housing) and Residential Tenancies Act 2016 (2016 Act) and the Planning and Development (Strategic Housing Development) Regulations 2017 (2017 Regulations).

Schedule 5 (Part 2) of SI No. 600 2001 Planning and Development Regulations sets out the categories of development and thresholds for activities that require the submission of an EIAR. The application site measures some 12.19 ha and accordingly and EIAR is required under Class 10 (b)(iv) – '*Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere'* of Schedule 5 (Part 2) of the Planning and Development Regulations 2001 (as amended).

A number of environmental specialist consultants were responsible for the preparation of individual chapters of this EIAR according to their technical expertise, which is a requirement under the EIA Directive and Regulations.

(II) SITE DESCRIPTION & PLANNING HISTORY

Belfield Campus is located to the south-west of the N11 Stillorgan Road. The campus comprises of approximately 133 ha and is generally bound by the Stillorgan Road to the north east; Fosters Avenue to the south east; Roebuck Road to the south and Clonskeagh Road to west.

The proposed application site comprises of three distinct parcels. The main parcel, which comprises of the proposed site for built elements, is located to the south-west of the overall campus and comprises approximately 11.4 ha.

The main application site is bounded by Belgrove Residences and new student residences under construction to the north-west; the UCD Quinn School of Business and the UCD Sutherland School of Law to the north; Merville Student Residences to the east; Roebuck Hall Residences and Roebuck Road to the south; and, existing residential development Roebuck Castle (outside the campus) to the west.

The second parcel is and to the east of playing pitches and open space. This site comprises approximately 1.4ha. located generally to the south and west of the Belgrove Residences, to the north of the Little Sisters of Mercy Residences,

The third parcel is located to the east of the Merville Residences and to the west of Glenomena Residences. This site comprises approximately 0.15ha.

The majority of the main application site comprises existing surface car parking areas; two training pitches and other areas of open space. The northern portion of the site comprises of four separate parking areas, located to the south of the Lochlann Quinn School of Business and the Sutherland School of Law, which account for approximately 472 car parking spaces. There is a small parking area to the west of the Merville Residences comprising of approximately 20 car parking spaces, and a larger car park to the south of the site, immediately west of Roebuck Halls Residences comprising approximately car parking spaces.

The central part of the site comprises of two training pitches. The existing woodland walkway traverses this area along the northern boundary of the pitches. Vehicular access road from the Owenstown Park Entrance is located to the east of these pitches while access road from Roebuck is located to the west, both connecting to the main internal circulatory road which runs around the main Campus.

The main application site also includes Roebuck Castle (a Protected Structure) and a number of buildings of varying merit. The setting of the Castle has been greatly altered with the construction of additional buildings close to the historic structure including a church and a four storey 'residence' building which was a former Nursing Home. Located further south, and also within the main application site, are two gate lodges in UCD ownership. Roebuck Glebe (a Protected Structure) is located at the south-west corner of the complex and is a single storey dormer gate lodge. Crannog House is located to the south-east corner of the complex and is a single storey gate lodge.

The second parcel is located y to the south and west of the Belgrove Residences, to the north of the Little Sisters of Mercy Residences, and to the east of playing pitches and open space. It currently comprises a small car parking area and other incidental open space.

There is no recent, relevant planning history associated with the application site.

(III) DESCRIPTION OF DEVELOPMENT

UCD is seeking planning permission for development comprising the following principal elements:

- 3,006 no. bedspaces comprising a mix of student accommodation typologies.
- The proposed accommodation will be arranged in a series of 7 Blocks, which will vary in height from 5 to 10 storeys.
- Generally, the proposed Student Residence Blocks are arranged in a courtyard format. 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.
- Dedicated Activity Hubs will be provided within the blocks with lounge, function and study spaces.

- A 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.
- No works are proposed to Roebuck Castle (a Protected Structure) save for the demolition of modern extensions and buildings in the vicinity of the site. Similarly, no works are proposed to the Glebe Lodge (a Protected Structure) or the Crannog Lodge.
- 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.
- A multi-use external court and outdoor active and passive amenity area on the eastern part of the site.
- 994 no. car parking spaces, including a basement level car park and two surface car parks. Approximately 679 no. existing spaces will be displaced due to the development, with an additional 305 no. spaces to be decommissioned across campus by the time the project is completed, subject to achieving the targets proposed in the draft UCD Travel Plan.
- Approximately 2,104 cycle parking spaces.
- Retention of the existing woodland walk and all other associated landscaping works.
- Provision of a new, temporary construction access and associated construction parking area onto Fosters Avenue for the duration of the proposed development.
- A ten-year permission is being sought.

It is envisaged that the development be constructed in three phases.

(IV) CONSIDERATION OF ALTERNATIVES

The proposed student accommodation element of the proposed development provides a high quality, purpose built, on-campus student accommodation which will assist in creating a vibrant and socially engaging residential student population, and reduce daily traffic movements on and off the campus.

The proposed development is set in the context of an acknowledged, city wide housing and student accommodation crisis.

The *Governments Action Plan for Housing and Homelessness, Rebuilding Ireland*, July 2016 (the Action Plan), identifies the importance of providing well designed and located student accommodation in order to avoid additional pressures in the private rental sector.

National policy has identified the importance of providing well-designed and located student accommodation in order to avoid additional pressures in the private rental accommodation. There are many benefits of locating student accommodation on-campus in terms of promoting sustainable travel patterns; maximising the opportunity of available resources; freeing up the private residential market (and future development sites), and generally enhanced student experience. It is considered that the location of additional student

accommodation on campus is advocated by and consistent with the Government's *Action Plan for Housing and Homelessness, Rebuilding Ireland*, July 2016.

A number of alternative layouts for the proposed development were considered over the design process. In addition, the proposals for the development were subject to detailed discussion with the Planning Authority prior to the principles of the of the proposed layout being finalised.

The significant environmental issues and potential effects which informed the proposed layout included built heritage and conservation, landscape and visual impact, shadow assessment, integration with the sustainable transportation strategy, and impact on amenity of existing student accommodation on site and adjoining properties.

The resultant and proposed scheme was informed by consideration of a number of environment aspects; vehicular and pedestrian movements; maximisation of pedestrian connectivity through the site; linkages with adjoining Student Accommodation; protection of Architectural Heritage; protection of adjoining residential amenity and retention of existing mature trees.

(V) HUMAN BEINGS

UCD has a current student population of over 26,500 students with the university offering undergraduate, masters, PhD, post-doctoral training, research and innovation opportunities. UCD is also an important centre of employment, currently employing approximately 4,000 staff, making it one of Ireland's largest employment centres. The surrounding environment is generally suburban in nature, with a number of neighbourhood centres located nearby. Residential communities located in close vicinity of the campus include Roebuck, Mount Merrion, Clonskeagh and Booterstown. There are currently approximately 3,180 bed spaces available for student residents at a number of on-campus university residence villages. The university campus contains sporting and recreation amenities that are available to both students and members of the wider community. The university campus also has a large area of grounds, including woodland areas that are popular amenity areas for students and members of the local community. UCD is well served by public transport.

The proposed development will increase the population on the campus. This will contribute to a more active, vibrant and inhabited campus, particularly during the evenings, weekends and out-of-term. The spending from the new student community is likely to be in the region of €2.4 million per annum to the local economy, based on 3,006 student places, with a Long Term, Moderate Positive Impact on the university and on the economy of the wider area.

The on-campus student accommodation, will potentially make available a portion of the private rental housing market in the vicinity of the university campus. This will have a Long Term Moderate Positive Impact for students and the wider housing rental market.

Students will continue to be housed subject to a license to reside to ensure all students are aware of their resident and community obligations. This will lead to Long Term Neutral Impact in terms of disruption or nuisance to neighbouring communities. The potential increase in vehicle ownership, if not vehicle use, is likely to have as Slight Negative Impact on surrounding residential areas.

The additional recreational facilities including the Student hub, student facilities, active recreational areas and internal courtyards will broaden amenity and facilities available bringing a Long Term Moderate Positive Impact to the university community.

The loss of open undeveloped land on the campus is likely to be a Long Term Moderate Negative Impact on the recreational amenity of the university and the adjoining residential areas.

At construction stage, there is likely to be a Temporary Slight Negative Impact from short-term restrictions to Ownestown Park access road to the college for private cars, and a Temporary Slight Negative Impact on journeys for cyclists and pedestrians, arising from realignment works. The construction stage may also result in direct Short Term Moderate Positive impacts from the creation of secondary employment opportunities and local spending.

Mitigation measures at construction stage include the provision of adequate notification of construction works and any resulting closures or diversions, maintaining a pedestrian and cycle access point at Owenstown Park or Roebuck Castle and the preparation of construction management plan. At operation stage, mitigation measures will relate to the management and obligations of residents of the accommodation and the enhancement of the woodland walkway. The overall impact of the proposed development will be significantly positive in terms of catering for increased travel demand at UCD associated with planned campus population growth, by sustainable transport modes (walking/cycling) associated with significantly increasing the on-campus resident student population.

Assessment of the likely impacts of the scheme on Human Health through environmental relationships has been undertaken and these impacts are dealt with throughout the EIAR, and in particular, Air, Dust and Climatic Factors (Chapter 9), Noise and Vibration (Chapter 8), Landscape and Visual (Chapter 11), Water Hydrogeology and Hydrology (Chapter 7) and Water – Supply and Drainage (Chapter 13). There will not be significant impacts on human health as a result of the construction or operation of the proposed development. The mitigation measures relating to the operation phase of the development concerning traffic, transport, noise, vibration, water, air and dust quality and landscaping as set out in this EIAR will be carried out in full to minimise impacts on adjacent residents, the university, and human health..

(VI) SOIL AND GEOLOGY

The proposed development site is situated within an urban environment in south County Dublin. Soils are deep and generally moderately drained. Across many parts of the application site soils have already been removed to make way for existing structures, roadways and temporary car parks. There will be permanent removal of soils as part of site preparation. Excess soil shall be removed off-site and re-used.

Subsoils are a stiff, dense, gravelly till, referred to as Dublin boulder clay. Subsoils will be excavated and removed off-site to make way for foundations and a large basement car park. These subsoils are not considered to be of geological importance. Sands and gravels were encountered in the southern part of the application site. It is likely that where it is necessary to excavate this material it can be re-used for site contouring purposes.

The risk to soil/subsoil quality from accidental spillages and leaks is deemed to be low assuming all mitigation measures described in this document are adhered to.

Bedrock was not encountered during site investigation and it is not envisaged that it will be exposed during construction works.

There are no sites of geological heritage on or in the vicinity of the site that will be impacted upon by the proposed development.

There are no historical activities that would suggest potential for contaminated soils/subsoils. It is possible that during construction works, local areas of historical contamination may be encountered (e.g. beneath historical heating oil containers). Upon encountering potentially contaminated soils, more extensive trial pitting and soil sampling will be carried out to characterise the extents and type of contamination, with identified material removal off-site by an appropriately licensed contractor.

Potential impacts to the soils and geological environment have been assessed, and appropriate mitigation measures have been presented. There are no likely significant impacts on the geological environment associated with the proposed development of the site. It is not anticipated that any impacts will arise following the implementation of the mitigation measures outlined in the EIAR.

(VII) WATER: HYDROGEOLOGY & HYDROLOGY

In the context of surface water the primary impacts are to surface water quality, due to contamination with hydrocarbons and building materials such as concrete, and transport of silt from the site. A number of temporary mitigation measures have been recommended to prevent any negative impact to surface water quality during construction phase. Permanent mitigation measures, primarily silt interception by the Existing lake and hydrocarbon interceptors for the basement car park should protect water quality during the lifetime of the proposed development. A stormwater attenuation device shall control stormwater flows from the site at pre-development greenfield runoff rates, and this will protect against any potential increase in flood risk due to the introduction of hardstanding. Attenuated stormwater will be diverted to the Elm Park Stream.

The potential risk to groundwater is less due to the protective coverage provided by a thick layer of low permeability overburden. As this is removed for site development the protection to the underlying aquifer is temporarily reduced. Mitigation measures will protect against any impact to groundwater quality. Hardstanding will be installed on any areas where subsoil has been disturbed, thereby protecting the underlying aquifer. Foul water is to be discharged to a mains sewer network.

Potential impacts to the hydrological and hydrogeological environment have been assessed, and appropriate mitigation measures have been presented. There are no likely significant impacts on the hydrological or hydrogeological environment associated with the proposed development of the site. It is not anticipated that any impacts will arise following the implementation of the mitigation measures outlined in the EIAR.

(VIII) NOISE AND VIBRATION

The proposed development for which planning permission is sought in this application comprises a student accommodation centre up to 10 storeys in height above a single basement car park, and associated ancillary features.

Potential Construction Phase Noise & Vibration Impacts

The proposed construction works is expected to span a number of years, with the hours of construction typically from 07.00 to 19.00 Monday to Friday and 08.00 to16.00 Saturdays. Although there may occasionally be the need to work outside the normal hours of construction, heavy or noisy construction activities will be minimised during these periods in accordance with best practice. The assessment has shown that the predicted construction noise level associated with site works will not exceed the assessment criteria for construction works of 70dB(A) at any of the named receptor locations. A Minor impact is predicted at some of the closest receptor locations for all construction phases.

The change in noise level attributable to construction traffic will not be noticeable and can be classified as "imperceptible". The nearest residential receiver to the proposed development will not experience vibration impact during construction. The only construction activity with the potential to generate noticeable vibration levels will be construction vehicles but the level will not be detectable at the closest residences.

Potential Operational Impacts

The proposed development will have very low noise outputs associated with the completed structures with the only noise sources associated with the proposed development being building services noise and traffic on the internal road network. There will be no source of vibration associated with the operational phase.

The plant that will be capable of generating noise to some degree include ventilation, heating and chiller units. Some of this plant could operate 24 hours a day, and hence would be most noticeable during quiet periods, including night-time. Noise levels from these sources will not be audible at nearby receptors. The predicted increase in noise levels due to additional vehicular traffic associated with the proposed development is barely perceptible with a negligible impact.

Mitigation Measures

The Construction Programme will be manged to ensure that all impacts including noise and vibration are minimised and maintained within permissible limits. For the Operational Phase, building services plant will be housed indoors which acts as effective containment for any noise associated with the operation of the plant.

(IX) AIR, DUST AND CLIMATIC FACTORS

The proposed development for which planning permission is sought in this application comprises a student accommodation centre up to 10 storeys in height above a single basement car park, and associated ancillary features.

Potential Construction Impacts on air quality and climate

The proposed construction works associated with the development proposed in this planning application is expected to take a number of years. The potential air quality impacts during Construction are summarised as follows:

i. Dust emissions associated with excavations and construction works

ii. Emissions of dust associated with building demolition works

iii. Construction transport emissions

This assessment shows that the most significant potential impacts are those associated with Construction activity and construction traffic. There is predicted to be a temporary slight adverse impact on the closest receptors during the Construction Programme with potential short-term impacts from traffic on the surrounding roads within about 50m of the site. There will be no lasting impact and the short-term impact can be managed by means of an effective Construction Management Plan incorporating the mitigation measures outlined in the EIAR.

Potential Operational Impacts on Air Quality & Climate

The only predicted air quality impacts associated with operation of the development are emissions to atmosphere from heating sources and traffic associated with the development. The change in traffic movements will have no quantifiable impact on air quality. There are no adverse impacts on ambient air quality predicted as a result of the Operation Phase of the proposed development.

Due to the size and nature of the development, greenhouse gas emissions resulting from the development will be imperceptible in the national context. There will therefore be no adverse impacts on climate and no significant contribution to Irelands greenhouse gas budget.

The size and nature of the development and the nature and volume of emissions will lead to an imperceptible change in atmospheric conditions. There will be no change to the heat balance in the immediate area.

Mitigation Measures

A Dust Management Plan will be formulated for the construction phase of the project, as construction activities are likely to generate some dust emissions. The principal objective of the Plan is to ensure that dust emissions do not cause significant nuisance at receptors in the vicinity of the site.

There is the potential for a number of greenhouse gas emissions to atmosphere from the boilers which may give rise to CO2 emissions. However the level of emissions will be insignificant compared to national greenhouse gas emissions.

(X) BIODIVERSITY

Biodiversity

A review of the biodiversity of the site was carried out by OPENFIELD Ecological Services and this included a study of existing information from the area, consultation with the Development Applications Unit of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, and a site survey. A site survey was carried out in February 2016 and August 2017. Surveys were therefore within the optimal season for general habitat survey. This included a breeding bird survey. A detector-based bat survey was carried out in May and July 2016 by Brian Keeley of Wildlife Surveys Ireland. This is within the appropriate season for bat surveys.

It was found that the site is not within or adjacent to any area that is designated for nature conservation at a national or international level. There are no plants recorded from the site that are listed as rare or of conservation value. There are no habitats that are examples of those listed on Annex I of the Habitats Directive. There is a stand of Japanese Knotweed, an alien invasive species as listed in Schedule 3 of SI No.477

of 2011. This was treated by stem injection of herbicide in August 2017. A management plan for the eradication of this plant has been prepared. The site can be described as highly disturbed in nature, with buildings, roads, playing fields and other artificial surfaces. Horticultural hedges and ornamental trees are mostly of low biodiversity value although mature trees, of a variety of species, are of local significance. Older woodland areas – or clusters of mature trees – are also of local significance. There are no water courses of fisheries value in the catchment of the site although a small stream is present. It enters the Irish Sea at Dublin Bay. Dublin Bay is an internationally recognised location for wintering birds and wetland habitats. Because it is designated under EU law for these features a separate 'screening report for Appropriate Assessment' was prepared. The bat survey recorded three species: Common & Soprano Pipistrelle and Leisler's Bat. These bats are likely to use the field boundaries and mature trees for foraging and/or commuting and may also roost in mature trees. Bat roosts were recorded at the former chapel, where approximately 51 Leisler's Bats were counted, and an individual Leisler's roost from a tree near the NOVA centre (outside the subject site boundary). Roebuck chapel is therefore considered to be a maternity roost. All bats roosts are protected and so a derogation licence has been applied for from the National Parks and Wildlife Service (and following consultation with the local ranger). Although Badgers are known from the vicinity there was no evidence of Badgers using the site and there are no setts.

Areas of woodland are not to be significantly reduced in size as a result of this project although sections will be removed to provide a new access route from Foster's Avenue, as other small sections to the south and north-east. An estimated 317 trees are to be removed due to their condition or because of conflict with the project design. This will be offset by the planting of approximately 700 new trees. None of these trees has been assessed as Category A (defined as 'trees of high quality/value with a minimum 40years life expectancy). Good site management practices will ensure that pollution to water courses does not occur during the construction phase. To this end, a detailed Construction Management Plan has been prepared. Surface water will discharge to the existing pond in the UCD campus after attenuation and silt removal. A replacement bat roost is to be created under licence from the NPWS and this will ensure the continued viability of the local bat population. In addition, felling of larger trees is to be done under the supervision of a bat ecologist. Trees to be retained within the development are to be protected with exclusion guards to avoid impacts from machinery etc. With the suggested mitigation in place, the ecological impacts by this proposed development will be neutral.

(XI) LANDSCAPE & VISUAL IMPACT ASSESSMENT

UCD Student Housing Non-technical summary

Methodology

This assessment deals with two related aspects, namely; Impact on the Landscape Character of the area and; Impact on the Visual Environment. The method for assessing Visual Impacts employs the use of comparative 'existing' and 'proposed' photomontages prepared for a representative selection of viewpoints from around the site. All impacts are assessed using the criteria for quantum, quality and duration of impact as set out in the current guidelines.

Receiving Environment

The site lies within the south west area of Belfield, in the area of Roebuck.

The site currently comprises of surface car parking to the north; two centrally located playing pitches, open space and hedgerow; surface car parking to the south associated with Roebuck Hall Residences; and a number of buildings centred on Roebuck Castle to the south. There is a range of trees of varying maturity across the site. Roebuck Castle is located to the west of the complex of buildings. The western boundary with Roebuck Castle residences also has mature trees forming a screen and shelterbelt or varying width. The central portion of the site is characterized by large open grass playing pitches with trees, car parking and residences to each side except to the north which is open to academic buildings. The central area of the site appears generally flat, and in fact falls gently northwards with occasional banks and cuttings associated with the level changes at the edges of the pitches, car parks and boundaries The receiving environment is therefore visually contained and relatively flat site. The Owenstown Park access is used by buses, cars, cyclists and pedestrians, with further pulses of students on foot. There are also older people and young families walking their dogs through the campus. The characteristic of the site looking northwards is one of a busy and developing campus.

Characteristics of the Proposal

The development comprises a total of 3,006 no. residential bedspaces. The proposed accommodation will be arranged in a series of 6 no. Residential Blocks, which will vary in height from 5 to 10 storeys. Dedicated Residential Activity Hubs are proposed within each of the residential 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 active urban streetscapes.

The proposed development also provides for an additional student facility centre comprising a multifunctional hall, gym, health & wellbeing centre, with studio accommodation above and supporting shops and services such as a bank, convenience store, café's, shops etc.

The proposed development includes for the removal of recent additions to Roebuck Castle to the south and 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.

Potential Impacts of the Proposed Development

The main potential impact of the scheme relates to the height, scale and massing of its built elements and their potential visibility/prominence from a range of vantage points around the site. Potential landscape impacts include aspects of the relationship between existing development and the proposed and include social and cultural factors.

The proposed development will result in the insertion of 9 new 5-10 storey buildings into the existing environment, together with associated access and service roads and drop-off car parking, shared surfaces, recreational amenity spaces, and a shared surface plaza. The landscape treatments include green roofs and ground levels SUDs. The proposed development will not be out of context in terms of the developing character of this area of the campus. However there is a potential impact relating to the evolution of the former demesne landscape from which the campus is derived, to the recreational landscape characterised by the existing pitches and the proposed development which will consolidate the transition to a more urban residential zone of the campus.

The sensitivity to these impacts will fall in to two categories; one being when the development is experienced within the campus by the those who are familiar with the evolving landscape context; and the other where the development is viewed from outside of the campus. The second category stems from locations on the south-western perimeter of the campus where the development will be experienced in the context of the neighbouring residences and Roebuck Road.

Predicted Impacts

The development itself will impact on the landscape in varying degrees and due to the nature of the development it will be deemed to have a permanent visual impact on the existing environment. In landscape terms, impacts on three inter-related aspects to be addressed, namely:-

- The perceived character of the area;
- The existing amenity value of the landscape; and
- The existing views.

i. Impact on Landscape Character

Despite the presence of a significant area of playing fields, road infrastructure and car parking, with trees and woodland, and the surrounding residential and academic buildings, the overall landscape character today is contained within that envelope of a semi urban campus landscape

The presence in the locality of recent 6 storey high rise residential buildings at Belgrove and Roebuck gives a precedence of higher built development in this area and means that the proposed development will not be anomalous within the existing landscape setting.

The development will involve the removal of trees located at the northern part of the site and at the boundaries. The Elm Walk trees will be relocated on the campus. The impact of this will be substantially ameliorated by the replanting of exotic, native and locally occurring species within the landscape of the proposed development, which will be fundamental in enhancing the existing and creating a new appropriate green structure.

Changes to the landscape character of the site itself will include the removal of the playing pitches and an intensification in the use and programming of the new spaces, including courtyards, active linear 'streets', social spaces, shared surfaces, a plaza and recreational spaces. The overall impact on landscape character will be significant and neutral.

ii. Impact on Landscape Amenity Value

The subject site at present is used for active sports recreation and a footpath as part of the campus woodland walks. The proposed scheme will include a public plaza, active 'streets', courtyards and recreational spaces with playful and social elements and a reinstatement of the campus walk. The overall impact on landscape amenity is moderate and positive.

iii. Impact on Views

The 12 views that have been assessed are taken from within the campus, at the perimeter of the campus, and from further away on higher ground. Whilst the long distance views show the scheme in the context of the

south east of Dublin and are slight, the scale of the development generates moderate and predominantly significant views close to and within the campus due to the context of emerging trends on the campus as well as the scale of the development. Of these 10 are neutral due to the nature of the design sensibilities, with two views that are negative where the development is exposed towards the perimeter of the campus.

Conclusion

In summary, the proposed development is a logical extension of existing student residential fabric of this area of the campus which has been planned for by the university and the local authority. The proposed scheme has been well conceived and designed to integrate within its landscape context and to create a more urban quarter of the campus with a new and active public realm . It also makes a very positive contribution to a socially cohesive living environment for a substantial number of people.

(XII) MATERIAL ASSET: TRAFFIC & TRANSPORT

Introduction and Context

University College Dublin (UCD) have developed a Travel Plan for the period 2016-2021-2026, following consultation with the UCD Community, Dun Laoghaire-Rathdown County Council and the National Transport Authority. This Travel Plan sets targets in relation to reducing the reliance on travel by private car and identifies opportunities to continue to promote sustainable modes of travel. The provision of 3,006 additional bedspaces on campus will be the most significant element of terms of achieving these targets while future projects identified in Greater Dublin Area Transport Strategy 2016-2035 and the Greater Dublin Area Cycle Network Plan will also directly benefit UCD. Examples of projects include the Blanchardstown to UCD Bus Rapid Transit (BRT) scheme; the Dundrum/UCD to Tallaght orbital bus route; the Dodder Greenway cycle route; and the Sandyford to City Centre cycle route.

UCD, with a current staff and student population of almost 30,000 people, promotes sustainable travel through its policies and infrastructure. The campus is permeable, with 12 formal entrances for pedestrians and cyclists and end of trip facilities such as showers, changing areas and cycling parking are provided. In addition, the campus acts as a terminus for Dublin Bus and private bus services, with 50 buses entering and existing the campus at peak times. UCD also operate a shuttle bus service between the DART (at Sydney Parade) and the campus. In terms of current commuting trips to the campus, private vehicle transport (i.e. car drivers and passengers) has a mode share of 25%, public transport (i.e. bus and rail) has a mode share of 41%, while green modes such as walking and cycling have a mode share of 33%.

Parking demand management is in place across the Belfield campus and as of September 2016, there are 3,558 car parking spaces on campus. It is estimated that approximately 3,042 of these spaces have a daily ‘commuting impact’, 186 are ‘non-commuting spaces’ and 330 are pay and display visitor spaces.

As part of the UCD Travel Plan, a car parking strategy has been prepared for the campus which has the following objectives;

- To maintain the existing quantum of permit parking;
- To provide a limited number of managed, dedicated, long-term ‘car-storage’ parking spaces for student residents on-campus;

- To increase the quantum of managed visitor parking in each traffic cell; and
- To review and rebalance the amount of parking in each traffic cell such that traffic is appropriately distributed across external junctions.

Proposed Development

The proposed development includes the provision of high-quality public spaces that will be integrated with the existing campus pedestrian and cycle networks.

The proposed development will result in the loss of a number of car parking spaces as a result of new buildings, the realigned internal road and access arrangements. A displacement of 679 existing parking spaces will occur as a result of the new development.

The proposals include 637 no. basement car parking spaces, 32 no. at-grade disabled spaces, a new 100-surface space car park adjacent to Sutherland School of Law, and a 225-space extension to the Little Sisters car park behind Belgrove residences. These parking spaces will be accessible from Owenstown Park when traffic gates are closed during peak morning and evening periods.

In order to maintain the overall campus car parking provision at the levels proposed in the UCD Travel Plan 2016-2021-2026, it is proposed as part of this planning application to remove a total of 177 car parking spaces from the Merville and Glenomena residences and 49 from the existing car park at the old running track, accessed off the R138 Stillorgan Road. This is illustrated below.

Car Park Name	Existing spaces	Displaced by proposals	Remaining spaces	Proposed changes	Total spaces
O1	87	0	87	0	87
O2 (Little Sisters car park)	61	0	61	+225	286
O3	72	-72	0	0	0
O4	314	-314	0	0	0
O5 (Merville/Glenomena)	201	-20	181	-177	4
O6	75	-75	0	0	0
O7	10	-10	0	0	0
O8	33	-33	0	0	0
O9	69	-69	0	0	0
O10	55	0	55	0	55
O11	86	-86	0	0	0
Other spaces beside buildings (mostly disabled)	18	0	18	0	18
New Permanent Basement car park	-	-	-	+637	637
New Sutherland School of Law car park	-	-	-	+100	100
New surface level disabled parking bays	-	-	-	+32	32
Total	**1,081**	**-679**	**402**	**817**	**1,219**

As a direct result of the present proposals, the total car parking across the whole campus will equate to 3,647 spaces, which is consistent with the UCD Travel Plan 2016-2021-2026. Error! Reference source not found. below illustrates the breakdown of car parking spaces per traffic cell, following the completion of the student residences.

	Parking Cell						Total
	R138	Owenstown	Richview	Clonskeagh	Nova	Rosemount	
Pre-Development	1,086	1,081	148	1,090	124	29	3,558
Post-Development	1,037	1,219	148	1,090	124	29	3,647

The present proposals are fully consistent with the aims for campus-wide car parking set-out in UCD's Travel Plan, in terms of quantum, location and type of parking.

The proposals include the replacement of impacted existing spaces, the provision of additional car parking, as well as the decommissioning of existing spaces from the Owenstown Park and R138 traffic cells. This is reflected on a campus-wide net increase of 89 spaces, bringing the total provision to 3,647, which is 77 spaces short of the suggested provision of 3,724 by 2021.

The proposals include the relocation of a large number of existing surface car parking to a covered, managed facility within the basement of the student residences. This is consistent with the objective of consolidating car parking on higher-density facilities at the periphery of the campus core, thus enabling the creation of high-quality pedestrian and cycle areas at the heart of Belfield campus.

The Travel Plan identifies the need to increase the availability of visitor (pay&display) car parking across the campus, with a particular deficit having been identified at the Owenstown Park traffic cell. The proposals address this issue by providing 64 additional visitor spaces, along with managed parking to serve the student residences and the replacement of staff and student car parking physically impacted by the proposed scheme.

2,104 cycle parking spaces will be provided as part of the Masterplan with other transport features including a realigned internal access road and new priority junction with the internal campus ring road; shared space areas; indented bays for buses along the realigned access road from Owenstown Park; and provision of a new, temporary construction access off Fosters Avenue for the duration of the proposed development. The Masterplan will create a highly permeable area in this part of the campus, with desire lines catered for by a dense network of paths for pedestrians and cyclists.

Construction Stage

It is anticipated that the construction of the UCD Student Residences Masterplan will be carried out in three phases. In terms of general traffic generation and impact on the surrounding road network, the critical period will be the construction stage, as traffic flows generated by the construction works will be higher than those when the student residences are occupied.

A temporary 'construction only' access is proposed at the junction of North Avenue and Fosters Avenue, connecting with the internal construction haul road. This access will need to be signalised and therefore it will require the following changes to the junction of Fosters Avenue and North Avenue:

- Provision of a short right-turn on Fosters Avenue into UCD; and

- Alterations to the traffic signals phasing on Fosters Avenue to allow for right-turn movements into UCD. The signal stage which permits construction vehicle movements into and out of the campus will be loop-activated.

The quantum of car parking available on campus, and in particular in the Owenstown Park traffic cell will vary from phase to phase during the construction period. The displacement and provision of car parking spaces during the construction period, with projected adjustments at the end of each phase contingent on achieving Travel Plan targets, is anticipated to be as follows:

As part of Phase 1, approximately 270 spaces will be displaced and 334 new spaces will be constructed. At the end of this phase, there will be 3,622 spaces on campus;

As part of Phase 2, approximately 297 spaces will be displaced. They will be temporarily accommodated within the cell during the construction of the basement car park. Once the basement car park is operational, these temporary spaces will be decommissioned. At the end of this phase, there would be 3,980 spaces physically on campus. This will reduce to 3,724 spaces by decommissioning spaces across campus based on achieving Travel Plan targets.

As part of Phase 3, approximately 112 spaces will be displaced and 5 disabled spaces constructed. At the end of this phase, a further 49 spaces would be decommissioned to bring the overall quantum to 3,568 spaces based on achieving Travel Plan targets.

It is proposed to provide 200 construction staff spaces on campus during the construction stage. Construction staff will be, as much as possible, encouraged to use sustainable forms of transport to travel to and from the site (i.e. public transport, walking, cycling and car-pooling).

It is anticipated that there will be a peak of 32 two-way HGV movements to and from the campus during the most intensive period of the construction works. They are, however, anticipated to occur outside of peak commuting hours. During the morning peak commuting hours, approximately 8 two-way HGV movements are anticipated. Taking into account construction staff vehicle movements, it is forecast that there will be a 1% increase in traffic volumes along Fosters Avenue and a 2% increase in traffic volumes at the junction of Fosters Avenue and North Avenue during the morning peak commuting hour.

Analysis of the modified junction of North Avenue and Fosters Avenue illustrates that the additional construction traffic movements to and from the new arm will be incorporated into the existing junction phasing, with negligible impact due to the relatively low traffic volumes.

Traffic Impact

In qualitative terms, notwithstanding the significant planned increase in campus population, the proposed UCD Student Residences Masterplan will ensure that there will not be any material increase in external traffic impact on the surrounding road and street network during the morning and evening peak commuter periods.

The UCD Student Residences Masterplan when completed will effectively remove the commuter peak periods traffic demand for more than 3,000 students as they will based on campus.

Furthermore, the adherence to the car parking strategy proposed as part of the UCD Travel Plan 2016-2021-2026, means that the campus-wide increase in car parking is consistence with the targets established, which take account of the provision of external public transport and cycling improvements.

Monitoring

As part of the ongoing commuting monitoring process undertaken by UCD, the impact of the development will also be measured. In particular, UCD will continue to carry out annual travel surveys to identify changes in travel patterns among staff and students. Surveys in relation to the residential car parking spaces and visitor parking spaces will also be undertaken regularly to ensure appropriate usage. Corrective measures will be actioned by the UCD Estate Services should any misuse be identified.

(XIII) MATERIAL ASSETS: WATER: WATER SUPPLY & DRAINAGE

The proposed development will be an important step in creating a more sustainable UCD Campus with significantly greater number of students living more sustainably on campus. In summary the potential impacts on the Water Supply & Drainage Material assets and proposed mitigation measures are as follows:

- The increase in impermeable area and the corresponding increase in both volume and rate of surface water run-off. This will be mitigated by applying the Principles of Sustainable Urban Drainage Systems, as embodied in the requirements of the Greater Dublin Strategic Drainage Study (GDSDS), which will ensure the run -off post development will replicate the pre- development Greenfield site with no significant adverse impacts on the surface water system.
- The increase in water demand and consequent increase in foul flow that the Development will bring has been assessed by Irish Water and they have stated that it can be accommodated by the existing infrastructure without upgrade.
- The development will have a positive impact on the Roebuck Castle Housing Estate as it will reduce both the Foul and Surface Water flow into the estate system.

In summary while the development brings with it the usual potentially adverse effects of increasing both volume and rate of surface water run -off these can be mitigated in a "best practice" way by designing in accordance with the principles of Sustainability as embodied in the GDSDS to replicate the response of the Greenfield Site. If residential development did not occur on campus it would have to occur somewhere else to meet the growing student accommodation needs. The same impacts would, therefore, have to be addressed on other sites with less available infrastructural capacity and where such a less coordinated and managed response to mitigate any potentially adverse impacts might not be so easily achieved.

(XIV) MATERIAL ASSET: UTILITIES

This section considers the key aspects relating to material assets of the proposed development site and the surrounding area, namely electricity, gas supply and telecommunications.

This chapter describes existing services to the application site and describes the predicted impacts which the development may have on these services.

It is envisaged that the proposed development will low or insignificant impacts in terms of electricity, gas supply and telecommunications provision.

(XV) ARCHITECTURE & CULTURAL HERITAGE

The Architecture & Cultural Heritage Section discusses the architectural heritage of the proposed development area and its immediate environs. It has been carried out by Robin Mandal Architects, an RIAI Conservation Practice, accredited at Grade 1.

Following examination of the historical records, visits to the site and inspections of the architectural elements of the site; and subsequent examinations of the proposals for the development of the site, a conservation assessment of the impact of the proposals on the architectural heritage elements has been undertaken.

The operation phase of the proposed development will also impact on the following architectural elements and relationships:

i. Roebuck Castle, a protected structure (DLR 217) and its setting;

ii. The garden wall of the former Roebuck Demesne;

iii. The Glebe Lodge, a protected structure (DLR 236) and its setting;

iv. The Crannog Lodge, to the southern end of the site;

v. The relationship with Roebuck Road and

vi. The overall setting of the Belfield Campus and the elements described above.

The proposed development consists of the construction of some 3,006 student housing units on the site and lands adjacent to Roebuck Castle, Belfield, County Dublin. The student housing blocks will range from two to 10 storeys. No works are proposed to the protected structures.

The biggest challenge to the setting of the protected structures and the recorded monument is the volume of the proposed construction contrasted to the scale of the existing buildings. This is less an issue with the Castle itself, as its scale is significant. For the smaller protected structure of The Glebe, as well as for the non-protected Crannog, the question of scale poses more challenges.

Having considered the evidence and the mitigation measures, the conclusion of this element of the report is that the overall impact of the proposed development, when mitigation measures are taken into account, is neutral, significant and long term.

(XVI) ARCHAEOLOGY AND CULTURAL HERITAGE

A desk-based study and field survey was carried out of a proposed Student Accommodation development at UCD Campus, Belfield, Dublin 4 by Aidan O' Connell of Archer Heritage Planning Ltd. The site currently comprises surface parking to the north; 2 no. centrally located training pitches and open space; surface car parking to the south associated with Roebuck Hall Residences and a number of buildings centred on Roebuck Castle to the south with an overall area of 12.19ha. This Cultural Heritage and Archaeology report sought to identify and describe known and potential archaeological or cultural heritage constraints within and/or immediately adjacent to the site and found;

- No obvious areas of archaeological potential were noted in the course of the site visit.

- There is one Recorded Monument (Roebuck Castle, DU022-017) within the area of the proposed development.
- There are two Protected Structures (Roebuck Castle DLR236 and Glebe DLR217) within the area of the proposed development.
- Archaeological monitoring associated with the Bioprocessing Facility just to the east of the site revealed no archaeological finds or features.
- No areas of archaeological potential were noted in the review of cartographic sources.
- No areas of archaeological potential were noted on or adjacent to the site on aerial photography.

The area to the north of the proposed development (the current training pitches) appear to be relatively untouched and have shown little development since the 18th century. Development of this area (current training pitches) may impact archaeological finds or features which might exist below ground. There are further smaller outlying greenfield areas to the West and East.

Roebuck Castle is a Recorded Monument,(DU022-017). Development of this area (adjacent to the castle) may impact archaeological finds or features which might exist below ground.

Subject to any grant of permission, further archaeological works will be undertaken at this site including:

1. Excavation of test trenches in greenfield areas (the training pitches, the outlying western area adjacent to Belgrove Student Residence, the greenfield area to the east of the site adjacent to the National Institute of Bioprocessing Research).

2. Excavation of test trenches in areas impacted by groundworks in proximity to Roebuck Castle, should this not be possible due to existing buildings then monitoring of the groundworks during the construction phase.

All investigations and excavations will be carried out under license to the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (DAHRRGA).

(XVII) INTERACTIONS

Chapter 17 of the EIAR provides an assessment of the interactions and interrelationships of the different environmental factors / impacts that will occur as a result of the proposed development including synergistic and cumulative impacts.

All environmental topics are interlinked to a degree such that interrelationships exist on numerous levels. The comprehensive assessments undertaken as part of this EIAR has revealed that the proposal will not result in any significant adverse effects on the environment. Mitigation measures have been proposed to avoid, remedy or reduce identified impacts.

Ultimately, all of the effects of a development on the environment impinge upon human beings, directly and indirectly, positively and negatively. Direct effects include such matters as air and water quality, noise and landscape quality. Indirect effects pertain to such matters as flora, fauna, services and road traffic.

Mitigation measures are proposed and outlined within individual EIAR chapters to ensure that any potential adverse impacts that may arise as a result of the proposed development are minimised.

(XVIII) MITIGATION MEASURES

Chapter 18 provides a summary of all mitigation measures contained in the EIAR.