

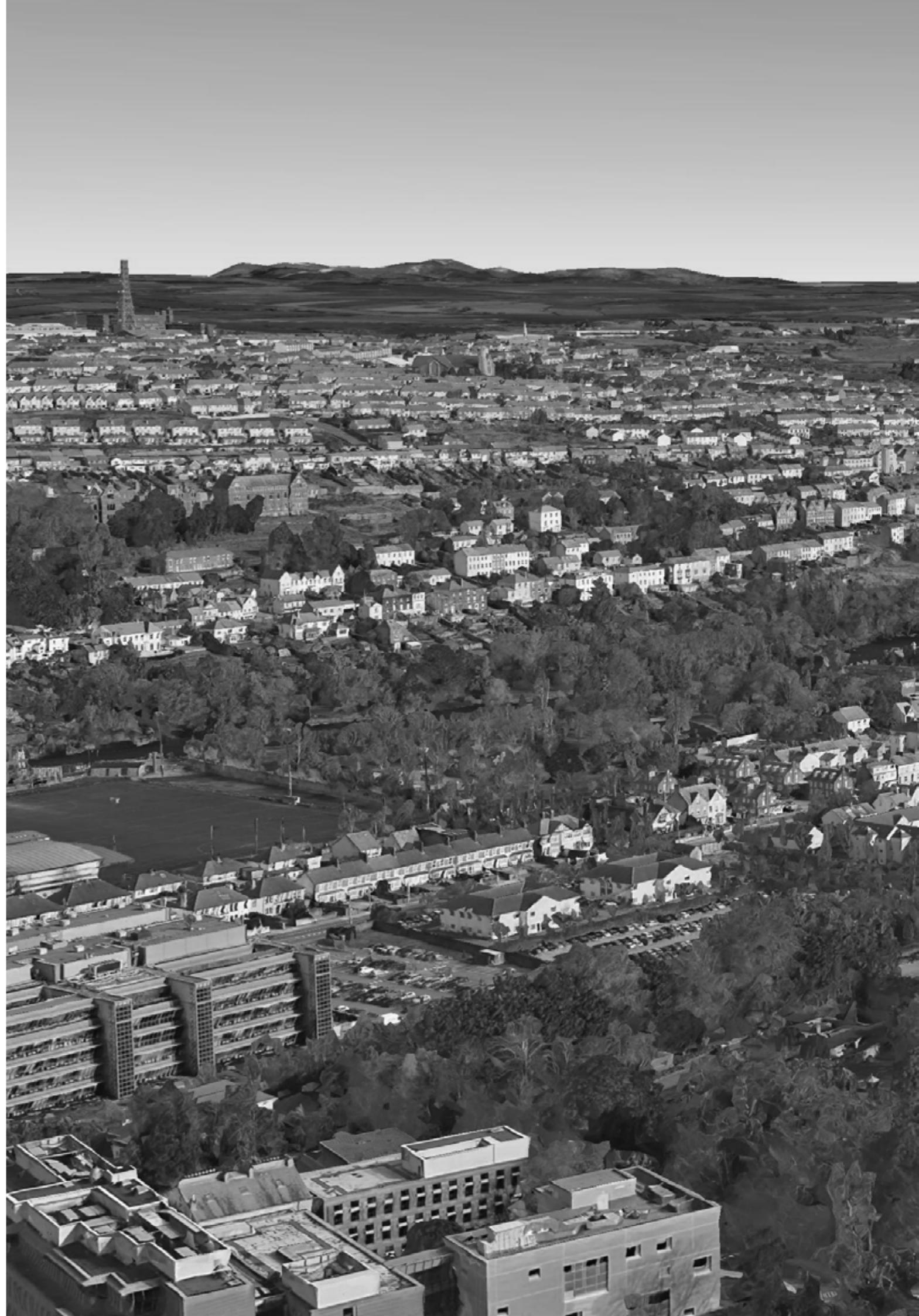


University College Cork Masterplan Review 2021



CONTENT

 1. Introduction	 7. Climate Change
 2. Executive Summary	 8. Diversity and Inclusion
 3. History of Campus Development	 9. UCC Masterplan Considerations
 4. UCC Planning Context – Academic and Campus Plans	 10. Development Strategies and Implementation
 5. Urban Planning Context	 11. The Digital Context
 6. Mobility	 12. Appendices











1. INTRODUCTION

University College Cork is an award-winning institution with a history of independent thinking stretching back over 170 years. UCC is ranked in the top 2% of the universities of the world and currently has a student population of 21,500.

Increased student numbers, related faculty expansion, demand for student accommodation and the challenges of climate change, places increasing demands on the land in UCC's ownership.

In the last 20 years, UCC's presence in the city has expanded significantly beyond the main campus boundaries. The relationship between University College Cork and the city is changing, reflecting the synergy between places of learning in their urban context.

As one of the largest landowners and employers in the city, UCC has an increasing civic role, helping to co-ordinate social and economic activity, being a good neighbour and positively shaping the City, which strengthens its teaching and research.

At the time of writing, the University has been faced with the challenges of a unprecedented public health crisis of the Pandemic, and has responded as you would expect, resolutely and determined to make the business of teaching and learning available on and off campus.

Its presence therefore is more than physical presently, as its core business of enhancing the formative years of the current and future generations of the region is maintained.

As one of the largest landowners and employers in the city, UCC has an increasing civic role, positively engaging in societal and economic activity, being a good neighbour and positively shaping the City, balanced with its core ethos of teaching and research.

UCC also recognises its responsibility, in shaping the consciousness of future generations, conducting research and working with partners, to ensure it is

inclusive – meaning a focus on all people in society and the challenges they face.

The UCC Masterplan Review 2011 itemised the long-term expansion requirements for the University and identified development locations on the UCC lands whilst also predicting that additional land will be required to future proof UCC's future requirements.

This Masterplan Review looks at the principles that underpin and support the planned expansion of UCC and its changing context in the city.

The relationship is examined in terms of UCC's spatial connectivity and the relationship between the UCC landbanks and its local and regional contextual development, through consultation with UCC stakeholders including faculty leaders, students, administration and local authorities.

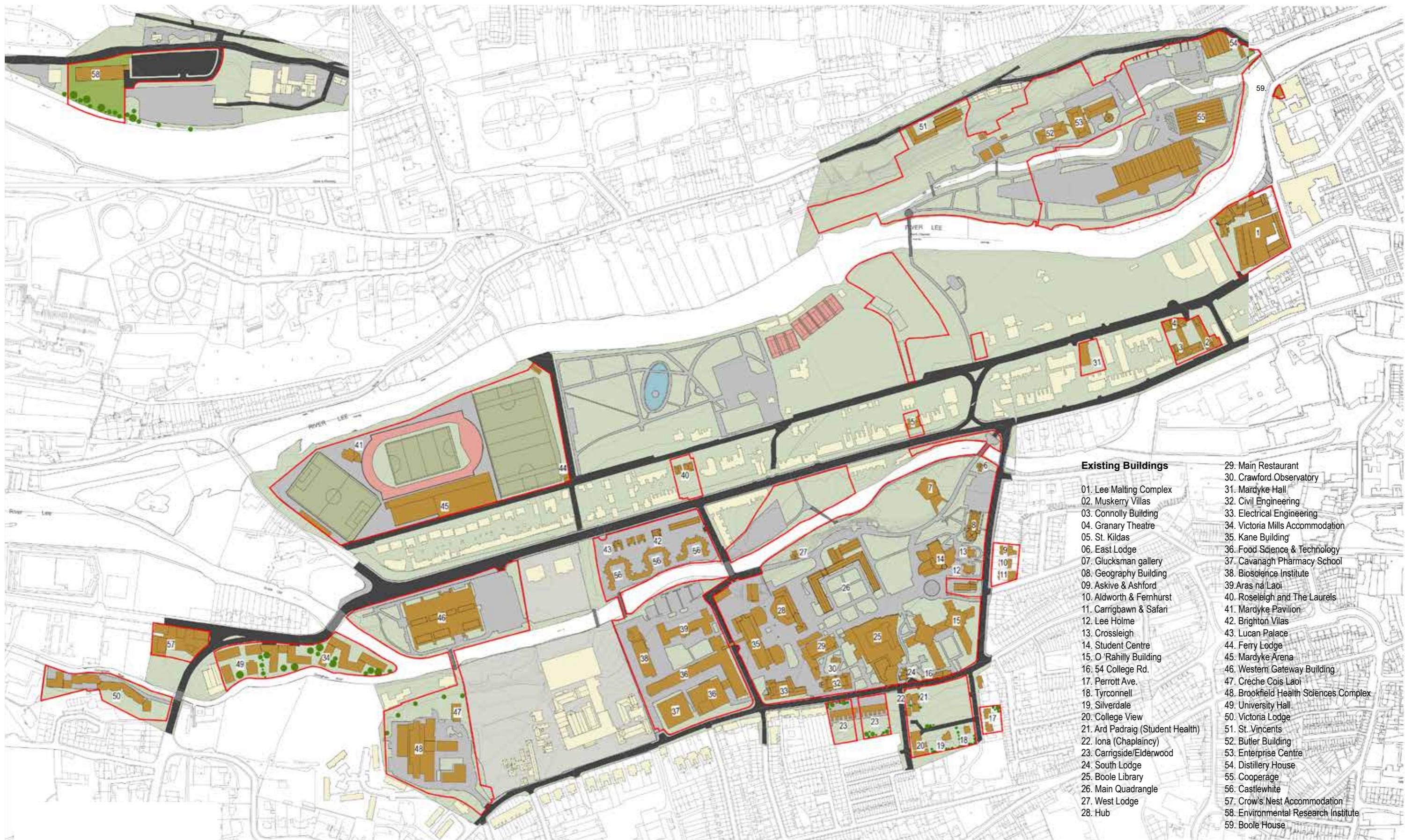
In recent years, innovation in campus planning involves a deep rethinking of the relationship between the built form of the university and the built form of its host city. The principle of the University as an enabler in the city, playing an important economic and social role, helping to co-ordinate economic and social developments at local and regional level implies that the traditional campus boundary is limitless.

UCC's physical expansion into distinct locations in the city has been gradual over the last decade, and this increase in its profile outside of the traditional campus perimeter offers opportunity to further develop UCC's relationship with the city socially and economically.

This masterplan review strongly recommends the policy of strengthening the identity of the University throughout its landholdings in the city and its function as an activator and enabler of growth in the region.



The Historic Core



UCC Properties - Existing Buildings

Key

- Existing Buildings
- UCC Properties



2. EXECUTIVE SUMMARY

UCC's Masterplan Review 2021 examines how the institution will develop, grow and evolve, physically, over the next period and to provide a framework for the development of the physical environment of the campus that will support the learning, research and academic ambitions of University College Cork.

UCC has set out its ambitious vision for the immediate future in its Strategic Plan 2017-2022 whereby it stresses its core values of creativity, transparency, freedom of expression, equality, respect, responsiveness, scholarship, integrity and diversity.

The Academic Strategy 2018-2022 proposes to achieve its goals by the development of a Connected Curriculum which will build on the substantive existing strengths of the University combined with the best international practice.

This Masterplan Review provides a framework in which the ambitions of the University can be realised within the context of the physical environment of the campus and its relationship to the city in which it resides.

We believe that a positive architectural and public realm is critical for the achievement of the goals set out in the academic and strategic plans. It is also critical that issues such as connectivity, mobility, sustainability, climate and the digital context are addressed as part of the plan for growth for the campus.

UCC is ranked in the top 50 Universities for Learning and Teaching in Europe, but it is also more than an award winning academic and research institution; it is an integral part of Cork and a key player in the economic, cultural and social life of the city and region. Therefore, the Masterplan addresses the wider context of UCC in the city and its wider hinterland we see the growth and development of the university in the context of its symbiotic relationship with Cork's own ambition for a sustainable and prosperous future.

Since its foundation in 1845 as one the Queen's Colleges of Ireland, the University has expanded and developed to meet the challenges of the times.

Most recently, the Pandemic has forced an urgent response to online distance learning. UCC's digital modes of communication have much to offer both pedagogy and scholarship.

There is however a distinction between 'blended learning' and 'remote teaching'. The emergency pandemic adaptation is not the same as a thoughtful, intentional redesign of courses to alternative modalities.

Students already are familiar with advances in technology and will adapt readily to the blended learning evolution. The student social campus experience cannot be readily substituted with on-line interaction however. The physical campus will retain its unique appeal.

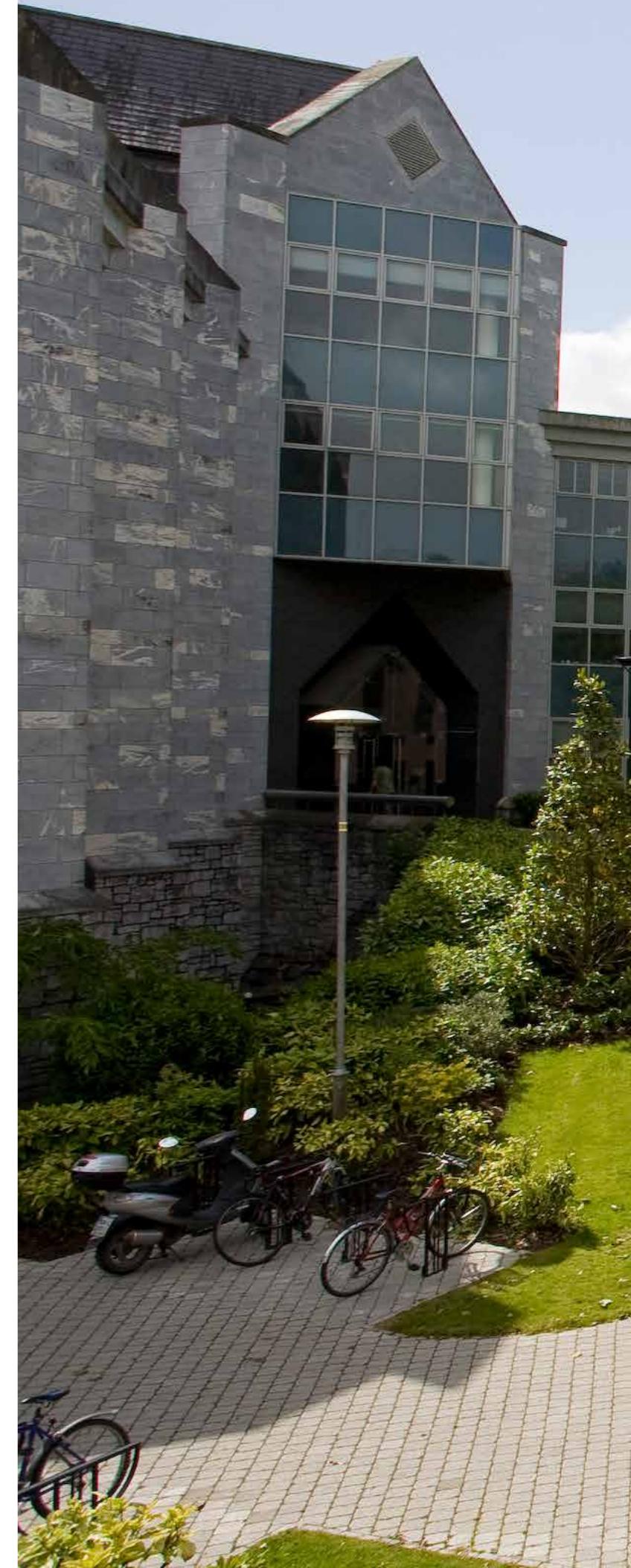
The open spaces and movement corridors on campus will come under fresh review – spatial flexibility, natural ventilation and connection to the exterior have never been more relevant. Staff interaction, management and the changing nature of work are in a transitional phase and need re contextualising as we move through 2021 and beyond.

Considerations underpinning the masterplan such as connectivity, use of the public realm, the digital campus, movement and spatial considerations could be considered as the primary areas in which UCC can plan a future campus which reflects a post Pandemic environment.

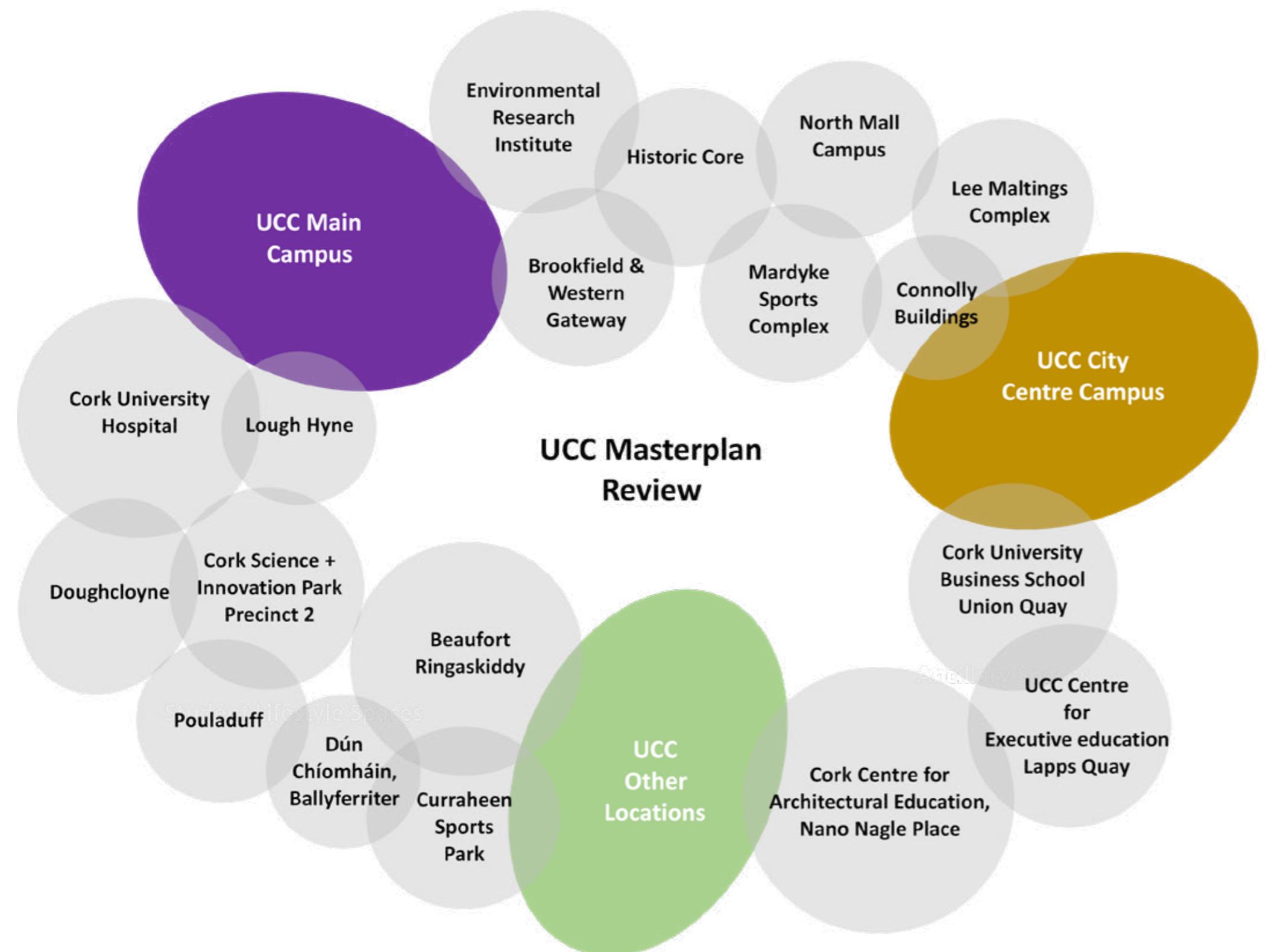
University College Cork remains a growing institution and this growth needs careful management. This Masterplan Review addresses the projected growth of the University in terms of consolidation, sustainability, mobility and infrastructure within the context of world class architectural and urban design excellence for the landscaped and built environment of the University.

The following considerations have informed the Masterplan Review:

- To promote a high-quality UCC experience in a vibrant, adaptable and sustainable environment
- To recognise that a continued diverse and inclusive community is among UCC's greatest strengths
- To ensure recommendations are flexible and responsive to future environmental and social requirements
- To prioritise the consideration of place making and connection to public realm
- To continue to invest in research and collaboration which underpins UCC's relationship with the City and region.
- To support the continued development of public transport infrastructure including pedestrian and cycle infrastructure for the Cork Metropolitan Area, to ensure high quality commutes for students and staff
- To ensure continued development of high-quality spaces for meeting, moving, exercising and socializing in the creation of a network of paths and character spaces
- To ensure the continued development of an IT Masterplan with a digital infrastructure







Campus diagram







3. HISTORY OF CAMPUS DEVELOPMENT

University College History

The story of the development of University College Cork has been one of continuous growth and expansion driven by academic achievement in tandem with the development of the mercantile City of Cork. The University has been a key player driving the development of Cork over the last 170 years providing professional, research and academic graduates who have played a major part in the economic, cultural and scientific life of the city and region as well as on the national and international stage.

History of Development of University College Cork: 1849 to 2019

In 1845 the Queen's College Act established three new colleges "for the Advancement of Learning in Ireland": Queen's College Cork, Queen's College Galway and Queen's College Belfast. These Colleges were opened for teaching in 1849, and in 1850 were linked together under the umbrella of the Queen's University of Ireland, established by Royal Charter.

Over 50 years later The Irish Universities Act (1908) established two new Universities - the National University of Ireland and the Queen's University of Belfast and dissolved the Royal University in 1909. Under this Act, the National University became a federal University with its seat in Dublin and with three constituent colleges established by Charter: University College, Dublin; University College, Cork; and University College, Galway. The Queen's Colleges in Cork and Galway were given an entirely new status and title.

The Queens College Cork, now known as University College Cork, opened its gates for 115 students in 1849. The original lands acquired for the college were a mile from Cork city on a small escarpment overlooking the South Channel of the river Lee.

The original college building, built to greet its first students, the Quadrangle Building, was designed by Deane and Woodward Architects on lands known as the Gillabney estate bought in 1846.

Sir Thomas Newenham Deane and Benjamin Woodward were the pre-eminent Irish architects of the Victorian neo Gothic style and were responsible for such key buildings of the era as the Trinity College Museum in Dublin and Oxford University Museum in Oxfordshire.

The Quadrangle Building remains the heart of the University and it was from this location that the campus grew organically throughout the Gillabney estate, depending on available funding and the requirements of the educational establishment of the day.

The University added the Medical (Windle) building in 1875, the Crawford Observatory in 1880, Biology Building (Honan Building) in 1880, Berkeley Hall Student Residences (later the Honan Hostel) in 1885 and the Western Road Gate Lodge in 1889.

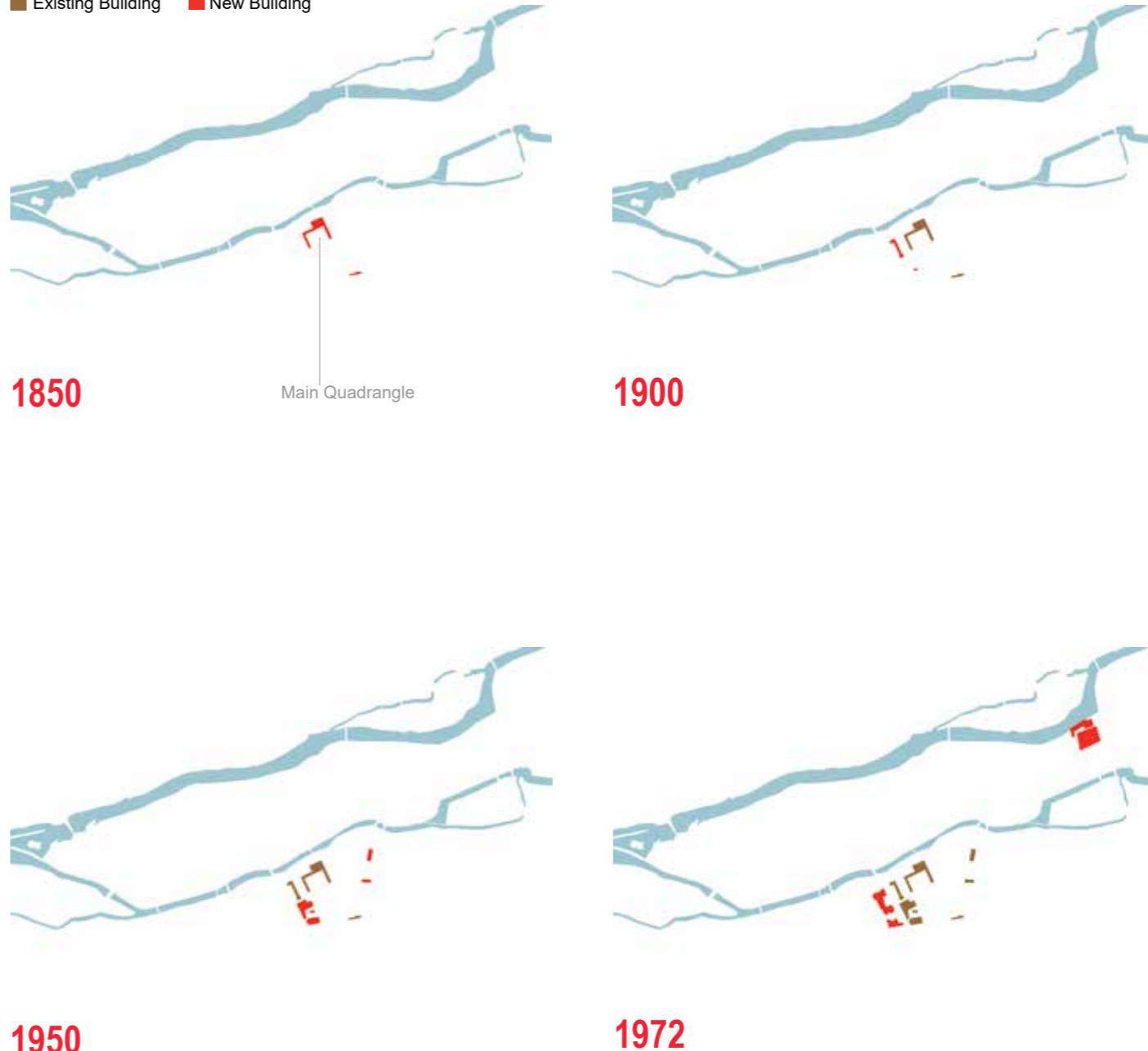
As the University grew it acquired more land between 1865 and 1885 including the Limekiln and Quarry sites, south of the original grounds and in the general area of the current location of the President's Garden. Perrott's Inch, along the river, was later acquired in 1893.

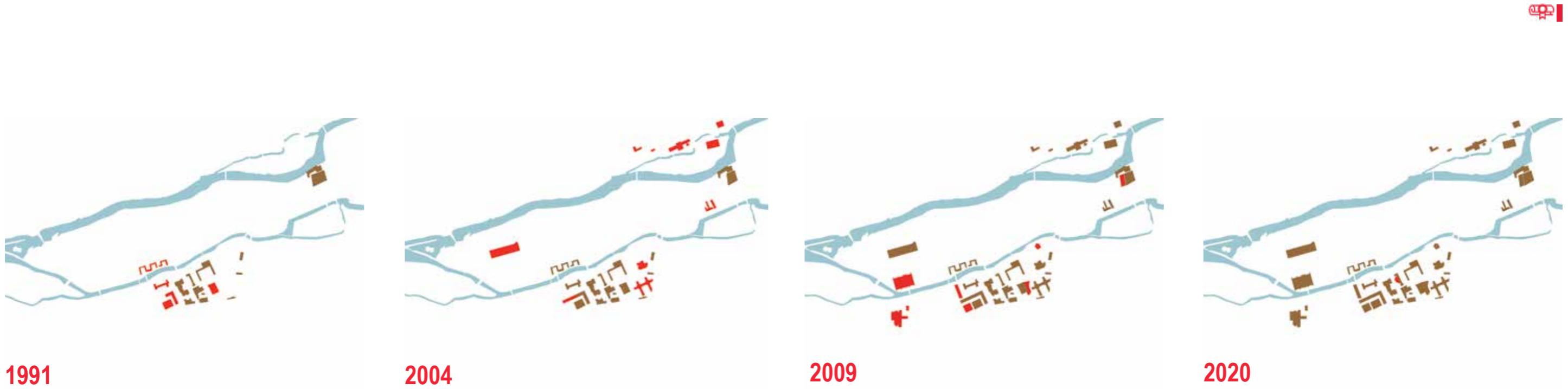
The University campus grew exponentially during the second half of the 20th century, with student numbers rising from 404 in 1910 to 1,300 by 1959. This expansion resulted in continuing land acquisitions including the Mardyke Athletics Ground in 1911 and continued with the purchase of Donovan's Land at the north east corner of the present main campus in 1918. Incremental land purchases in and around the main University campus area continued with the old Gaol site being purchased between 1946 and 1957. The Lee Maltings, further away from the campus on Dyke Parade, was purchased in 1969.

The University purchased a dairy farm in Curraheen in 1926 and this site, known as "The Farm" is the current location of the University's sports fields and is also the subject area of the current Curraheen Science and Innovation Park.

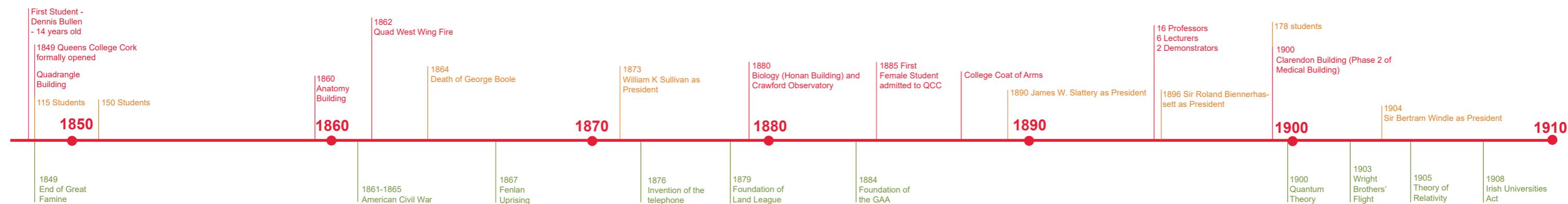
Historic Development of Main Campus Buildings:

■ Existing Building ■ New Building





UCC Timeline: 1849 - 2019



3. History of Campus Development

During this period a number of key buildings were constructed including the New Arts Building (1910), Physics and Chemistry Laboratories (Civil Engineering Building) (1911), Biological Laboratories/Honan Biological Institute (1910), Collegiate (Honan) Chapel (1916), Faculty of Dairy Science (Geography Building) (1931), Mardyke Athletics Ground Pavilion (1932), Men's Club and Restaurant (1940), Electrical Engineering Building (1954- 1965) and the Kane (Science) Building (1971).

From the 1850s up to the early 1970s the growth of the University building stock happened in an organic manner as numbers of students and funding for buildings and departments grew. From the 1960s, after the introduction of free second-level education and a general growth in prosperity, it became clear that student numbers would rise significantly and that the current mode of incremental development was no longer fit for purpose to cater for an enlarged new generation of students.

The first Campus Masterplan was developed by Murray & Murray, Pettit & Partners in 1972 to provide a masterplan

framework for the development of the University. This initial masterplan considered the desirability of a compact campus, the creation of an east-west pedestrian spine, recognition of the importance of courtyards and external linking spaces between buildings, grouping of buildings into a series of zones corresponding to the various schools and "core" communal activities. These fundamentals have been carried through a number of iterations and reviews up to the present day.

During the 1970s and 1980s the University added Aras Na Laoi (a former student hostel) (1977), the Food Science and Technology Building (1980), Boole library (1982) to the college portfolio within the context of the 1972 plan.

The 1990s saw further development for student welfare in the construction of the Castlewhite Student Residences (1994) and the UCC Student Centre (1995) as well as the O'Rahilly (Humanities) Building (1998) which was constructed on the site of the former Honan Hostel.

The new millennium saw the construction of the

Bioscience Institute (2002 & 2008), The Mardyke Arena Sports Centre Building (2001) the Glucksman Gallery (2004), Victoria Lodge and University Hall (2003 and 2006) all within the context of the 1993 Development Plan Review by E G Pettit & Partners with Garth May.

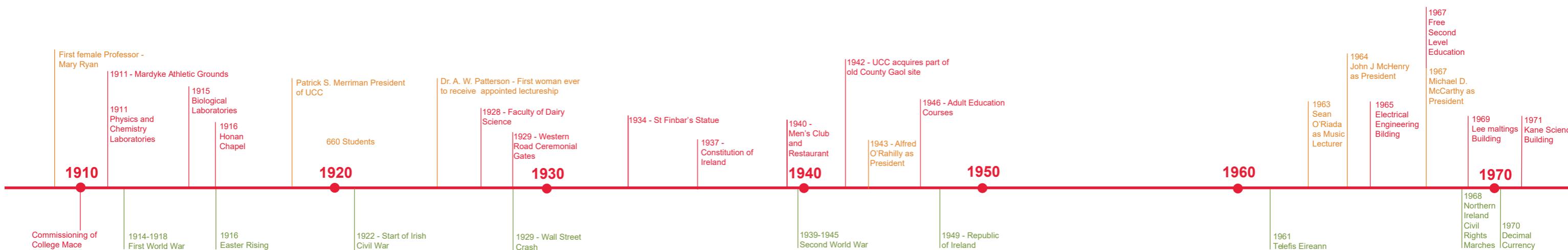
Within the last 10 to 15 years the University has expanded westward in the form of the Cavanagh Pharmacy Building (2006), the Brookfield Health Science Complex (2005) and the Western Gateway complex (2009) as well as the Post Graduate Research Library extension to the Boole (2007), all with reference to the Masterplan Review 2004 by BDP. It was during the period of this plan that the University also started to develop sites outside of the original main campus immediate area, such as the Environmental Research Institute (2005) on the Lee Road and the Tyndall National Institute (2010) at the Lee Maltings.

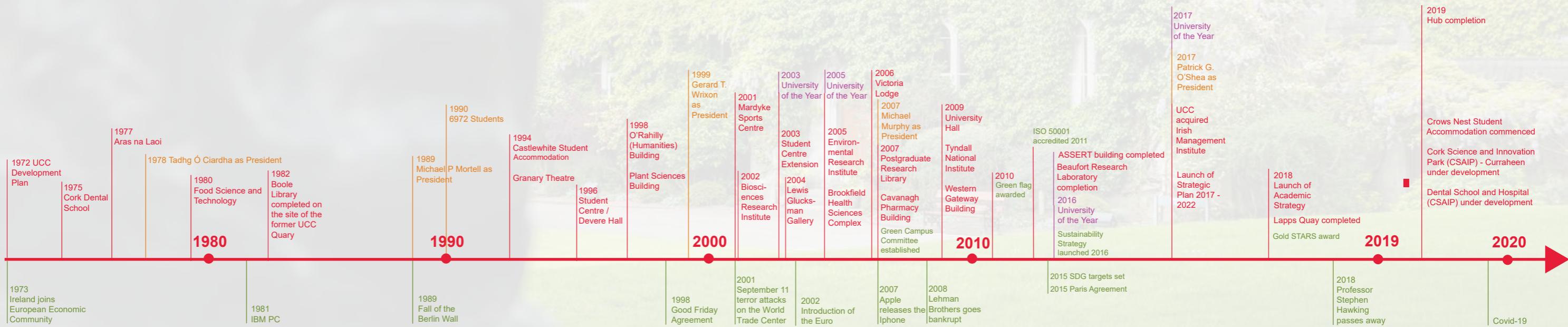
The period between 2002 and 2010 saw an intensive expansion of the University supported by strong national economic growth. This resulted in increased Government investment in third level institutions matched by philanthropic donations. The student population

increased from 13,000 to 17,000 students (+ 30%) during this 8-year period and the increase in building stock matched this extraordinary growth.

The University also increased its landholdings during this period acquiring the 5-hectare former Irish Distillers site at North Mall (jointly with the Mercy University Hospital) in 2005 and sites in Victoria Cross and Mardyke Garden in 2003.

The 2011 Masterplan Review by BDP and Friel Architects is the current Masterplan that is the subject of this latest Masterplan review. During the period of this plan the University has purchased the Crow's Nest site for student housing and delivered the Beaufort Maritime Research building at Ringaskiddy (2015), the ASSERT Centre at Brookfield (2016) and the Cork Centre of Architectural Education at Nano Nagle Place (2017). Recently the University has completed the Business Executive Education Centre at 1 Lapps Quay in the City centre (2018) and the new Hub in the heart of the original campus (2019). Also during this period, the University conceived the Cork Science and Innovation Park Masterplan (2015) which will be the location of the





Statue of George Boole in front of the Main Quadrangle

3. History of Campus Development

Health Innovation Hub Ireland building and the new Cork University Dental School and Hospital.

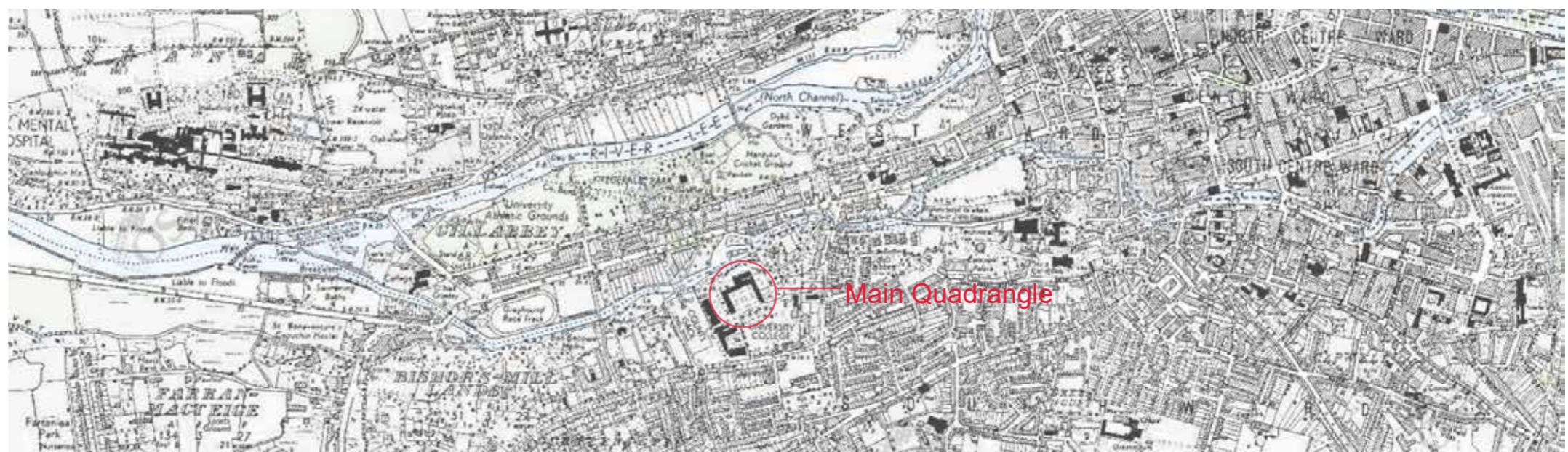
This story of UCC has been one of continued and gradual expansion. Student numbers have increased from 9,200 in 1993 to 21,500 in 2020.

This level of expansion in student numbers has been facilitated by forward looking stewardship in the acquisition of available land.

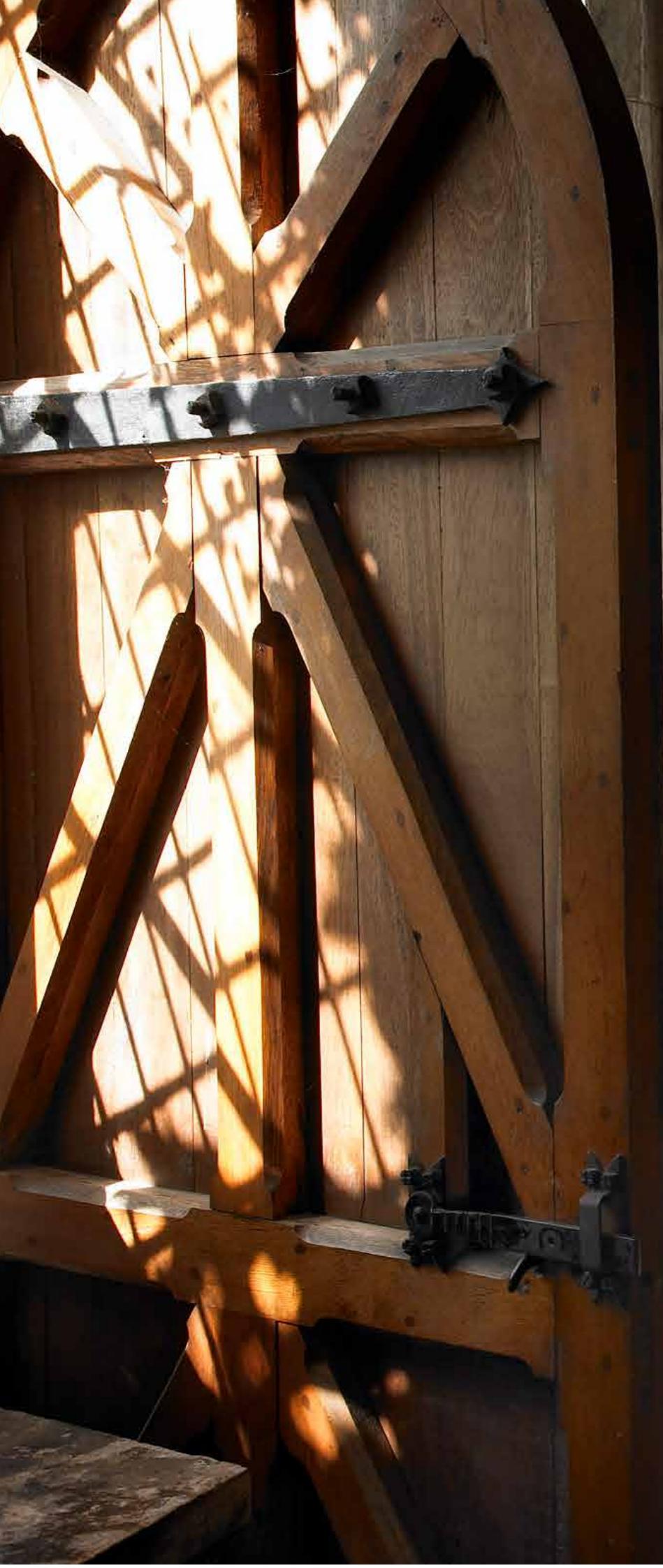
UCC has managed spatial acquisition through considered Masterplanning and strategic development as evidenced through the original Masterplan in 1972, updated in 2014, 2011 and through to this review which will take the University through its next stage of development.



6 inch Cassini map 1837 - 1842 - Prior to development of the university buildings (OSI)



6 inch Cassini map (OSI)



General Context

This review is taking place as UCC is placing itself at the forefront of this new globally focused Irish economy, particularly in the areas of innovation and research.

Due to an expected increase in third level student numbers nationally there is an impetus for growth for Irish Universities, and UCC is expecting to increase its student numbers to 23,000 by 2025.

In order to meet this demand and provide a world class campus for the students and staff, UCC has plans to expand its overall campus space by up to 20 per cent in the next five years as part of a €350 million investment programme. This investment is the largest contribution to the local economy by any organisation in Cork.

This investment programme includes the New Dental School and Hospital, Cork University Business School, the expansion of the Tyndall National Institute and various associated projects.

As well as providing for increasing student numbers UCC has a focus on research and innovation in collaboration with industry and has developed a sustainable income stream in this regard. UCC contributes to FDI and domestic investment into the southern region with seven of the top ten pharma companies located in the vicinity and they all avail of the high-quality science and engineering graduates produced by the University.

More directly, UCC's Tyndall National Institute, a world class research centre in integrated ICT hardware and systems, has a turnover of more than €30 million each year, 250 employees and more than 200 PhD researchers.

UCC's Economic and Societal Impact Report demonstrates the positive impact that UCC has on the Cork region and nationally.

The Report shows that the University supports almost

15,000 jobs on an annual basis, which equates to approximately 1 in every 15 jobs in Cork city and county.

UCC's total gross value-added economic impact amounting to €853 million annually; this output is produced for a €151 million state investment demonstrating an almost six-fold return for the Irish economy.

As well as a positive economic impact UCC has a major positive societal impact on Cork and the Southern Region making major contributions in the fields of culture, heritage and sustainability by means of investment in the arts, sports, and the environment.

In terms of a positive impact on a more equal society, UCC has taken a leading role in addressing barriers to third level education by widening participation to all. To this end 23% of the undergraduate intake comprises of mature students, students with disabilities and students from backgrounds that were not traditionally participants in third level education.

UCC is an important anchor for the city and region. The development of UCC lands in the city and region has implications for the Cork community in terms of increasing economic opportunities and for the social and cultural amenities which enrich the quality of civic life in Cork.

Strategic Plan 2017-2022

University College Cork sets out vision and shared ambition in its Strategic Plan 2017-2022 to be a leading university of independent thinkers with a mission for creativity, understanding and knowledge sharing for all.

The core values that underpin this vision are creativity, transparency, freedom of expression, equality, respect, responsiveness, scholarship, integrity and diversity.

To achieve this vision five goals have been set out in the Strategic Plan:



Strategic Plan 2017-2022 by UCC

- Implementation of an academic strategy to deliver an outstanding student-centred learning and teaching experience with a renewed and responsive research led curriculum
- UCC to be a leading University for research, discovery, innovation, entrepreneurship, commercialization and societal impact
- Create value for the community through an international outlook, informed and creative engagement with local and global issues
- Attract, develop, support and retain high quality staff
- Strengthen UCC's infrastructure and resource base



The priority actions of the Strategic Plan to meet these goals include the delivery of an innovative, differentiated academic mission that cater for an increase in student numbers from 19,500 currently to 23,000 and expand UCC space by 20% accordingly.

The strategic plan for the next few years involves the creation of new buildings to account for this campus expansion including:

- Cork University Clinical Medical School
- Cork University Dental School and Hospital
- Health Innovation Hub Ireland building
- New Tyndall National Institute building
- Cork University Business School
- Life Sciences and Engineering
- Creative Hub
- improvements for the School of Law, Law library
- Upgrading the Kane building

This expansion will also cater for 720 new student accommodation spaces and plans to develop a new world class outdoor sports facility at Curraheen.

Academic Strategy 2018-2022

The University College Cork Academic Strategy sets out six priorities and thirty-five leading actions to guide the academic direction of the University for the years ahead.

The Academic Strategy builds on previous strategies and academic plans that has led to UCC being one of the most successful universities in the country as it has grown rapidly from a student population of a little over 7,000 in 1990 to a current population of over 19,500 today.

UCC is ranked in the top 50 universities for learning and teaching in Europe and is the leading Irish university for securing investment in research and development.

UCC is also renowned for its positive student experience with a 93% retention rate for first year undergraduates and

the fact that 94% of UCC graduates are in employment or further study within nine months of graduation.

In 2010 UCC became the first third level institute worldwide to receive the Green Campus Award and it is the only institution outside of North America to be awarded a Gold STARS rating and joins the likes of Princeton, Cornell and UC Berkeley in this achievement.

The Academic Strategy 2018-2022 has a vision to provide curricular coherence and to enhance the student and staff experience by the provision of a Connected Curriculum, whereby the holistic education experience of students is connected to the development of core values and attributes including diversity, social inclusion, ethics, social responsibility, climate change, sustainability, mental health, wellbeing and a wider engagement with civic society.

As stated in the Strategy document the “Core principle of our Academic Strategy is that student learning and research will be facilitated through a Connected Curriculum that aligns with demand, university priorities and effective assessment practices.”

In order to achieve this goal, the strategy has an implementation plan consisting of 6 priorities:

- Develop a Connected Curriculum, building on existing strengths and best practice globally
- Align curriculum offerings with demand and with teaching and research priorities
- Constructively align effective assessment with learning outcomes
- Facilitate students’ development of core values and graduate attributes
- Establish a student enrolment plan that aligns with student recruitment targets
- Reform academic governance such that innovation is enabled, coherence is restored and risk is reduced

UCC 2022 focuses on the final two years of the Strategic Plan 2017-2022, themed Independent Thinking - Shared Ambition.

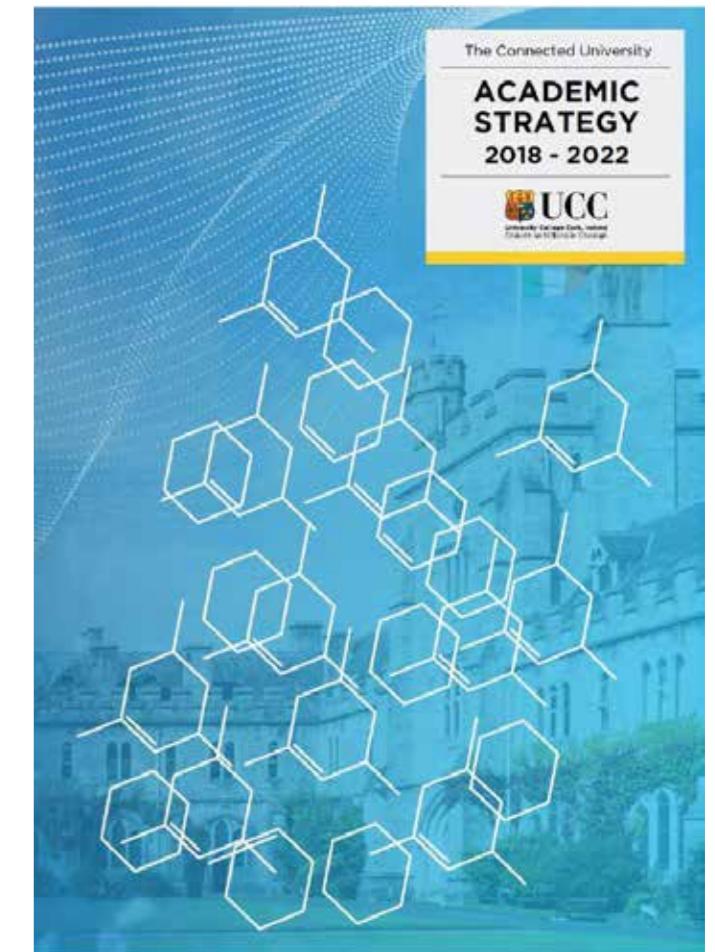
It sets out a thematic prioritisation of UCC’s strategy, as well as the transformative changes to its core operations in response to geopolitical challenges, the escalating climate crisis and accelerating societal and economic pressures associated with the Covid-19 pandemic.

This strategic pivot identifies UCC’s key strategic priorities for the period 2021-2022, clustered within five interconnected thematic pillars:

- Learning and Teaching
- Research and Innovation
- Student Success
- People and Organisational Culture
- Infrastructure and Resources

Deeply rooted in extensive collaboration both within and outside UCC, this two-year plan builds on UCC’s strengths in student focus, sustainability, and community and global engagement, to identify actions to respond to the current crisis and position UCC for long-term success.

This Masterplan review is aligned with the goals of the Academic Strategy in so far as it will provide the physical space and public realm for the delivery of a Connected Curriculum in all UCC’s locations in the city.



Academic Strategy 2018-2022 by UCC



4. UCC PLANNING CONTEXT - ACADEMIC AND CAMPUS PLANS

This Masterplan Review will be witness to even more expansion of the University as key buildings such as the Crow's Nest Student Accommodation, the Cork University Dental School and Hospital, the new Tyndall National Institute on the North Mall and the Cork University Business School in the city-centre.

UCC has a tradition of creating memorable and inspiring spaces to live, work and learn. It has an ethos of excellence in education and research achievement, as it has travelled on its journey from the intake of its first 115 students in 1849 to the more than 21,500 students who attend University College Cork today.

It is considered ever more relevant and timely to examine the fundamentals of previous UCC University Masterplan assumptions given the context of the changing environment of information technology, teaching methods, transport, connectivity and sustainability concerns.

The recent publication of the Cork Metropolitan Area Transport Strategy (CMATS) has enabled University College Cork to envisage its relationship with the city and metropolitan area in terms of mobility, connectivity and innovation.

A key component of this plan is the provision of an east-west rapid transit corridor which has been proposed as bus rapid transport (BRT) route and is now considered under CMATS as 'Light Rail Transit' (LRT) system.

The development of this corridor will provide greater certainty for future planning and development to pursue the higher densities required to meet National Planning Framework 2040 population and employment targets for Cork, and the planned expansion of third level educational institutions, including University College Cork.

This innovation Corridor will provide greater connectivity between the UCC main campus and Cork Science and Innovation Park, the proposed UCC Curraheen Sports Park, Munster Technological University, Cork University



The Main Quadrangle

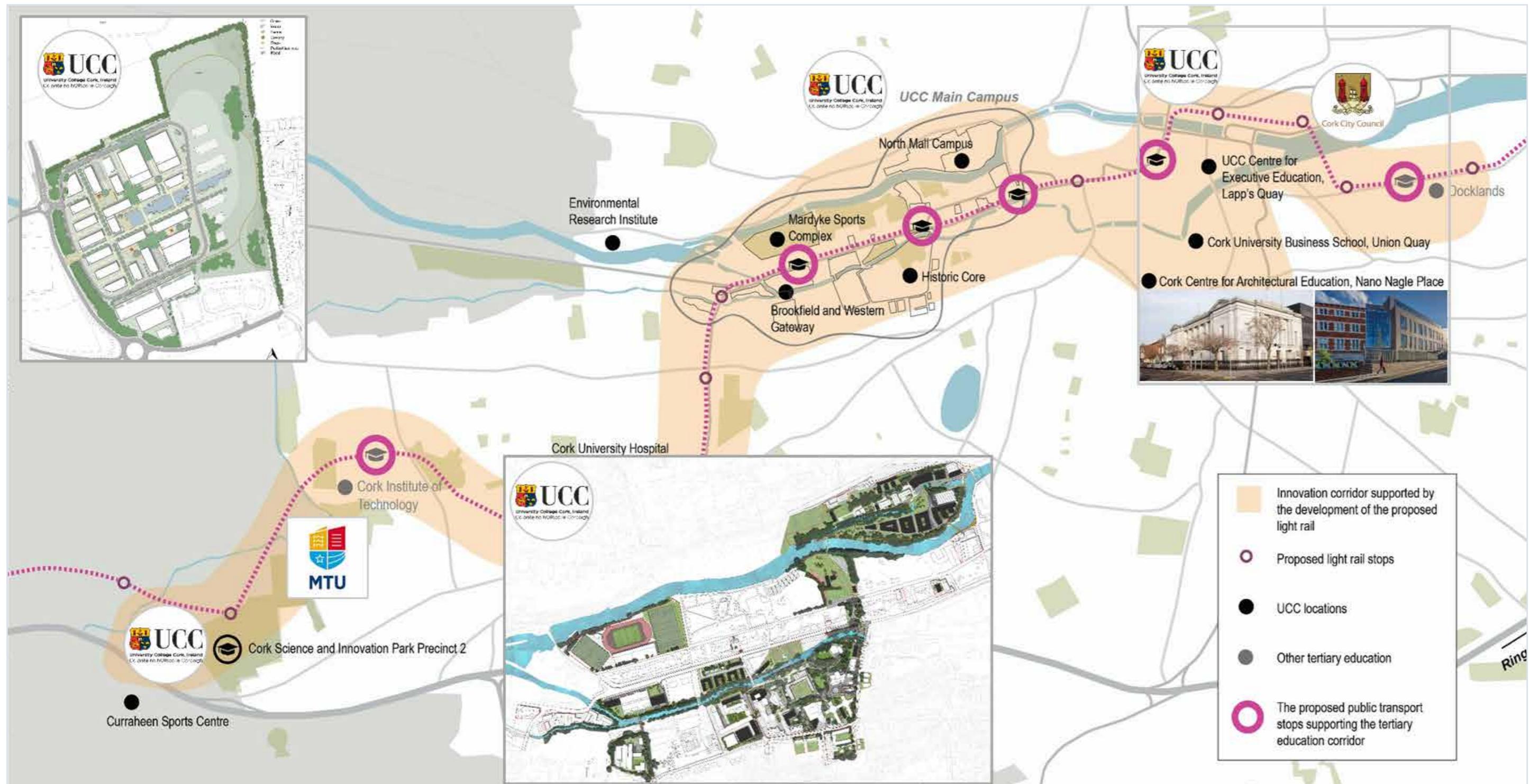
Hospital, the City Centre and the Cork Docklands to the east.

This Innovation Corridor will further enhance and consolidate University College Cork special place as a facilitator and promoter of research, innovation, business and technology based academic and commercial activity in Cork and the region. It is an objective of the University to continue its expansion in a sustainable manner on

campus and in its other locations in the city and region. UCC is committed to establishing and strengthening its presence in the north of the city and will work with Cork City Council on initiatives which build upon the principle of connected University and City.

A review of the projected demand related to student numbers over the next ten years will provide an indication of the Universities short term expansion requirements.

This Masterplan review considers the physical spatial development potential of UCC in the context of its likely future student demand requirements and its developing presence in the City.



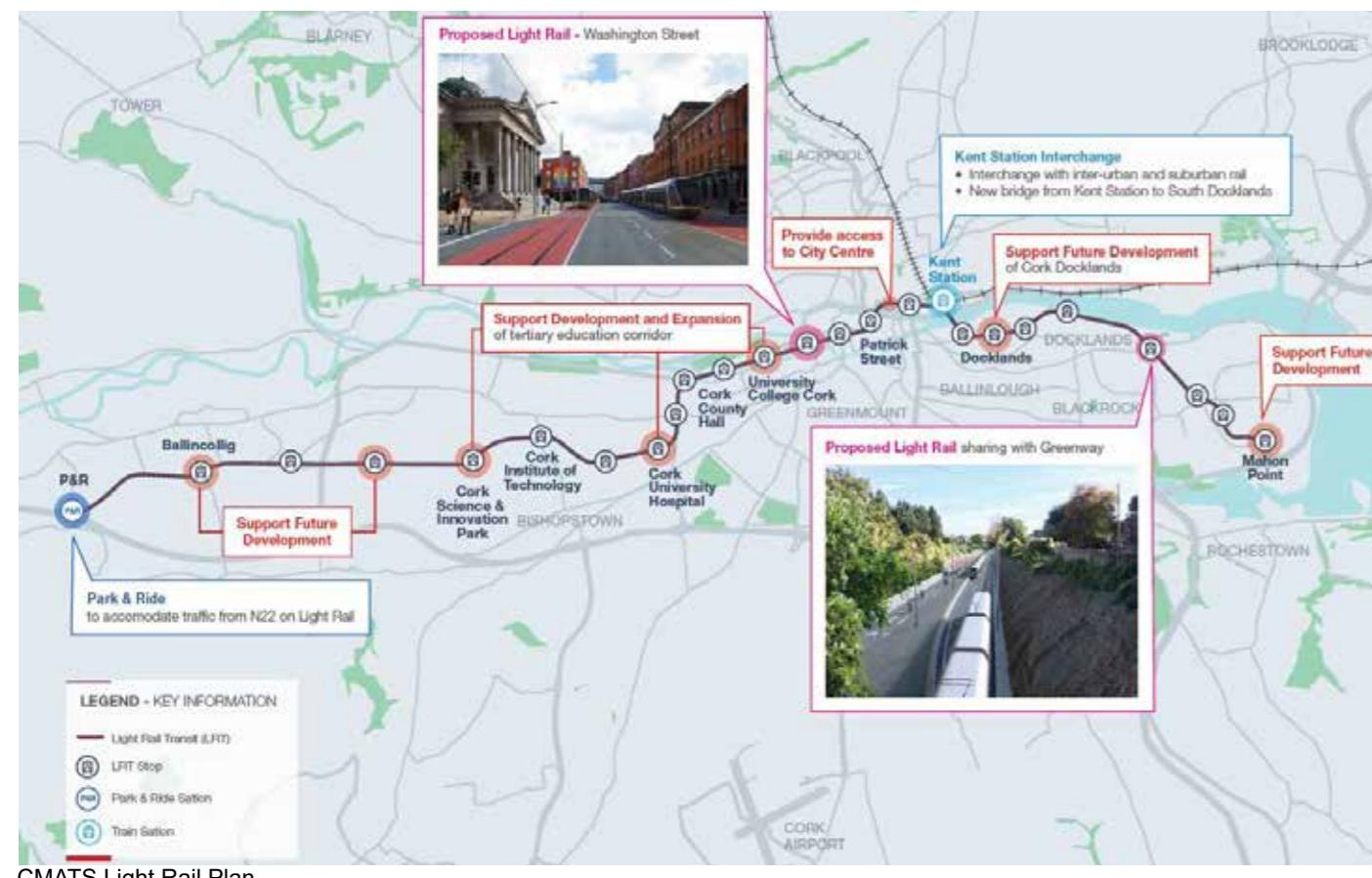
5. URBAN PLANNING CONTEXT

Cork City Development Plan 2015

Cork City Council recognises the importance of UCC to Cork City in their Development Plan as outlined in Objective 14.12 and the role that UCC plays in the city and the contribution its education, and research and development activities make to the attractiveness of the city and region for investment:

Objective 14.12

University College Cork: To support the sustainable development and expansion of University College Cork as an educational facility of regional and national importance'



Cork City Council recognises that UCC sets out the strategies, projects and targets for its future. Cork City Council acknowledges the vision for UCC is to be a world class university connecting the southern region to the globe and therefore one of the key goals of the strategic plan is to strengthen the University's infrastructure and resource base.

Strategies to achieve this include:

- to develop the campus to further enhance the UCC experience and to contribute to the cultural attractiveness of Cork City;

- to improve the condition, safety and accessibility of buildings and pursue campus development to the highest standards.

It is recognised in the Cork City Development Plan that the continued growth in student numbers will require the provision of new buildings and therefore the City Council will encourage and support in principle, future expansion plans including intensification of the existing campus and/or new development at the North Mall Distillery and other UCC lands, which is supported in the South Docks Local Area Plan. The City Council supports the expansion of UCC activities, including its activities in partnership with other Institutions such as the CUH / HSE.

It is noteworthy that the Cork City Development plan references the contribution that UCC makes to economic diversity and innovation in Objective 3.2 Economic Diversity whereby it is noted that research and innovation in the Cork area are centred on institutions such as University College Cork and a number of leading associated research institutes such as the Tyndall National Institute (ICT hardware research), Environmental Research Institute and IMERC (Marine Energy).

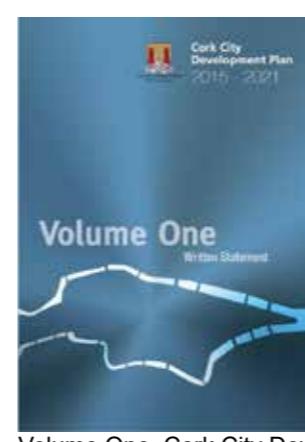
It is noted under Education and Health policy in the Development Plan that the role of UCC and CIT are of particular importance to the city as major employers as

well as educational facilities.

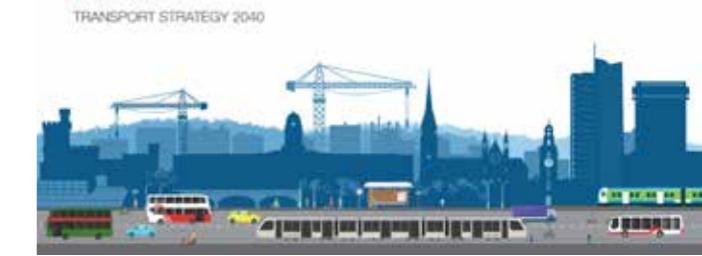
The Development plan recognises the collaboration between University College Cork and Cork Institute of Technology as being very important for Cork and also the collaboration between UCC and Cork University Hospital and the other major health institutions which also contribute significantly to the economy of the city.

Cork City and County Council's have commenced the preparation of a new Development Plan's for the period 2022-2028.

University College Cork is also recognised at a national and regional level with the importance of its connectivity to the city acknowledged in the National Planning Framework Ireland 2040 through its regional instrument the Regional Spatial & Economic Strategy (RSES) for the Southern Region. As can be seen under the Metropolitan Area Strategic Plans (MASP) objective 10: Education and Access to Talent that there is proposed a strategic east-west public transport corridor from Mahon to Ballincollig via the city centre, serving CIT, CUH, UCC, Kent Station, Docklands and Mahon Point thereby linking the University to key locations by rapid public transport corridor. This objective is further developed in the Cork Metropolitan Area Transport Strategy (CMATS) where UCC is identified as a key part of the tertiary education corridor for the proposed light rail transit (LRT).



CORK METROPOLITAN AREA







6. MOBILITY

Introduction

The recent publication of the Cork Metropolitan Area Transport Strategy (CMATS) has enabled University College Cork to envisage its future relationship with the city and metropolitan area in terms of mobility, connectivity and innovation.

A key component of this plan is the provision of an east-west rapid transit corridor which has been proposed as bus rapid transport (BRT) route and is now being considered under CMATS as Light Rail Transit (LRT) system.

The over-arching objective of the LRT is to enable the Cork Metropolitan Area to consolidate land-use and transport along a high frequency, high-capacity public transport corridor.

The development of this corridor will provide greater certainty for future planning and development to pursue the higher densities required to meet National Planning Framework 2040 population and employment targets for Cork, and the planned expansion of third level educational institutions, including University College Cork.

While the LRT is in early planning stages the development of this important public transport corridor enables UCC to consider the development of an Innovation Corridor concept that will provide rapid access between the various campus and city centre UCC locations in a sustainable manner.

This Innovation Corridor will provide greater connectivity between the UCC main campus and Cork Science and Innovation Park which contains UCC academic and health science institutions, The UCC Curraheen Sports Park, Cork Institute of Technology, Cork University Hospital, the City Centre and the Cork Docklands to the East.

This Innovation Corridor will further enhance and consolidate University College Cork special place as a facilitator and promoter of research, innovation, business and technology based academic and commercial activity

in Cork and the region. As a primary contributor to trips generated in Cork City and environs, UCC is committed to the promotion of sustainable modes of transport and reduction of single occupancy car journeys amongst campus users, which will contribute to maintaining and enhancing the status gained as the world's first 'Green Campus University'.

To this end, UCC has commissioned a series of studies on transportation over the past two decades to analyse prevailing trends in transport in the context of the University and environs and to put in place a strategy for influencing behavioural change and modal shift away from private car usage amongst campus users.

Strategic documents produced include:

- UCC Commuter Plan 2018
- UCC Campus Traffic Management Plan 2014 & 2017
- UCC Sustainability Strategy 2016
- UCC CSAIP Precinct II Masterplan 2015
- Site specific Mobility Management Plans for various planned developments.

The goals of the 2020 Commuter Plan update are congruent to this section of the Masterplan and provide a detailed assessment of transport strategies together with opportunities for implementation up to 2023.

In 2001, a detailed origin and destination and modal split analysis of all existing UCC commuting patterns was undertaken by Arup Consulting Engineers based on staff and student surveys. Follow up surveys were carried out by UCC in 2007, 2012, 2014, 2015, 2016, 2017, 2018 and 2019. The overall trend is strongly towards a reduction in single occupancy car journeys, for both staff and students, indicating the efficacy of UCC's strategic planning for transport. The challenge which now faces UCC is to maintain this trend as the University expands, with a greater focus on development at satellite campus locations such as the CSAIP, Beaufort Maritime and

Staff Modal Share 2001



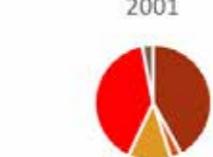
- walk
- cycle
- bus / train
- car (all)
- motorbike / other

Staff Modal Share 2019



- walk
- cycle
- bus / train
- car (all)
- motorbike / other

Student Modal Share 2001



- walk
- cycle
- bus / train
- car (all)
- motorbike / other

Student Modal Share 2019



- walk
- cycle
- bus / train
- car (all)
- motorbike / other

UCC's landholdings are located throughout the city and the Metropolitan Area and are comprised of:

The Main UCC Campus:

- Historic Core
- Brookfield and Western Gateway
- North Mall Campus
- Connolly Buildings
- Lee Maltings Complex (Tyndall National Institute)
- Mardyke Sports Complex
- Environmental Research Institute

UCC City Centre Campus:

- UCC Centre for Executive Education, Lapps Quay
- Cork Centre for Architectural Education, Nano Nagle Place
- Cork University Business School, Union Quay

Other UCC locations:

- Cork Science and Innovation Park Precinct 2
- Cork University Hospital
- Beaufort Maritime and Energy Research Building, Ringaskiddy
- Doughcloyne
- Pouladuff
- Curraheen Sports Park

6. Mobility

There is a real diversity across the nature of the UCC locations which provides real opportunity in the creation of a UCC identity in the off-campus locations.

Connections

Connecting the various elements of the UCC landbanks with strong infrastructure links is vital. Whilst overtime, significant connections will develop, it's likely that this will in the short term be mainly through a cycling network that is legible and makes movement around the various landbanks easy to navigate.

Pedestrian Facilities

UCC is a pedestrian dominant campus with a concerted effort to develop student housing within walking distance of its main campus. The effectiveness of this policy is evidenced by the fact that walking is the main mode of transport for almost 40% of UCC students. Future opportunity sites for student accommodation have been identified to allow for a more compact footprint which will bring students closer to their primary destinations.

The main campus contains attractive walking routes with adequately sized footpaths and is well connected to the surrounding roads and streets, with the newly installed Cavanagh Bridge to Perrott's Inch improving access from the Western Road side. The original UCC Commuter Plan (2005) identified key measures for improvement of the existing pedestrian network in UCC, with the most significant upgrades being the redesign of College Road and the Western Road/Donovan's Road junction upgrades.

Continuous review and maintenance of the high-quality existing pedestrian routes and provision of adequately lit and comfortable pedestrian infrastructure on the



Main Campus (including 'The Spine') and at key new developments such as the North Mall Campus and CSAIP sites will be the focus in future years, in addition to lobbying Cork City Council for further improvements to public spaces. On that theme, proposed upgrades to walking provision and BusConnects corridor improvements as outlined in CMATS should be brought forward as a priority in order to enhance the walking experience in the vicinity of UCC sites.

Cyclists

UCC's landholdings are relatively well-developed in terms of provision of cycle parking facilities. Cycle facilities are being added on a continuous basis, with 45 new secure cycle parking spaces being added at the Biosciences and North Mall Campus in 2019. UCC introduced a new bicycle service for all UCC staff members: the UCC Campus bike Scheme in 2011. UCC Buildings and Estates operate this communal bike scheme for UCC staff members. It provides all UCC members of staff with access to a bicycle for hourly use during the working day. Bicycles are available at various locations around the greater UCC Campus.

At present, there are 20 CampusBikes available at 8 locations: on the main Campus (8), Brookfield (2), Western Gateway (1), the Environment Research Institute (2), the North Mall Campus (Enterprise Centre) (3), Lee Maltings / Tyndall (2) and College View Workshops (1) and Dental Hospital (1). It is intended that additional bikes will be provided at several of these locations in the near future and provision of campus bikes will be extended to future developments at CSAIP, CCAE (Nano-Nagle-Place) and Union Quay to ensure full connectivity of the Cork City sites.

UCC also participates in the government's a Cycle to Work Scheme (tax relief scheme) since September 2009, with over 1000 bicycles issued to staff members in this time. Cycling as a mode of transport almost doubled in the immediate aftermath of the introduction of the scheme

(6% in 2007 to 11% in 2011), with 12.8% of staff cycling in 2019 indicating an increase over 7 years, albeit staff numbers have increased in this timeframe.

It should be noted that the 12.8% current modal share for cycling for staff is well within the target band (10% to 20%) outlined in the National Transport Authority's 'Achieving Effective Workplace Travel Plans' guidance document. While the scheme will continue to remain in place, other measures will now be required to influence modal shift of staff towards cycling even further. Furthermore, modal split of cycling for UCC students is 6.8% as of 2019, and an objective has been set in the 2018 Commuter Plan to increase this to 10% in line with National Policy.

UCC's Commuter Plan 2018-2013 has identified that the following factors, all related cycling conditions in road traffic, impact the most on bike use amongst staff and students:

- Quality of cycling infrastructure;
- Road Safety
- Driver behaviour

In this regard some measures (e.g. provision of showers/lockers/parking) are implementable by UCC and the University will continue to improve the provision of quality parking, shower and storage facilities in conjunction with increased promotion of same. However other hard measures will require coordination with Cork City Council and need to be viewed in the context of CMATS and the Cork Metropolitan Area Cycle Network Plan.

The National Cycle Manual lists five key needs of cyclists regarding cycling infrastructure as:

1. Road Safety
2. Coherence
3. Directness
4. Attractiveness
5. Comfort.

In analysing the existing cycle facilities for UCC under

these metrics it is apparent that the existing inter-site network of key access routes to campus and between campus could be improved.

The Cork Metropolitan Area Cycle Network Plan has undertaken a detailed assessment of cycle route quality throughout the city including the safety quotient of each route and forms a basis for key infrastructure upgrade requirements. Proposals outlined in this document, in particular for the Cork City Centre Network and Cork City South West Network will be key to progress towards the ambitious 11% cycle usage target set out in the 2018 Commuter Plan.

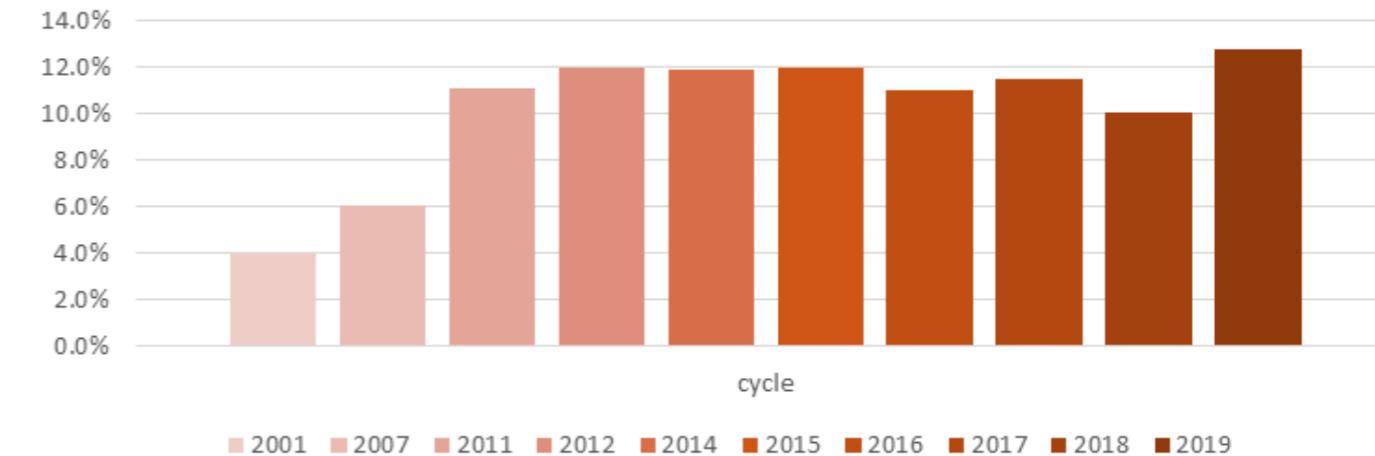
While cycle lanes and tracks are currently provided in a piecemeal manner between UCC facilities, these do not interconnect in a coherent way at all locations to provide a developed Cycle Network with adequate connectivity to serve UCC commuter needs and to encourage increased uptake of cycling as a mode of transport.

Providing bicycle infrastructure creates the necessity for quality bicycle parking. High quality bicycle parking areas create consistent activity and movement in a public space and can be social catalysts as well as important meeting points on the main campus. Their locations should be carefully considered and whether situated at the back of a central space or as a part of it they will inevitably become nodes on the campus.

Public Transport

Bicycle Parking

UCC Staff Cycling Trend 2001-2019



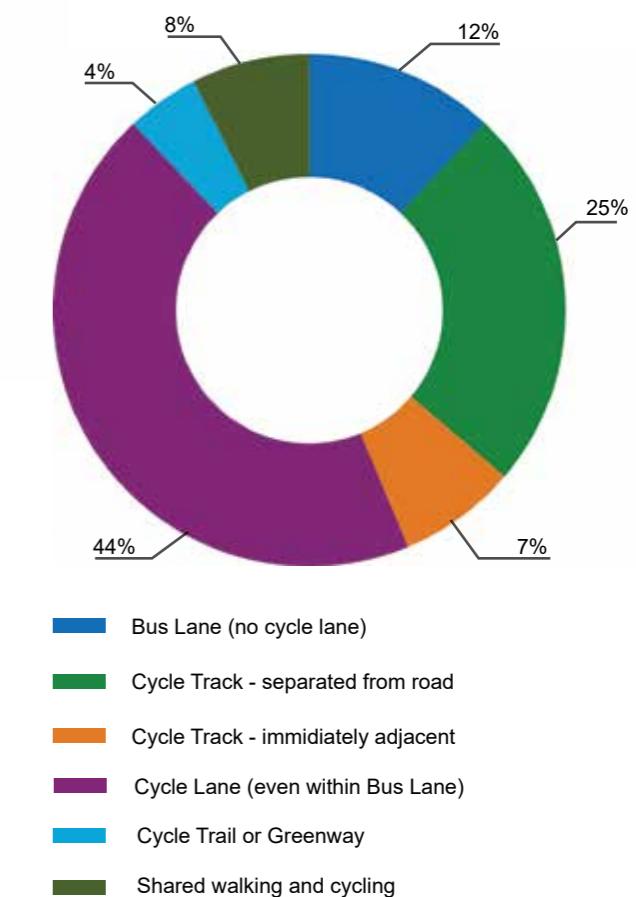
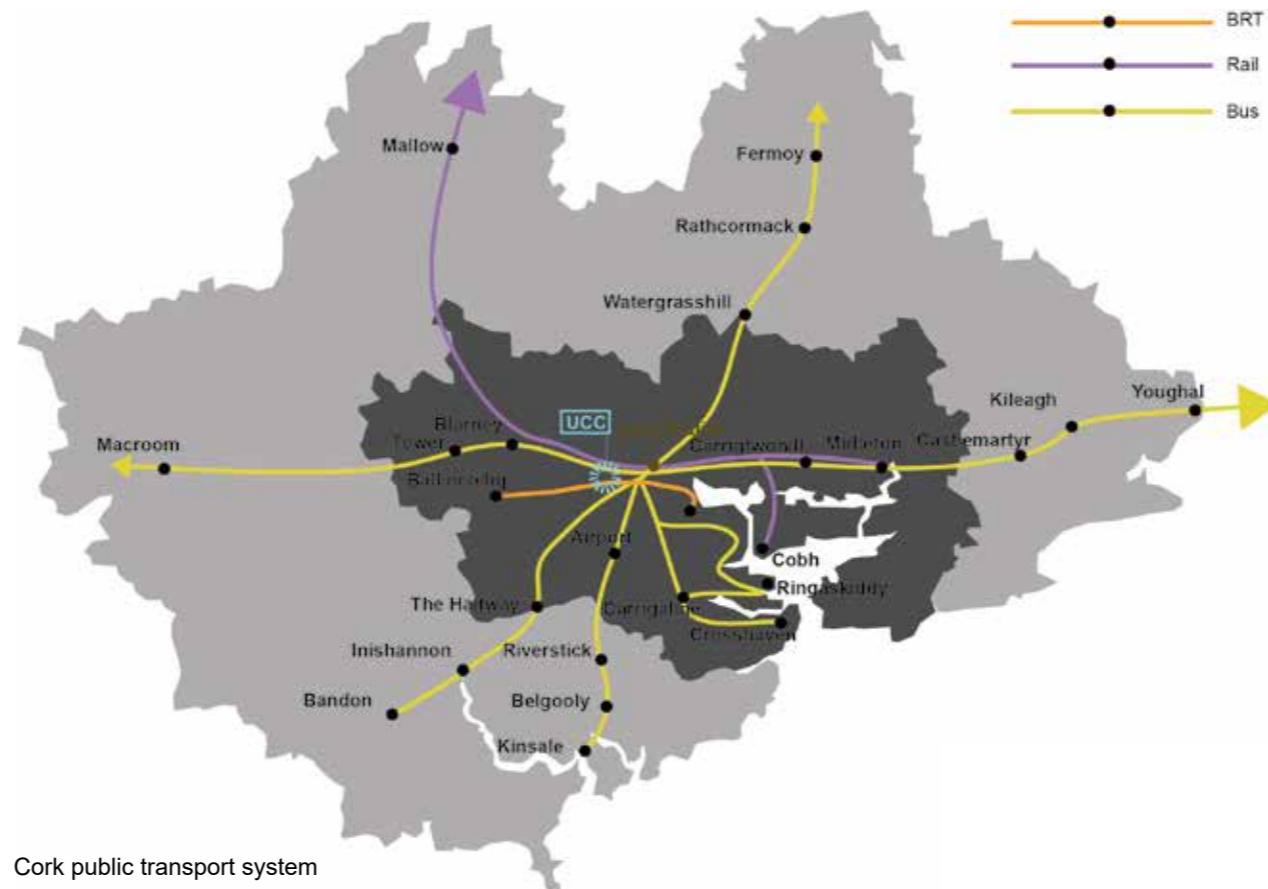


UCC's main campus is served primarily by 4 bus routes, (205, 208, 216 and 220). Each of these routes is relatively frequent, with services at 10 to 15-minute intervals at peak times. There is a perception amongst staff and students of UCC however that city bus services are not of sufficient quality, borne out by recent survey results which indicate that around 60% of both staff and students deem bus services as inadequate or in need of improvement as bus services often suffer from poor reliability, resulting from heavy traffic.

It is envisaged that the bus services mentioned above (in particular the 220 which passes closest to the Union Quay site) will become more availed of by students on completion of the proposed development at the Union Quay site, as the primary high density accommodation hubs in the Victoria Cross area are approximately a 40 minute walk from Union Quay, which is at the upper limit of walking distances for commuting purposes. In general, the bus services offer satisfactory access in terms of walking times to the various UCC satellite campus sites (generally less than 10 minutes) and frequency of services.

Key to improving the quality of public transport for UCC staff and students going forward will be the improvement of bus stop infrastructure. It is notable at present how few covered bus shelters are on the 208/220 route in the vicinity of Victoria Cross, and the 205-bus route on College Road. While the lack of shelter provision may be due to inadequate footpath widths in the areas in question, not having shelters serves as a discouragement to the use of buses during inclement weather and reduces user comfort for those who have no choice but to use bus services.

At a local level, UCC will display and make available



Breakdown of facility type in Cork Area - Source: CMA Cycle Network Plan

details of bus timetables, routes, stop locations and fares at appropriate locations in the campus. Real time departure and arrival times of buses near the UCC main campus will be made available on screens in the campus, and travel packs will be provided to new students.

Adequate public transport connectivity will be required to further promote the sustainability and viability of the CSAIP and Union Quay developments. Therefore, bringing forward further improvements to bus services and general infrastructure serving existing sites and opportunity sites as outlined in this masterplan will be key to the continuing expansion of UCC.

On-site parking

At present, there are approx. 1,239 staff parking spaces across the main Campus, Brookfield and Western Gateway buildings and North Mall Campus and 56% of staff drive to work each day. In addition to this 31% of students drive to the University. While UCC is committed to achieving a reduction of the modal share of single occupancy car journeys, this must be balanced against the consistently increasing student and staff populations and the inevitability that a significant proportion of staff and students will have a requirement to commute by car due to various factors.

Where reasonably practicable, UCC is committed to minimising on campus car parking whilst complying with best practice guidance and maximising land use efficiency as public transport improvements unfold.

Notwithstanding this approach, the University is intent on decoupling the link between parking demand and the provision of new University infrastructure. To this end, active management of existing car parking spaces is critical in ensuring that the objectives of sustainable transport are realised. In this regard UCC has already implemented satisfactory policies in terms of limiting student access to paid parking areas only and restricting entry to staff carparks through the use of enabled staff IDs, and this

policy will continue to be in place for developments at opportunity sites identified in this masterplan. Additional car-pooling spaces will be provided to help with the Commuter Plan aim of increasing the uptake of car-pooling amongst staff, and Electric Vehicle charging points will be provided on all major UCC carparks.

Park and Ride

UCC have well established Park and Ride facility at Pouladuff (200 spaces) and the satellite car park (Park and Walk) at Dennehy's Cross (180 spaces) and have access to the Black Ash Park and Ride facility with Cork City Council during term times. Annual travel surveys indicate that between 6% and 8% of students use Park and Ride facilities as part of their daily commute.

CMATS proposals for the increase of park and ride services and linking these directly to public transport routes would be beneficial to UCC, as would proposals to supplement strategic park and ride services with smaller local "mobility hubs", particularly on the northside of the City.

Development of these proposals as a priority and provision of direct links from park and ride hubs to UCC sites via shuttle bus and public transport will be key to reducing the demand for on-site parking.

Mobility Objectives:

UCC is committed to supporting sustainable transport measures for their students and staff and visitors. Car park spaces on the main campus in particular will gradually be reduced as the public sustainable infrastructure network is improved and expanded

Cycling and Walking Objectives:

Cycling and walking takes precedence throughout the main campus area and adjacent urban spaces supported by a commitment to implement high quality bicycle parking.







7. CLIMATE CHANGE

United Nations 17 Sustainable Development Goals

The 2030 Agenda for Sustainable Development provides 17 Sustainable Development Goals which are an urgent call for action by all countries, including Ireland, in a global partnership.

It is the aim of UCC to support these goals with Universities educating a creative and highly skilled workforce, and partnering with city leaders to use data and technology to improve the urban environment.

Sustainability

Given its pivotal role in academic, social and economic matters at local level and at national level, UCC supports an ongoing and indeed increasing commitment to a sustainable approach in the development and operation of the campus, building on strategies outlined in the previous masterplans and in the current Strategic Plan for the University.

The UCC Sustainability Strategy speaks directly to the United Nations Sustainable Development Goals and much work is ongoing across the university to assess how the goals are implemented across the campus.

Energy

The University is committed to responsible energy management as part of our overall environmental strategy and has a long track record in energy management, assisted with grant and technical support from the Sustainable Energy Authority of Ireland (SEAI) to support energy saving initiatives. UCC is the first third level institution worldwide and also the first public sector body in Ireland to be certified to ISO 50001. In the period 2019/20 overall electricity consumption reduced by 3% and gas by 7%. UCC reached an energy efficiency target of a 40% reduction in 2020. UCC is committed to further reductions in the coming period.

The UCC Sustainability Mission

- To facilitate the development and empowerment of future leaders in sustainability through our research, teaching and learning activities
- To engage our student body, staff and wider community in becoming active citizens for sustainability
- To minimize the local, regional and global environmental impacts of our educational, research, and ancillary operations, and infrastructural development
- To enhance the health and well-being of the University and wider community through the facilitation and promotion of healthy eating and living as an integral part of sustainable living
- To be an overall positive force in the journey towards creating a sustainable world for all

Green Campus Programme

The commitment of the university to sustainability was underlined by the accreditation of UCC with the prestigious international 'Green Flag' award, thus becoming the first 3rd level educational institution in the world to receive this award.

The Green Campus Programme identifies the campus as a community and it places significant importance on the inclusion of all sectors of the campus community in its environmental management and enhancement. The Green Campus Programme rewards long term commitment to continuous improvement by the campus community in question. This programme, sponsored internationally by the Foundation for Environmental Education and operated in Ireland by An Taisce, has seen the University save €300,000 in waste management

costs, reduce waste to landfill by nearly 400 tonnes and improve recycling from 21% to 60%.

Other measures which resulted in the Green Flag Award focused on savings in energy and water usage, and on sustainable commuting initiatives.

Following on from the publication of the university's Sustainability Strategy in 2016, the sustainability agenda is becoming fully embedded in UCC, with Green Campus and sustainability highlighted in the following university plans and policies:

- University Strategic Plan 2017 -2022
- Community Engagement Plan "UCC Together With and For the Community" 2017 -2022
- ERI Strategic Plan 2018 -2022
- Glucksman Gallery Strategic Plan 2018 -2022
- UCC Procurement Strategy 2017 -2022
- UCC Academic Strategy 2018 -2022
- Buildings and Estates Strategic Plan 2017 - 2022

UCC's Sustainability Strategy set out the goals and ambitions in incorporating sustainability into all aspects of university life. The Strategy focused on nine key areas:

- Sustainability Citizenship
- Teaching and Learning
- Research Food, Health and Wellbeing
- Landscape, Heritage and Natural Resources
- Recycling and Waste Management
- Energy, Water and Climate Change
- Procurement and Contracts
- Commuting and Business Travel

The Strategy also specifically calls for the use of the University's infrastructure for research and learning in relation to sustainability. Strong links are being built between the operational staff and its researchers, formalized in the first UCC 'Living Laboratory Seed Fund' in 2019.

Waste Management and Recycling

The University is committed to reducing the volume of waste generated and to increasing the proportion of that waste which is recycled. It endeavours to implement sustainable resource management practices based on reduce, reuse and recycle principles.

The University is striving to reduce the acquisition of new materials, re-using existing materials and to increase recycling to the best possible standards. All waste is being disposed of in a manner consistent with statutory requirements and a documenting procedure is being implemented. The University has a policy of dissemination of information on waste management to enable staff and students to stay continually informed on the University's waste policies and procedures.

Proactive measures have also been introduced in the area of recycling, including improved collection and management of waste (including on-site segregation of waste in Dry Mixed Recyclable and General Waste) with a consequential reduction in waste going to landfill.

Construction Process

In the procurement of buildings and related developments on UCC Lands, the University is extremely conscious of the need to ensure best practice in the area of sustainable design of the built environment.

To this end, briefs for new building and development reflect requirements for energy efficient buildings, incorporating both passive and active conservation measures. Design Teams adhere to the use of best practice standards such as BREEAM in order to measure the "green" performance of buildings during both construction and operational phases. The achievement of performance standards in excess of those reflected in national legislation and standards is required.

Energy conservation and other green measures are also being implemented in the ongoing programme for upgrading of the existing University building stock.

Carbon Footprint Report

A carbon footprint is a measure of the potential climate impact of the greenhouse gases (GHG) that are emitted directly or indirectly by an organisation's activities. The estimate, expressed in the equivalent of tonnes of carbon dioxide, is calculated using the internationally recognised Greenhouse Gas Protocol Corporate Standard.

Comparing the report with results from other universities suggests that UCC is performing well. However, the real value of this report is that it can facilitate the tracking of UCC's reductions in GHG emissions on a year by year basis. It can also facilitate comparisons between different buildings or complexes on campus.

A proposal for the establishment of an integrated Carbon Management programme for UCC, which would capitalise on the Carbon Footprint report, is currently under underway, it sets out UCC's approach to reducing the Carbon impact and exceeding public sector objectives for 2030 and beyond.

Environmental Research Institute

Since 2000, UCC is also home to the Environmental Research Institute which has been assessed as being a Level 5 or "World Leading Standard" as part of an independent quality review of research at UCC.

Climate Adaptation Planning

UCC's climate action plan is currently underway taking into consideration potential impacts of future climate scenarios throughout all aspects of the campus. The plan sets out specific guidelines for making the campus climate resilient.



The United Nations 17 Sustainable Development Goals

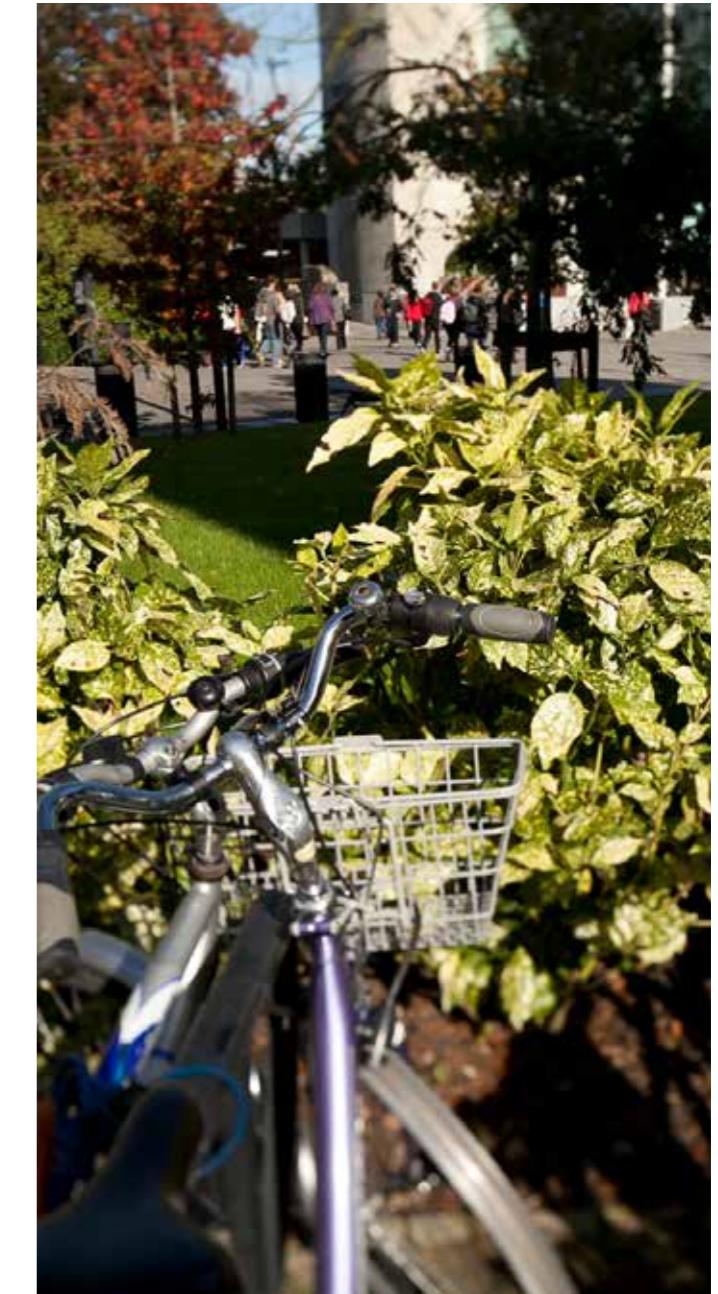
UCC continues to make great strides in reducing energy use. UCC exceeded the national targets with a reduction in energy intensity (per m²) of 57% over the period 2006-2018.

"Sustainability is part of how we do business now in UCC, for example our new Student Hub building, which sees a reimagining of the old Windle Building, is built to BREEAM Excellent Standard and will be the first building in UCC to implement the new Sustainable Print Management Policy"

John O'Halloran & Mark Poland
Green Forum co-chairs



Groups within UCC with responsibility for sustainability and green activities



Bicycle parking in the Historic Core



8. DIVERSITY AND INCLUSION

Diversity and Inclusion

Diversity and Inclusion have been a core focus of teaching, research and policy activity for a wide range of UCC staff and students for decades. At University level, the UCC Equality Committee has existed for many years and has advised the University on equality initiatives and produced equality strategies and annual reports.

- UCC believes that a diverse community is among a university's greatest strengths, and that an inclusive campus enhances the living, learning, and working environment for all.
- Diverse groups are better able to adapt to new technologies and ideas and to encourage the search for novel information and perspectives, thus leading to better decision making and problem solving.
- Diverse groups are more innovative, creative and adaptable than homogenous groups and can bring true vibrancy to communities.

UCC is committed to support and ensure inclusion for both students and staff and to not discriminate on grounds of gender, marital status, family status, sexual orientation, religion, age, disability or race. This also includes supporting components which ensure that people of all economic backgrounds are able to access the campus through sustainable transport and can find suitable housing and high-quality childcare. It makes sense to create a broad and diverse UCC Community and subsequently, creative and inclusive highly skilled workforce.

Universal Design

The physical environment of UCC continues to be designed to meet the needs of all people who wish to use it. This is not a special requirement, for the benefit of only a minority of the population, it is a fundamental

condition of good design in all areas in UCC's ownership. By considering the diverse needs and abilities of all throughout the design process, Universal Design creates UCC environments that meet people's needs.

People with Disabilities

UCC wishes to derive maximum benefit from the contribution of students and staff by ensuring that the abilities of students and staff with disabilities are never overlooked. UCC acknowledges the equal rights of people with hidden disabilities, and also that the same disability can vary in its impact and affect people differently.

UCC recognises that some people with disabilities may encounter greater difficulties than others in adjusting to life on the campus. Particular attention will be given to people with disabilities and assisting their performance in the initial stages on the campus. This includes creating a campus that goes beyond compliance under Part M of the Building Regulations, as well as ensuring that all design work is undertaken considering the experience that people with certain sensitivities will have within a campus full of sounds, smells, obstacles and movement. UCC has recently created 'calm zones' on the campus for people with sensitive needs and installed a charging plug facility in the Hub.



The Peer Support Programme helps new students settle in

Universal Design Objectives:

- The UCC physical environment has regard to the ethos of Universal Design ensuring that the environment is equally accessible to all.

People with Disabilities Objectives:

- It is the aim to ensure that the abilities of all students and staff are never overlooked.
- UCC acknowledge and supports the equal rights and needs of people with hidden disabilities.

Diversity and Inclusion Objectives:

- UCC believes that a diverse community is among a University's greatest strengths and that an inclusive campus enhances the living, learning and working environment for all.
- UCC want to ensure that diversity and inclusion are a core focus.
- Diversity in UCC intensifies self-awareness, contributes to expanding the knowledge base and promotes creative thinking. A world class physical environment showcases people with diverse opinions, political views, and academic passions who can all learn from each other.







9. UCC MASTERPLAN CONSIDERATIONS

UCC Lands in Context - Topography

This chapter identifies significant contextual elements of the UCC Lands and their relationship with the city. For many, the main campus setting exudes the qualities that make the UCC experience special and embodies strong placemaking characteristics. It is considered that whilst UCC locations outside of the main campus are naturally at various stages of development, a primary consideration in the expansion of facilities will be to foster a UCC identity that embodies the principles of placemaking.

Factors such as orientation, location, density, topography, history, uses, vibrancy, politics and economics all interact to inform development patterns of the main campus and other UCC landbanks.

The Main Physical Elements of the UCC Lands are:

- Landscape
- Building Stock
- Views and Corridors
- Pathways and Connections
- Roads and Traffic
- Pedestrian Access
- Flood Plains
- Public Realm

River Lee

The Main UCC Campus is situated in the Lee Valley adjacent Cork City in an area of strong visual character. The Lee Valley is formed by the River Lee which has its source in the Shehy Mountains on the Cork-Kerry border. It flows eastwards towards Cork City and enters the sea at Cork Harbour.

The River Lee splits into two channels, forming Great Island on which Cork City has developed, and reaches the open sea between Whitegate and Crosshaven.

The choice of riverside locations is a feature of settlement

since earliest times – rivers provided both sources of food and routes for travel and exploration. This dependency may have been diluted by the passage of time, but it nevertheless remains a strong subliminal factor in the choice of locations for human settlement. It is therefore essential that the future development of the main UCC campus enhances and strengthens this relationship.

Development on an east-west axis as a key strategic driver in the expansion of the campus has been identified in previous masterplans (2004). This strategy responded not only to the subliminal impact of the waterway, but also recognised the positive impact of the existing topography on the character of the University, in addition to responding to practical issues such as proximity and ease of circulation from one part of campus to another.

The main UCC Campus continues to benefit from the combination of topography and water which makes it visually attractive and ecologically diverse as the river and riverside planting forms a significant part of the spatial ordering within the landscape hierarchy of the campus.

The existing riverside walks greatly aid the permeability of the campus in addition to enhancing links between the campus and neighbouring areas.

Away from the river, the landscape on the campus – both hard and soft - has been particularly important in defining spaces and circulation routes. Landscaping is a binding element, particularly where the building stock is visually diverse. It is resilient and self-sustaining, and in the context of UCC, it is of major importance in the definition of the character of the main campus.

Though an important linking device, it should also be recognised that the character of the river varies between the two principal channels. This variation is seen principally in the wider North Channel offering longitudinal and cross vistas in contrast with the more enclosed South Channel.

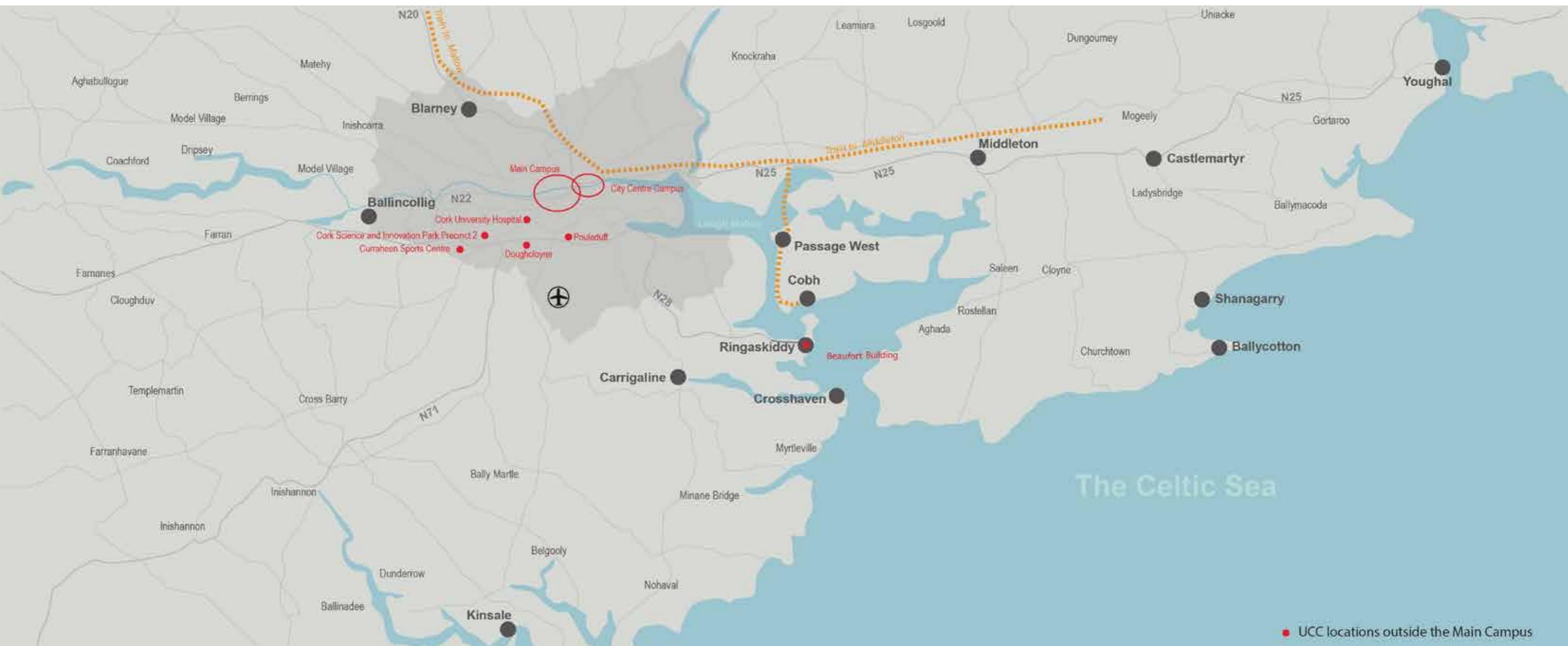


The UCC Central Campus is nestled in between the hills to the north and south within the Lee Valley



River Lee on the UCC Central Campus

9. UCC Masterplan Considerations



The County Cork Coastline and UCC locations

9. UCC Masterplan Considerations

UCC Lands in Context - Diverse Locations

UCC's landholdings are located throughout Cork City and the surrounding area and are comprised of:

The Main UCC Campus:

- Historic Core
- Brookfield and Western Gateway
- North Mall Campus
- Connolly Buildings
- Lee Maltings Complex (Tyndall National Institute)
- Mardyke Sports Complex
- Environmental Research Institute

UCC City Centre Campus:

- UCC Centre for Executive Education, Lapps Quay
- Cork Centre for Architectural Education, Nano Nagle Place
- Site for Cork University Business School, Union Quay

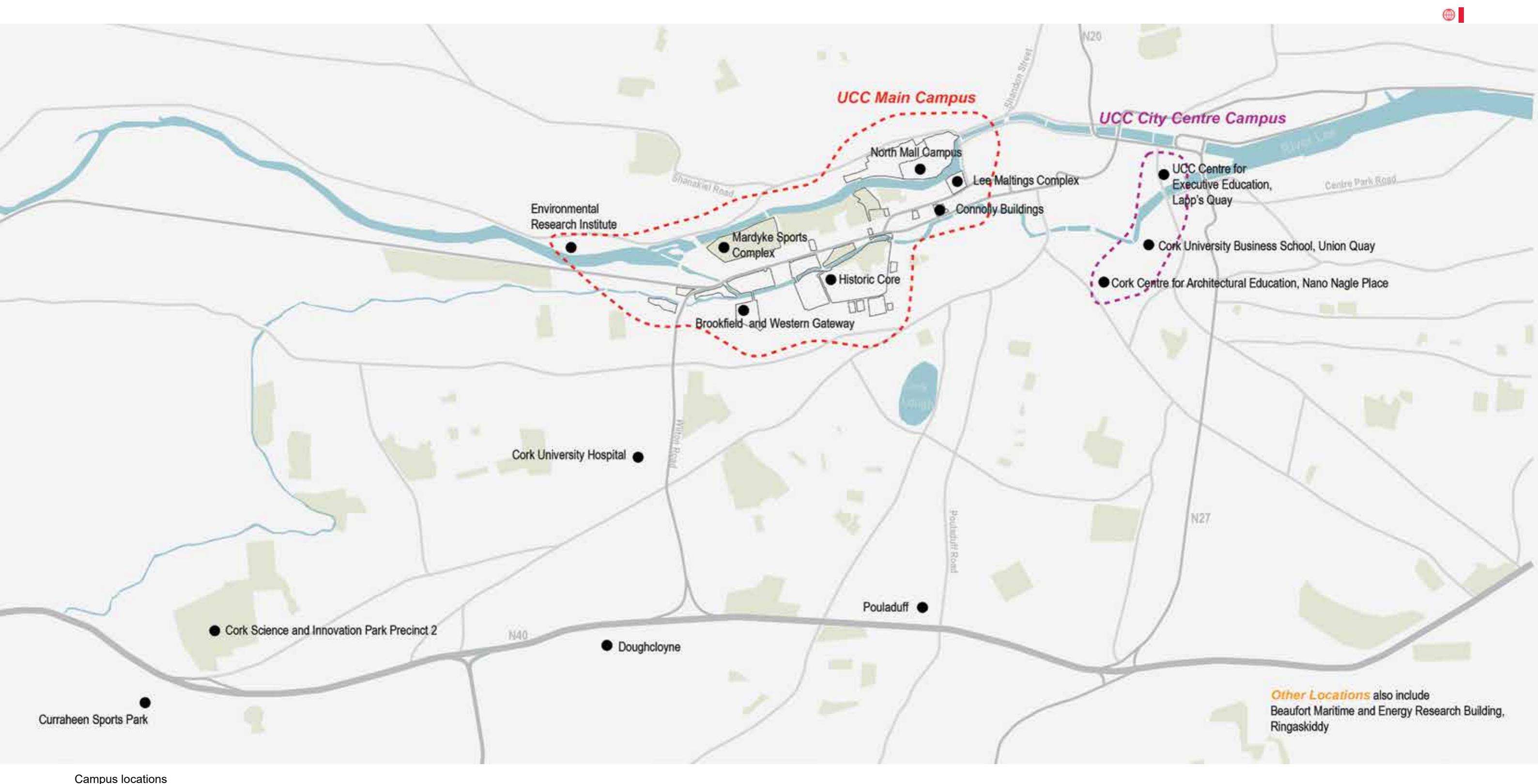
Other UCC locations include:

- Cork Science and Innovation Park Precinct 2
- Cork University Hospital
- Beaufort Maritime and Energy Research Building, Ringaskiddy.
- Doughcloyne
- Pouladuff

There is a real diversity across the nature of the UCC locations which provides real opportunity in the creation of UCC identity in the off-campus locations.

Campus Areas

Campus	Area	Character
UCC Main Campus	Historic Core	Considered to be the central UCC campus and historic centre of University College Cork. The Historic Core is full of historic character and award winning contemporary architecture. It has a high quality public realm along the wooded riverside within walking distance of the city centre.
	Brookfield and Western Gateway	The Brookfield Health Science Complex is a contemporary group of buildings built around the historical Brookfield House. The Western Gateway Building is located on Western Road and opened in 2009, provides lecture theatres, undergraduate teaching laboratories, research laboratories and a riverside cafe.
	North Mall Campus	The former Irish Distillers site is partially in joint ownership between UCC and Mercy University Hospital. The site is large and flat, on a bend in the river with mature trees, defunct industrial buildings and is on the western edge of the city centre. There are a number of UCC faculties on the North Mall Campus, however the majority of the site is underdeveloped and there is opportunity for UCC expansion in this area.
	Connolly Buildings	The Connolly Buildings located in the former Presentation Brothers School on Western Road, a 3 min. walk from the main gate of UCC.
	Lee Maltings Complex (Tyndall National Institute)	The Lee Maltings Complex on Dyke Parade houses the Tyndall National Institute in a complex of contemporary and 18th century industrial buildings on the opposite bank of the River Lee to the North Mall Campus.
	Mardyke Sports Complex	The home of UCC Sport and Club Activities, a modern sports complex.
	Environmental Research Institute	The ERI is a stand alone research building located on the bank of the River Lee on the northern and western approaches to Sunday's Well and the city.
UCC City Centre Campus	UCC Centre for Executive Education, Lapps Quay	Lapps Quay in Cork city centre is the location for the Centre for Executive Education in the former Cork Savings Bank, an 18th century building and protected structure.
	Cork Centre for Architectural Education, Nano Nagle Place	Nano Nagle Place is a new visitor centre in the former Presentation Sisters convent in Douglas Street. It is a heritage and education centre that also accommodates the Cork Centre for Architectural Education (CCAE) for UCC and CIT.
	Cork University Business School, Union Quay	The former Brooks Haughton warehouse on Copley Street and Union Quay in Cork City is the proposed location for the development of the new Cork University Business School (CUBS).
Other Locations	Cork Science and Innovation Park Precinct 2	UCC CSAIP Precinct 2 is an 18.3 hectares Masterplan Framework within the context of the Cork Science and Innovation Park in the western suburbs of Cork City at Curraheen. This is the proposed location for the Cork University Dental School and Hospital, Health Innovation Hub Ireland Building
	Cork University Hospital	This is the current location of Cork Maternity Hospital, UCC Academic Departments and Clinical Sciences and the proposed CUCMS.
	Beaufort Maritime and Energy Research Building, Ringaskiddy	Ringaskiddy is the location of the UCC Beaufort Maritime and Energy Research building in Cork Harbour opposite the Haulbowline Navy Headquarters. The Beaufort Building is adjacent to the CIT Maritime College. Further research/innovation related facilities are planned on the adjacent lands.
	Doughcloyne	Whilst the lands currently are industrial in nature, UCC will consider future development in accordance with the Cork City Development plan.
	Pouladuff	Whilst the lands currently are industrial in nature, UCC will consider future development in accordance with the Cork City Development plan.
	Curraheen Sports Park	Proposed sports facility, currently used for playing pitches, a pavilion and ancillary structures for equipment and maintenance storage.





UCC Lands in Context- Cork Science & Innovation Park

The Cork Science and Innovation Park (CSAIP) at Curraheen is an ambitious long term development project with the potential to deliver significant job creation and economic output for the region. The park provides an opportunity to bring together researchers, entrepreneurs, academics and technology intensive enterprises and drive the innovation agenda regionally and nationally.

Cork County Council developed its Framework Masterplan for the CSAIP in 2011. This document sets out the quantitative and qualitative criteria for the development of the Science and Innovation Park in Curraheen.

The park is made up of six different development precincts, totalling approximately 70ha. The total quantitative allocation of development (as per the Cork County Council Framework Masterplan) is 363,320m².

The University lands (Precinct 2) are located at the south east of the park. The overall area of UCC lands is 18.3 hectares and the quantitative allocation of development is 107,350m².

UCC propose to develop the Precinct 2 lands on a phased basis using best international practise for the development of science and innovation parks.

It is anticipated that the design and development of Precinct 2 will ensure that CSAIP will become a strategic employment location, an educational and research campus environment, a place of business, a public transportation node and an amenity area.

UCC developed its Precinct 2 specific Masterplan in 2015, which supports the concepts and objectives detailed in the Cork County Council Framework Masterplan.

The development of UCC's lands at Corks Science and Innovation Park has great potential to act as a beacon of progressive and sustainable development.

The UCC precinct can be much more than an extension of the University's research activities, it will be the bridge linking the research activities of the University to the employment, technology and wealth creating enterprises and organisations who will work with the University to the mutual benefit of both groups to develop a talent-pool and expand the research, development and innovation horizons.

The benefits of mixing research activities and teaching is a proven manner of stimulating collaboration.

It is a general objective of UCC to continue to develop the lands with the full teaching and learning experience of the student combined with the research and innovation opportunities.

Connectivity to the city and to the main campus will be facilitated and improved as public transport expands and develops. This is intrinsically linked to the success of the UCC lands at CSAIP.

Currently the Health Innovation Hub and Cork University Dental School and Hospital are being progressed in accordance with the Reddy A+U Masterplan completed in 2015 which demonstrates that the site has the capacity to deliver over 100,000 sqm of health, research, education and innovation accommodation.



UCC Cork Science and Innovation Park



Cork Science and Innovation Park Precinct 2 Masterplan



UCC Lands in Context- UCC Sports

UCC's Sports Strategy identifies UCC as "a connected university, and sport plays an important role in connecting student and alumni communities, and engaging with the wider community". UCC's Sport Strategy supports the development of graduate attributes beyond the classroom for all students at UCC.

It seeks to "enhance the student experience while contributing to students' health and wellbeing, building life-wide skills and lifelong friendships".

Sport and physical activity underpins UCC's Strategic Plan (2017–2022) to build and develop world-class sports facilities to attract and inspire high-performance athletes and to support all students in physical recreation.

In terms of existing sports facilities, the Mardyke is home to UCC's major indoor sports centre (the Mardyke Arena), an outdoor running track and an all-weather pitch with facilities for rugby, soccer, hockey and GAA. Enhancement of the changing facilities and improved gym and spectator facilities are envisaged in this location.

The development of the proposed Cork Science and Innovation Park (CSAIP) at Curraheen will require the relocation of the existing sports facilities and construction of new facilities in a nearby location.

It is proposed to establish a major regional Centre of Excellence for Sport as part of the new development, with new indoor and outdoor facilities including grass and all-weather playing surfaces, stand and changing facilities.

Given the growth of student numbers and the consequential increase in demand for and usage of sports facilities, it is clear that enhanced sports facilities are required. Consideration will be given to the provision of gym facilities as part of the North Mall development, as a satellite operation of the main facility at the Mardyke Arena.

Through building and developing world-class outdoor sports facilities which supplement the Mardyke Arena's indoor offerings, UCC can attract and inspire high-performance athletes as well as supporting students at all levels in physical recreation.

UCC will develop an inspiring destination for outdoor teams at a new UCC Sports Park in Curraheen to replace the present facilities at the Farm.

UCC will also work with key stakeholders, sporting organisations in the region and the agencies in Cork to support the provision and access to a quality network of community, sporting recreational and performance facilities.



UCC Sports at Mardyke



Draft UCC Sports Park



UCC Lands in context - A City Centre Campus

The UCC City Centre Campus includes the Centre for Executive Education at Lapps Quay, Cork Centre for Architectural Education, at Nano Nagle Place and potentially the location for the Cork University Business School at Union Quay. The successful growth of the university requires expansion beyond the Main Campus Historic Core into the city centre enhancing the social and economic fabric and revitalising the city and region. The recent opening of the Centre for Architectural Education and the Centre for Executive Education manifests UCC's presence in the city.

Cork Centre for Architectural Education

Located at Nano Nagle Place, CCAE is a joint venture between CIT and UCC to create a hub of architectural education in Cork. It offers better integration between all activities in the building, ensuring that students can get an even better learning experience allowing light and impressive views over the city.

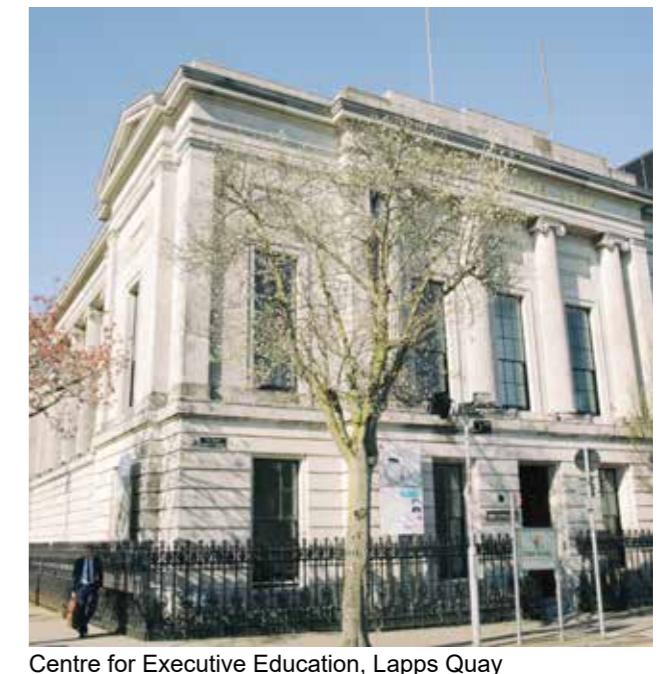
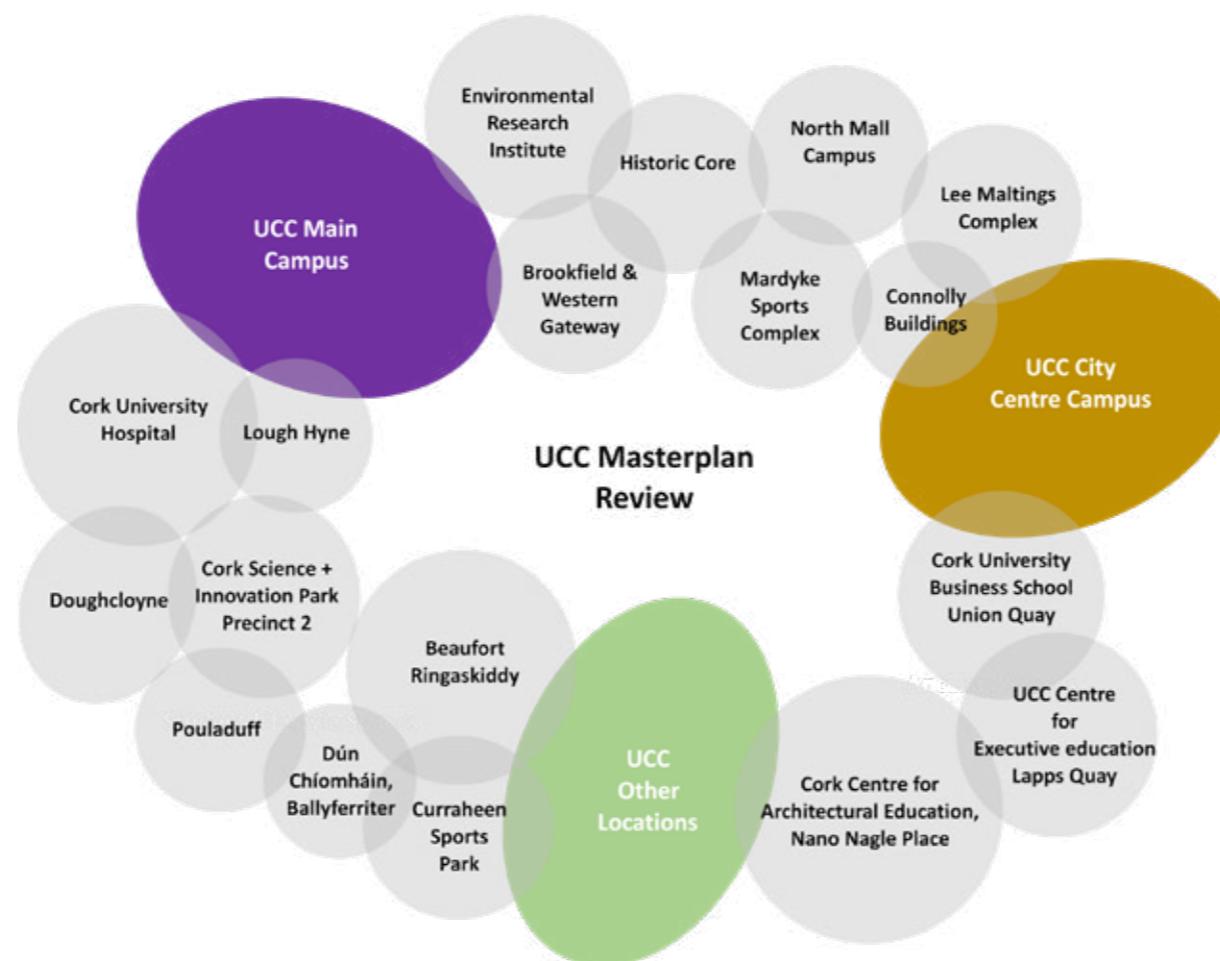
Lapps Quay

The refurbishment of the old Cork Savings Bank at No. 1 Lapps Quay and 16 Parnell Place houses the Centre for Executive Education.

UCC is committed to using this as a world-class executive education centre that will benefit existing regional and multinational business and serve as a hub for future inward investment to the city and broader region.

Union Quay

UCC has identified the lands at Union Quay as a potential future location of the Cork University Business School, subject to a masterplan layout. The lands could accommodate 4500 students and over 225 staff to become the heart of the Cork city business district. The site may also accommodate complementary university activities as part of the overall development of the site.



UCC Lands in context - Main Campus Overview

City Centre and Cork Docklands to the East there is the potential to emulate the Main Campus with appropriate place making and character creation.

UCC's ability to bring people, students/researchers, staff and academics from different backgrounds should not be underestimated. UCC is a unique anchor to these locations attracting people from different backgrounds intermingling in an off-campus location will create "cultural swirl". This is further facilitated by permeable spatial and social boundaries, allowing practices, knowledge, and ideas to pass from one person to another.

The main UCC Campus offers world-class educational facilities provided in quaint, picturesque and charming settings on a campus which has close ties to Cork City, allowing for city centre commutes in only a few minutes. The surrounding residential areas, sports arena and North Mall lands create a true city centre campus.

UCC has significant presence in Cork City Centre with the development of the Centre for Executive Education at Lapp's Quay Centre, the Cork Centre for Architectural Education at the Nano Nagle Place and the North Mall Campus all only a walk and cycle away. Continued connectivity to all these campuses is an important objective of this Masterplan.

Cork is a city with great opportunities for walking, everything feels a short walk away and this also manifests within the UCC Campus.

The close proximity to the city centre and the scale of UCC, in particular the Historic Core, is a significant factor in the allure of the spatial qualities of the spaces. UCC enjoys an established physical context of very high quality which includes both its connection to the surrounding landscape and indeed to Cork City Centre. This high quality reflects the benefits of the location of the main campus in the Lee Valley, in an area of strong visual character.

The UCC lands at Curraheen present connectivity challenges due to its location. However, it is noted that this will alter significantly over time, particularly with the development of the Dental School and Hospital and increased connection to the city through infrastructural development identified in CMATS.

UCC Identity

As UCC continues to expand in the city as well as on the satellite landbanks it is essential that there is still a sense of a united UCC identity. This unity can be supported through a number of interventions:

Infrastructure:

- Support of sustainable transport: bicycle scheme, public bus, shuttle bus, BRI, Light Rail
- Technological connectivity – the virtual campus experience

Spatial:

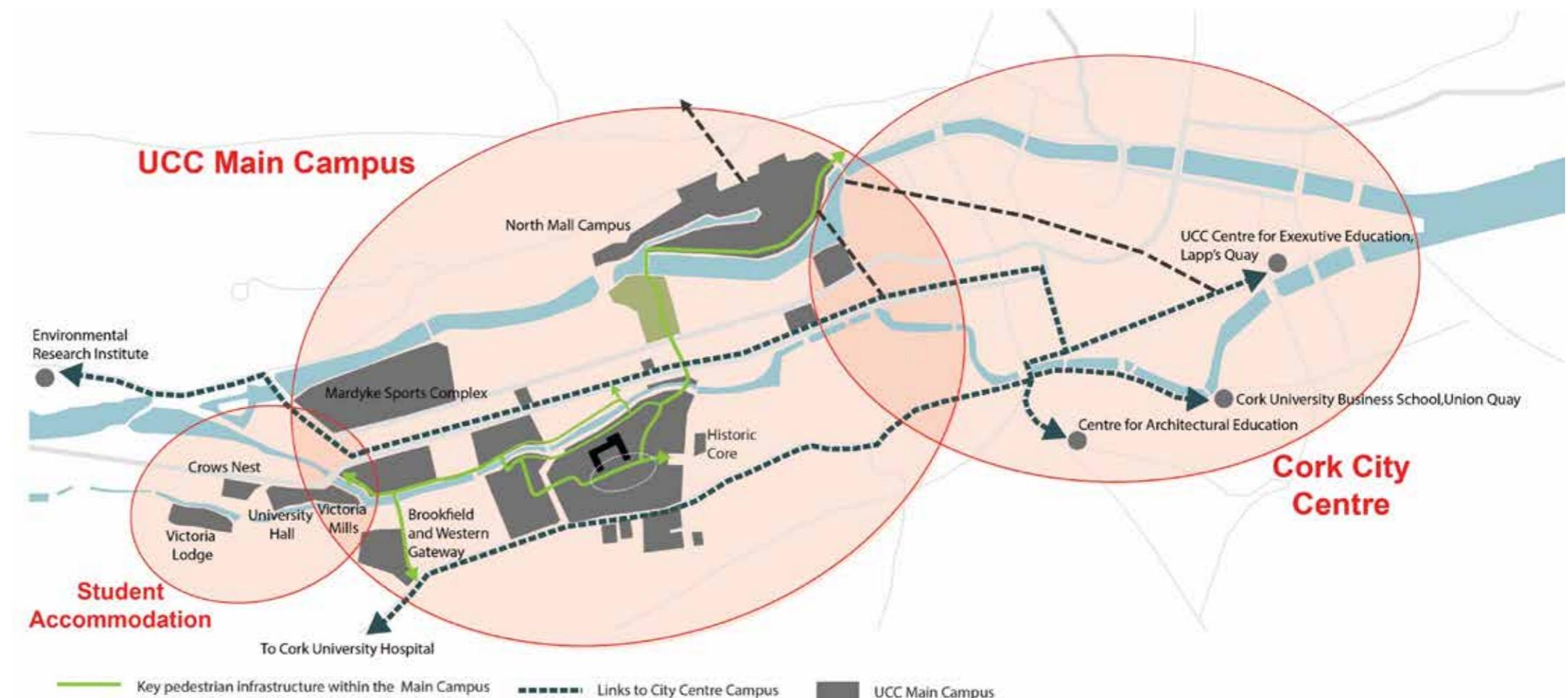
- Place making and public realm: An integrated design implemented throughout the UCC lands – spatial and visual connectivity
- Street Furniture such as benches, bins and lighting implemented throughout to create a visual design connectivity

Branding:

- Graphic Branding: similar signage and branding throughout UCC locations

Linking to City Centre and UCC Campuses

As the Main Campus continues to expand into the wider Cork City Centre and other locations it is important to try and enhance the unity throughout. This can be done by creating good connectivity, including creation of a design palette for materials and street furniture. For the locations that are not a part of the Main Campus, physically connected high-quality pedestrian and cycle infrastructure through the city is imperative.





UCC Lands in context - Main Campus Landscape

The Main Campus has a very varied landscape. The large cedars in front of the Main Quadrangle are a central landscape feature. The Honan Plaza is bordered by The President's Garden and the mixed fir planting in front of the O'Rahilly building, creating a green enclosure for the space. The President's Garden links the Honan Plaza to the river and the Glucksman Gallery. This area is the largest green open space on the campus and provides the pedestrian connection from the main entrance gate and the path along the river.

The other central landscape feature is the river edge. With green and lush banks offering a valuable biodiversity advantage, with great potential to become both a spectacular landscape corridor and a significant part of the infrastructure of the campus. The river landscape is easily accessible in the Glucksman Gallery Area and at the Western Gateway building and has potential to become a strong corridor on both sides of the river over its entire length. The landscape on the North Mall Campus is mostly wild with woodland planting, dry meadows and grassy edges.

Campus Trees

The iconic tree lined campus at University College Cork (UCC) has joined some of the leading arboreta in the world after being accredited by a prestigious global accrediting programme. To foster best practice the ArbNet Arboretum Accreditation Programme examines the conservation, maintenance, educational outreach and scientific collaborations of arboreta across the world. The Royal Botanic Gardens in Sydney, the Oxford Botanic Garden at the University of Oxford and the Arboretum De Paris are among the arboreta accredited globally by ArbNet, now the 2,500 trees across 42 acres at UCC join this notable list. These exist as individual specimens and as riparian groups along both the northern and southern channels of the River Lee. The visual amenity provided by UCC's tree resource on all

approaches to the campus is of immense benefit to visitors, staff, students as well as Cork City's residents. The corridor of trees can be followed through parks and walkways travelling east from the campus to the city and docklands and travelling west along the Lee Valley. One of the most valued views is on approach to UCC along the Western Road through the main gates and following along towards Perrott's Inch where the magnificent Aula Maxima building is framed by large mature and veteran trees on either side.

UCC is host to two champion trees that are listed on the Champion Tree Register of Ireland (held by the Tree Council of Ireland). One is a Wing nut (*Pterocarya fraxinifolia*) located between the O'Rahilly building and the Boole Library. There are many other wonderful specimens under UCC's care, and their history is now available virtually on a Google earth tour of 'UCC's significant trees'. The tree stock is predominantly mature and in good condition. An analysis provided by the tree management database also shows the excellent age profile structure UCC currently has, where frequent planting over the years has ensured a continual tree cover.

Trees and buildings can exist and complement one another. This is evidenced by the construction of the award-winning Glucksman gallery (2004) in the lower grounds, amongst some of the largest trees on campus. The approach taken to this project should be adopted for all future projects, large and small, if in close proximity to significant mature trees.

Biodiversity

The positive impact of biodiversity on the natural landscape is a great benefit to UCC. In the urban environment of Cork City, green spaces, such as those in UCC, add greatly to the mental and physical health of students, staff and the general public who spend time within the UCC grounds.

Biodiversity and its important function is under threat globally and locally. Over 20% of species are threatened with extinction in Ireland. The most recent assessment of the status of EU protected habitats and species in Ireland showed that 91% of the 58 habitats assessed have unfavourable conservation status.

During recent UCC Habitat Surveys, 27 different habitats were recorded on UCC campuses.

The main habitats are:

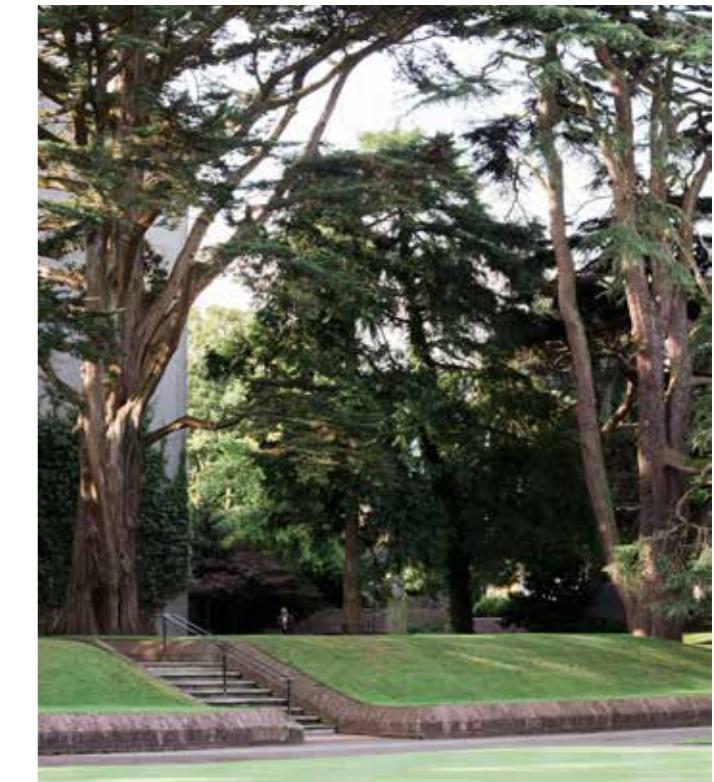
- Buildings and Artificial Surfaces
- Amenity Grassland
- Scattered trees and parkland
- Riparian Woodland
- Rivers: Eroding/upland rivers, depositing lowland rivers and tidal rivers
- Flowerbeds and borders
- Planted broadleaved woodland
- Treelines
- Hedgerows
- Stonewalls and other stonework

*UCC Biodiversity Action Plan 2018 – 2023

It is imperative that these habitats are protected and that anyone making changes to them understands the significant effects this can have for biodiversity on campus.

Good contouring in landscape works can help ensure that surface water from rainfall is directed where we want it to go to and also help avoid ingress into buildings, basements, and onto roads during flood events with overflowing rivers and lakes.

UCC recognises that biodiversity and natural landscapes are an important tool to negate the impact of climate change. It is important to identify and implement measures to enhance and protect biodiversity in UCC and ensure that biodiversity is integral to the planning and design process in all of UCC's future developments.



Cedar Trees in front of the Boole Library



Cavanagh Bridge



UCC Lands in Context - Main Campus Microclimate

Microclimates can be influenced by topography, landscape, vegetation and building structures. Given that landscape, vegetation and building stock continue to evolve on campus lands, it is clear that local microclimates will also continue to vary, possibly on a more accelerated basis than has been observed historically.

Proposals for the future development of the campus, whether new building, landscaping or even land acquisitions, must take full account of likely microclimates.

Climate Adaptation Plan

UCC is committed to leading the way and making the campus climate resilient pro-actively engaging with the experts on this matter. It is the aim to set up structures to develop, protect, enhance and evaluate proposals for the campus, including a holistic strategy for initiatives within the entire public realm.

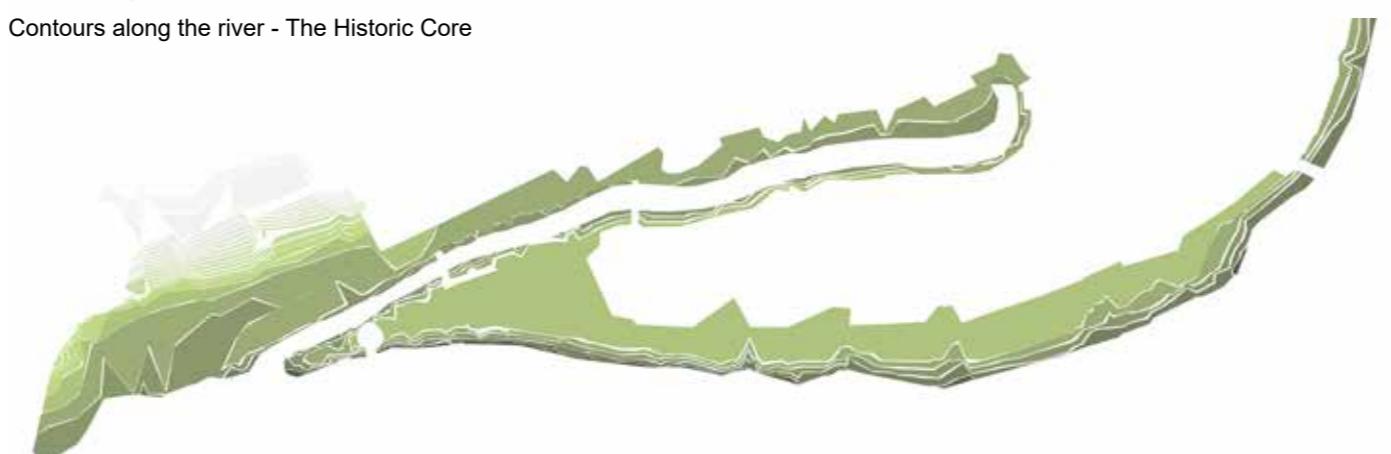


Contours along the river - Brookfield and Western Gateway



Climate Adaptation - water is captured in green spaces and absorbed or lead to water retention areas

Contours along the river - The Historic Core



Contours along the river on the North Mall Campus

Lowest contour

Highest contour



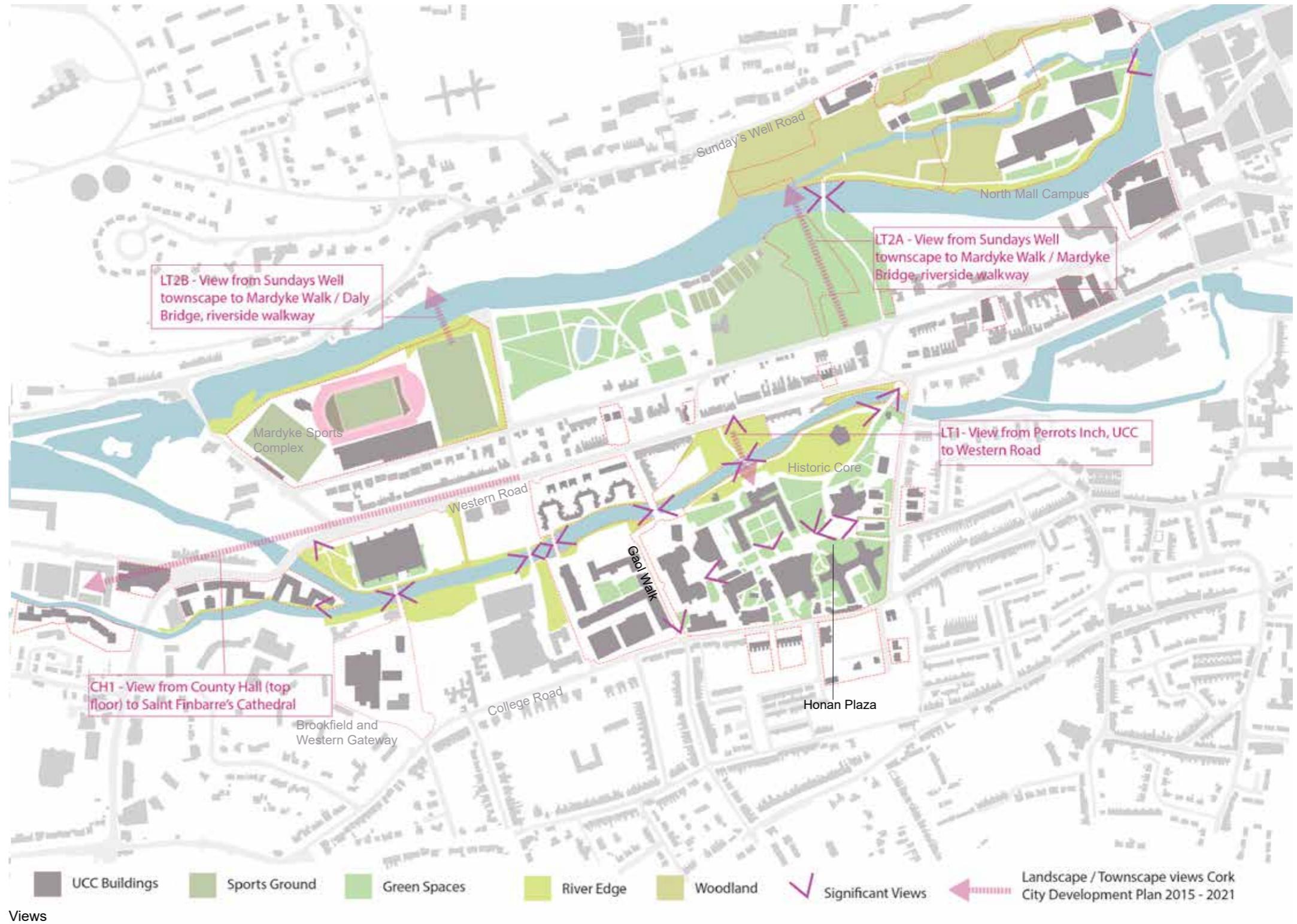
UCC Main Campus - Views

There are many picturesque views from the river-crossing bridges, in both east and west directions.

Within the main Campus there are framed views, East-West, between the Kane Building and the Honan Chapel, as well as along the Gaol Walk to the north.

From the North Mall Campus, the views are along the river towards the city centre.

Cork City Development Plan has also set out a series of protected landscape / townscape views from the main campus.



UCC Main Campus Entrances / Connections

The entrances to the main campus are located on College Road, Donovan Road and Western Road, with the North Mall campus connecting to the city centre.

Central Entrance Areas:

- Main entrance Gate - Western Road
- O'Rahilly Building entrance – College Road
- Boole Library entrance – College Road
- North Mall Entrance – North Mall

The main entrances are all framed suitably and gated. Many of the secondary entrances facilitate a sense of easy access to the adjacent residential areas and to the wider city.

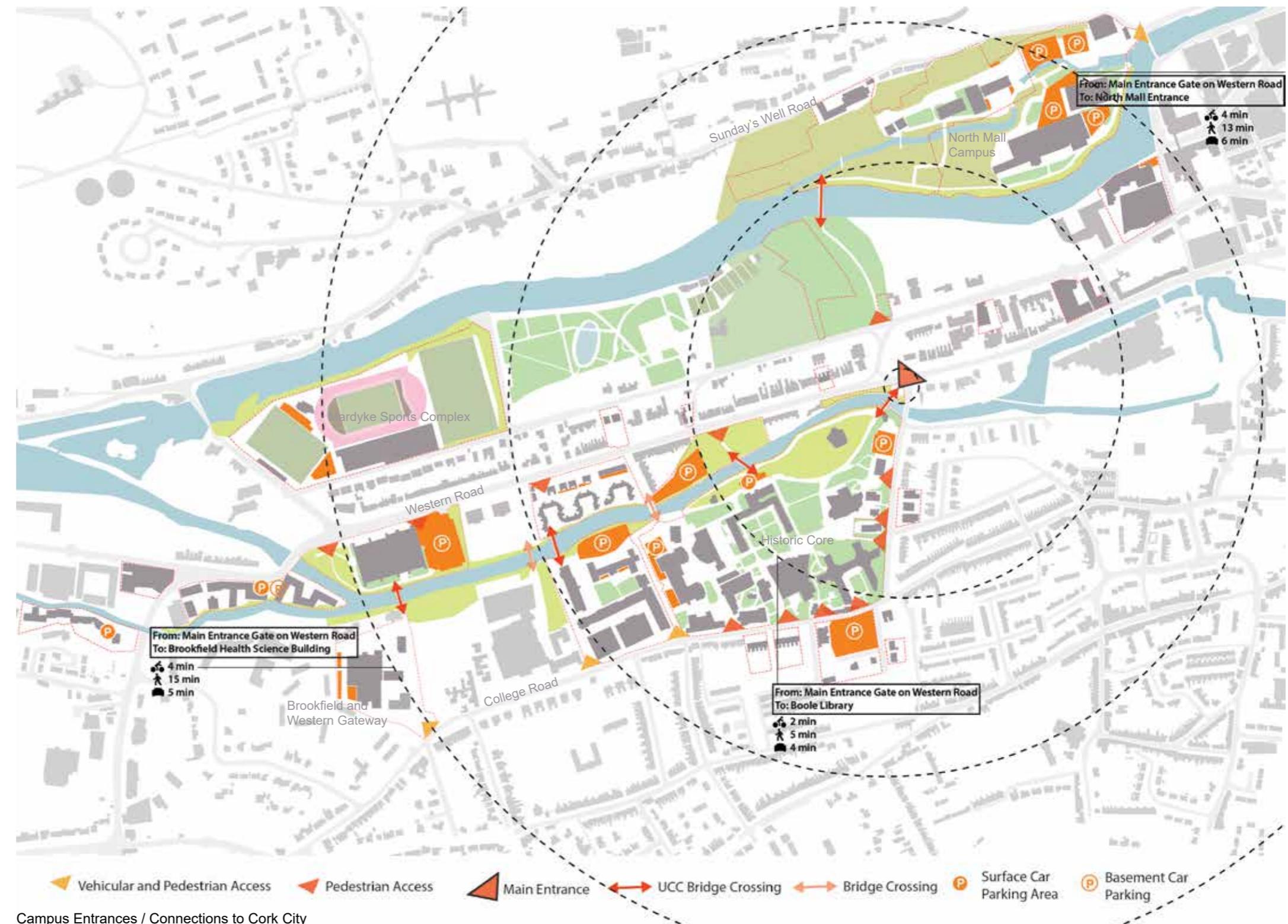
To increase awareness of the North Mall Campus and improve its connectivity to the south of the campus it is an objective to enhance the pedestrian link between the main entrance gate on Western Road and the entrance to the North Mall Campus from the Mardyke Bridge.

Walking Times

The campus is entirely walkable and journeys within the dotted radii are no longer than 15 minutes.

Parking Areas

There are currently a limited number of car parking zones on the main campus. The larger car parks are adjacent to the Western Gateway Building, in front of the Áras Na Laoi, on College Road and on the North Mall Campus.



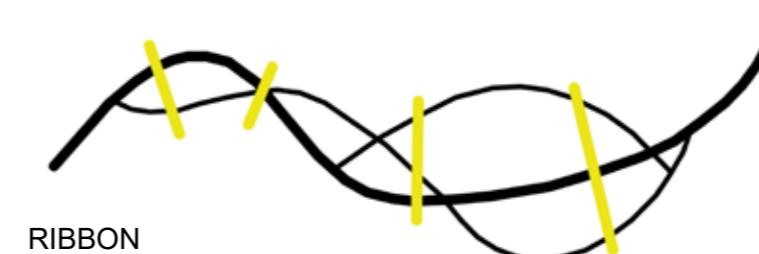
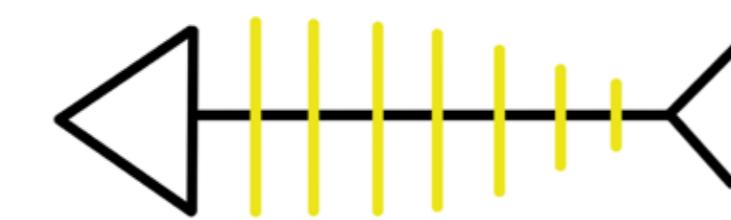
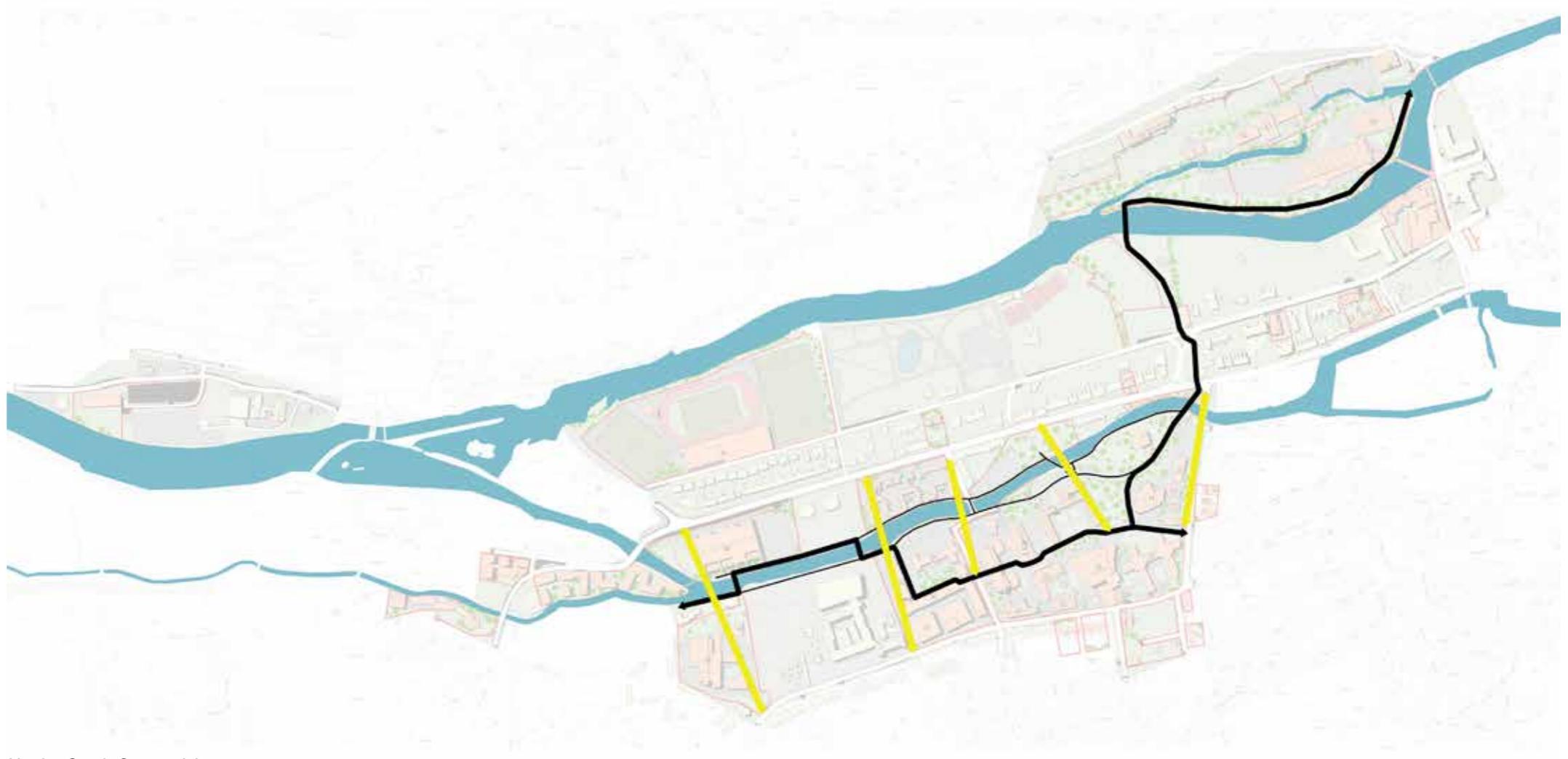
UCC Main Campus North - South Connectivity

The strong east-west pattern of movement and spaces across the Main Campus is identified as a significant spatial characteristic. Running parallel with the river, it allows easy connectivity to other green spaces, and to civic space along the valley floor, notably the banks to the river, Perrott's Inch, and Fitzgerald Park.

North-south connectivity requires more effort – dealing with crossing the river and level changes as the valley rises towards the edges. Open spaces further north and south in the city do not connect as well to each other, or to the river, as those along the valley.

The solutions at the main campus are evident, primarily in the elegant bridges; most recently the Cavanagh Bridge (2018) connecting Perrott's Inch with the lower grounds.

The physical and visual permeabilities of the main campus in the north-south orientation therefore are important factors in the landscape structure.



The form of the 'spine' within the Historic Core is a fitting description of the linear route which connects some of the main open spaces: The Quadrangle and the Amphitheatre. On a larger scale, the routes in to and through the campus meander like a flowing ribbon, linking the mosaic of individual spaces.



9. UCC Masterplan Considerations

UCC Main Campus - Cycle Infrastructure

At present there is approximately 100 km of cycling infrastructure in the Cork Metropolitan Area, while there has been significant improvements the cycle paths do not connect in a coherent way to form a network for the city.

The streets surrounding UCC are some of the most used for cycling in Cork City. The streets are narrow and dominated by car usage.

On Western Road a one-way cycle path in the eastern direction connects to the city centre, while the low speed nature of College Road and Gaol Walk will accommodate cycling in the western and eastern direction and across the campus.

There are several Bike Stations around Western Road area with plans to expand the scheme further in the area.

Bicycle parking is provided throughout the campus, with additional spaces planned with each expansion project.

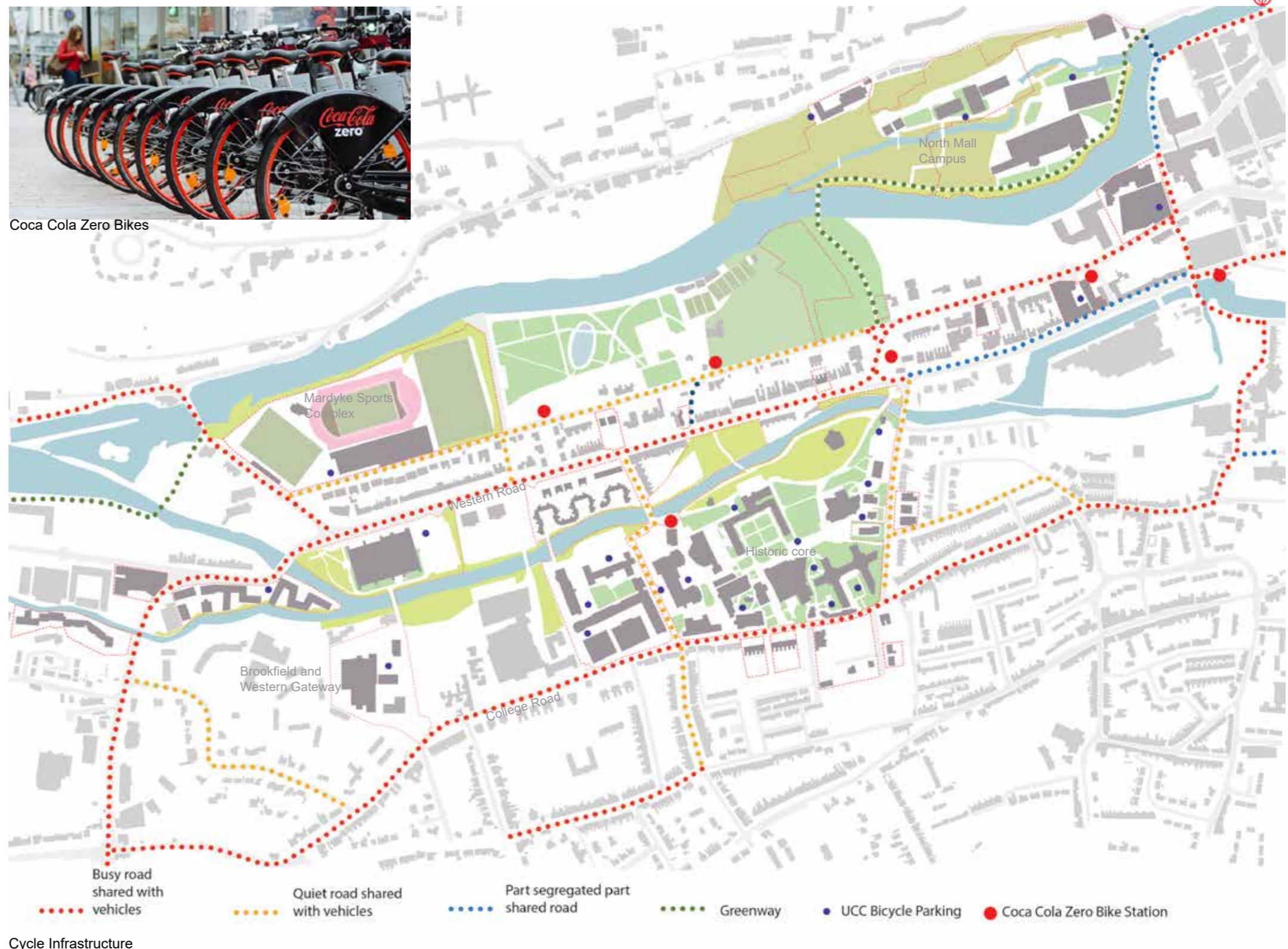
City Centre Connectivity

The City Centre is only a 5-10 min bike ride and a 15-20min short walk from the main campus.

The City Centre is also closely linked to the bike rental scheme with numerous stations in the areas of:

Cork Centre for Architectural Education
Lapps Quay
Union Quay

There is also a bike station at the train station and several located around the Main Campus.





UCC Main Campus - Public Transport Infrastructure

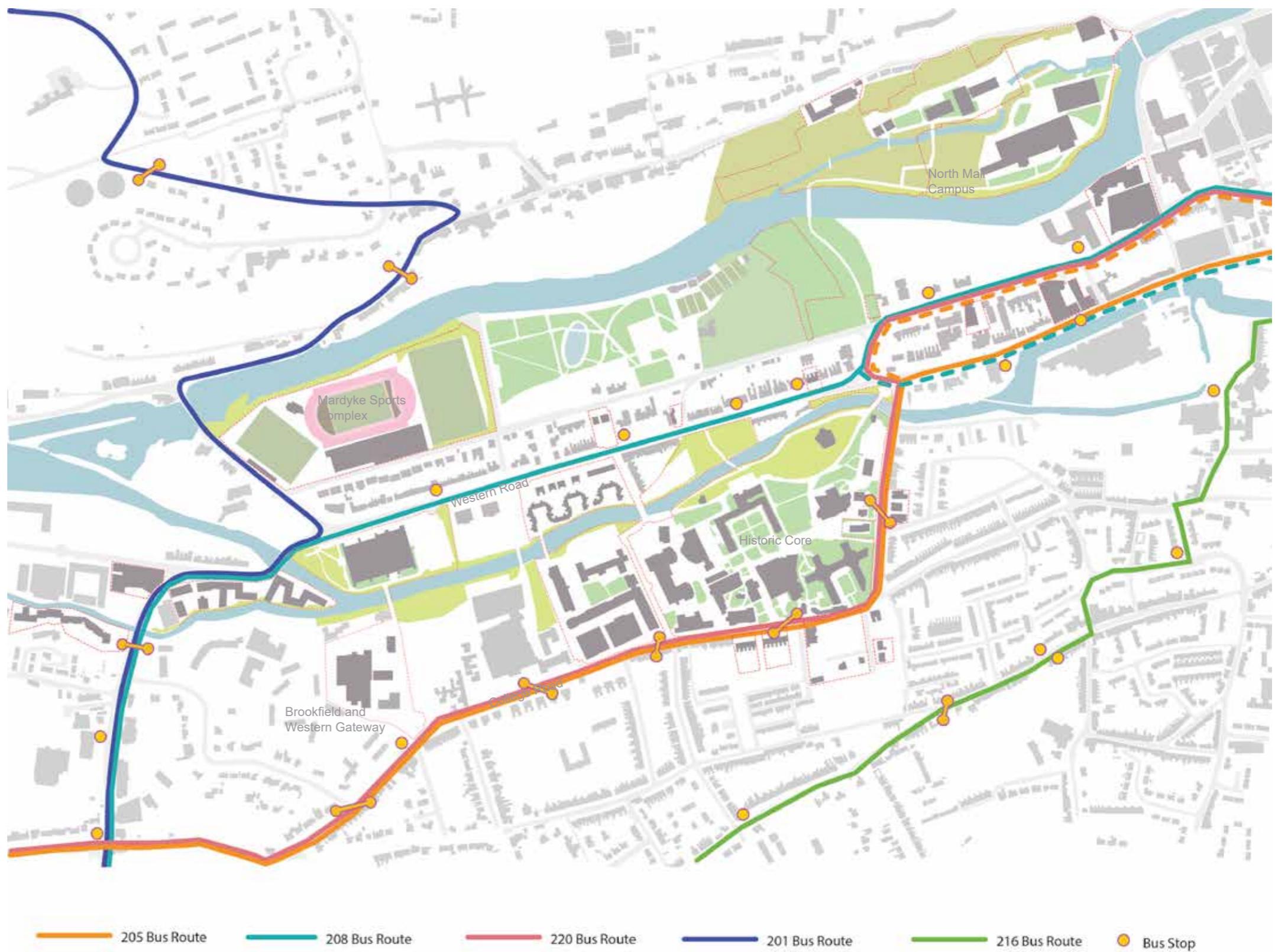
UCC encourages all their students and staff to use public transport and was the first university in Ireland to operate its own Park + Ride scheme.

At present there are three car parks available for the Park + Ride:

Pouladuff
Dennehy's Cross
Black Ash

Shuttle buses operates to and from several locations on the campus.

The public transport infrastructure surrounding UCC primarily consists of five bus routes - 201, 205, 208, 220 and 216. These run at 10 - 15 minute intervals. They are mainly used for connecting to locations outside the city centre or for commuting between student accommodation around Victoria Cross and the City Centre Campus locations.





UCC Main Campus - Building Heights

Buildings are lowest in the older historical character area and range from 15-20m in height generally.



Kane Building - Scale on the campus

