

University College Cork Green Flag Reassessment Report September 2023

UCC Green Campus

A “Student-Led, Research-Informed and Practice-Focused” programme driving the transition to sustainability on campus and in the community.



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Chapter 1: About UCC & Sustainability

Founded in 1845, University College Cork (UCC) is one of four constituent universities of the National University of Ireland. UCC students embarked on the Green Campus programme 16 years ago and UCC has since become a global leader in sustainability best practice. UCC has continuously improved its environmental performance despite a substantial growth in student numbers and the inclusion of new buildings. Sustainability at UCC is “Student-Led, Research-Informed and Practice-Focused” and this whole institution approach has seen the University achieve almost 40 awards, ratings, and rankings for sustainability including:

- Sustainability Institution of the Year (International Green Gown Awards, 2023),
- Green Gown Sustainability institution of the year 2022 (across Ireland and the UK),
- the first university outside North America to be awarded a Gold STARS rating from the Association for the Advancement of Sustainability in Higher Education,
- PWC Sunday Business Post Most Sustainable Large Organisation 2022,
- 9th globally in the UI Green Metric World University Ranking of sustainable universities
- the first higher education institution in the world to achieve ISO 50001 certification for energy management,
- A recipient of the Times Higher Education DataPoints Merit award,

(The full list is provided in Appendix A).

The recognitions listed above have been achieved through a commitment to sustainability that spans the breadth of UCC’s activities, which has its origins in the efforts of individual students and staff who have been driven to take action. Collective actions have been realised through top-down and bottom-up support. Climate action and action for biodiversity loss is deeply embedded in the fabric of UCC’s ethos, and much of this dedication originated in, and continues to be driven by, the efforts of UCC Green Campus Committee. In 2022, UCC was the first University in Ireland to establish an Office for Sustainability and Climate Action. The Office has four staff, including a “Green Shoots Coordinator”, whose role is to support student engagement in sustainability. In 2023, the University’s Leadership Team established a subcommittee on Sustainability and Climate Action, which is chaired by the President. The Green Forum continues to sit twice per year and is chaired by the President and the Director of Buildings and Estates. An Associate Vice President for Sustainability has also been appointed. Further information on the processes and structures related to sustainability in UCC is detailed in **Chapter 9. Ensuring Continuity**.

UCC’s sustainability ambitions are detailed in UCC’s Sustainability and Climate Action Plan (2023-2028) which supports UCC’s overall Strategic Plan (2023-2028). The latter commits the University to “Radically reform our practices and use of space and technology to meet our ambitious sustainability and climate action goals”. More detail on the Sustainability and Climate Action Plan can be found in **Chapter 4. Action Plan**.



SDG TEACHING TOOLKIT

developed and rolled out in collaboration with students and staff

ESTABLISHED NEW

Green Shoots

To engage students with Sustainability and Climate Action



PLASTIC FREE UCC

UCC cafes, catering and restaurants remove all disposable cups and plastic bottles



Scope 1 & 2 Carbon Emissions reduced by 21%



SINCE 2019

Total waste tonnage reduced by 40%

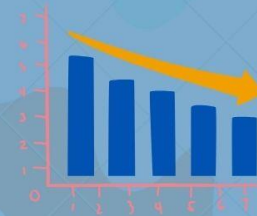
Total water use reduced by 44%

3

Living Laboratory funding rounds with 9 projects funded to date



Sustainability Criteria included in all tendering



NAMED

MOST SUSTAINABLE

University in the World 2023
Green Gown International Awards

Fig. 1. Highlights since last assessment

Chapter 2: The Green Campus Committee

The committee is the driving force of the Green Campus programme and oversees its operation and progress. The Green Campus Committee at UCC is built on those foundations. The exact mode of operation, however, is continuously evolving to ensure the successful and efficient running of the committee. UCC's Green Campus committee is co-chaired by the Student Union Communications and Engagement Officer and the chairperson of the Green Campus committee. These positions are mandated within the constitution of each entity. The Societies President is also a member of the committee so that there is a link with more than just one society. In 2017/18 an official constitution was drawn up for the committee and this was reviewed and updated in 2023.

The committee links into the wider sustainability structures in UCC as seen in **Fig 2.** and further detailed in **Chapter 9. Ensuring Continuity.**

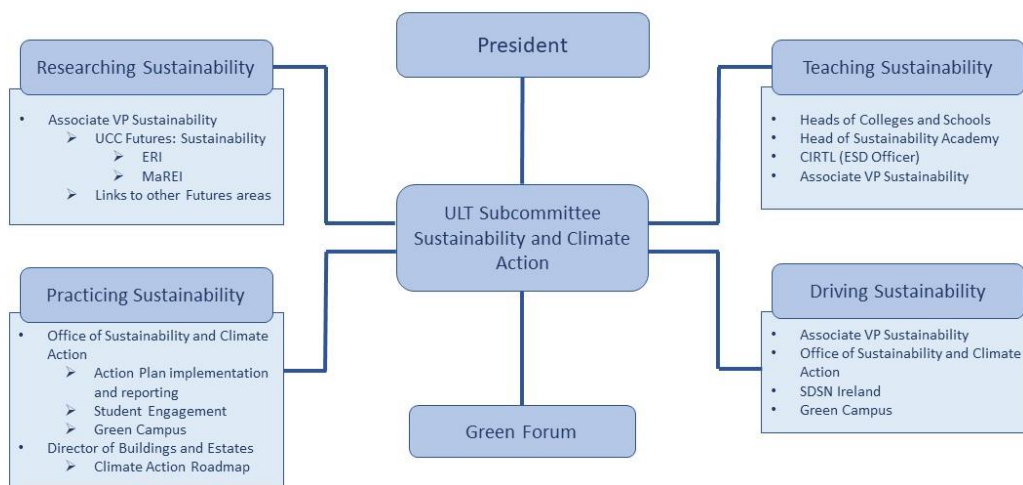


Fig 2. Sustainability Structure in UCC.

In September 2019, the Committee joined in the global Climate Strike and UCC staff supported our students by convening on the Quad to be addressed by both the UCC Deputy President and Student Union President. In March 2020, UCC celebrated the 10th anniversary of becoming a Green Flag Campus by inviting schools from across Cork City and County to campus to undertake workshops and events related to our green flag programme. The highlight of the day was when both the primary school students, and our own Green Campus students addressed all those attending at a ceremony in the Glucksman Gallery. They spoke of their hopes for the future all those in attendance, including the President and Deputy President, were moved by the remarks of these young activists.



Fig 3. Illustration from workshop with Green Schools committees as part of 10-year celebrations.

2.1 Impact of the Covid pandemic on student engagement

The Covid-19 pandemic had a huge impact on student engagement in sustainability. Lockdowns meant that committee members could not meet in person and student life changed completely. Many students experienced significant anxieties related to the pandemic and lack of social interaction, and the impacts of this are still being felt. Nevertheless, the Committee carried out a series of new environmental and educational actions within this period.

In 2021, student Mark Falvey led the Committee in establishing the first national Green Week, to be run across all Green Flag campuses in Ireland. A total of 21 events took place, detailed [here](#) including UCC's Walk 5, Pick 5, Tag 5 Challenge encouraged socially distanced litter-picking. Mark also led the first UCC Build Back Better Climate Assembly, which led to the creation of UCC's Build Back Better report. The assembly saw subject matter experts present to the UCC community on each of the themes of Green Campus programme. Staff and students were then invited to have their say on how UCC could work to be more sustainable. A guide was also produced, outlining how to run a climate assembly for other universities. The outputs of the Climate Assembly directly contributed to the production of UCC's Sustainability and Climate Action Plan (2023-28), detailed in **Chapter 4. Action Plan**. A further Climate Assembly was organised in 2022. More details on events organised by the Committee can be found in **Chapter 6. Informing and Involving the Campus and Wider Community**.

2.2 Challenges

Some challenges associated with running an efficient and effective Green Campus Committee in UCC have included:

- Difficulty ensuring continuity and adequate handover including for example email and social media logins.

- Lack of coherent focus and pursual of tasks due to the different backgrounds and interests of individuals involved
- Lack of accountability and initiative for general members
- Low or inconsistent attendance at meetings
- The challenge of understanding the complex structure of higher education and the way in which sustainability has evolved over the years.

In addition, while mandating the Student's Union to have a role on the Committee is helpful in terms of continued student engagement, it also presents the risk that the Committee might not be prioritised under certain individuals. The constitution drawn up in 2017/18 did much to alleviate a lack of clearly defined committee roles. However, debate around the body of the constitution, later referred to simply as "terms of reference," led to delayed action and routine committee meetings in 2022/23. The finalised terms of reference (2023) are attached in Appendix B.

Chapter 3. Environmental Review, Monitoring and Evaluation

3.1 Waste

The original impetus for the Green Flag programme at UCC was students' dissatisfaction with waste management on campus and the issue of waste and recycling continues to be a key leverage point for engaging both students and staff with the programme.

3.1.2 Single-Use Plastics

In 2017, UCC library management made a decision to ban all disposable cups from the building. This came after an audit of the bins in the building showed an extremely low recycling rate and that disposable cups were one of the main contaminants. Inspired by this action, the Students' Union launched a campaign calling on the whole University to go single-use plastic free by 2023. 8,000 students signed a petition, which was presented to then President Professor Patrick O'Shea.

In 2019, two Green Campus Living Laboratory projects focused on the issue of plastic waste and its reduction. Aoife Hughes, an MSc. student in the Department of Management and Marketing undertook an analysis of behavioural drivers and barriers to the campus going single use plastic free, while Dr Niall Dunphy (CPPU) carried out a demonstration project with reusable lunch boxes in collaboration with the NGO Voice Ireland.

Unfortunately, the Covid-19 pandemic impacted significantly on much of the progress made in removing disposables. The belief that disposable items and single-use plastics were safer than reusables pervaded a lot of public discourse in relation to the pandemic. Nevertheless, in 2022, an action group was established under the direction of the University's Restaurant Committee and Green Forum and a Single-Use Plastics Free Policy was developed and put the University Leadership Team for approval. The Policy was approved in May of that year with a stated aim of

being single-use plastic free across catering operations by January 2023. The policy specifically called out plastic bottles, cutlery, and all disposable cups (including those that are biodegradable). See Appendix C for full details of policy.

In order to implement this ambitious policy, the University worked with both KSG and the Student Centre to support them in making the transition to crockery and or reusable takeaway only. Measures implemented across campus included:

- Installation/upgrading of 34 water refill stations
- Installation of FreshCup mini dishwashers for staff and students to sanitise their own individual reusable cups.
- Implementation of the 2GoCup Deposit return scheme in outlets across campus, with a deposit of €2 on each cup.
- Installation of a soft drinks refill machine in the main restaurant.
- A campus wide communications campaign including posters and social media posts informing staff, students and visitors about the changes.

Conferrings and events presented a unique problem as large groups of people congregate in small areas, most of whom are unlikely to bring their own cups/bottles. At the start, KSG procured a lightweight reusable cup that could easily be transported across campus to different sites, however it was found that people tended to take the cups away with them and so this was not sustainable economically or environmentally. In the end, the decision was taken to revert to crockery for all events. Likewise, large student events taking place in the Student Centre would traditionally have used an enormous amount of disposable plastic cups. Fresher's Week 2023 was the first where all on campus student event were single-use plastic free.



Fig. 4. UCC President and SU launch Plastic Free UCC



3.1.2 Food Waste

In relation to Food Waste, in 2023 UCC's contracted food service provider KSG began using the "Positive Carbon" tool in their kitchens. Positive Carbon is a total food waste monitoring solution designed to register different food waste types being disposed of. A number of changes have been implemented in UCC kitchens based on the findings of this exercise, for example the staff restaurant now serves the same food as the main restaurant in order to keep waste to a minimum. The first 6 months of this initiative has seen a reduction of 18% in food waste across KSG outlets.

3.1.3 International Office Swap Shop

In 2019, with funding from the Green Campus Living Laboratory, Natalie Byrne and Suzanne Buckley of UCC's International Office established a Swap Shop for visiting students. Two thousand international students arrive at UCC each semester and accumulate a lot of stuff over the term. From rain gear to camping equipment, duvets to Halloween costumes, these items were not going back home with the students but instead being disposed of. The International Office put out calls for donations from UCC staff throughout the year on their Facebook account and on WorkVivo. Most items are accepted once they are in good condition, including bedding, soft furnishings, pillows, kitchen items and toiletries. Students pay a fee of €3 to access the items and the funds raised are donated to a local charity. The Swap Shop is hugely popular, with one recent event seeing all items snapped up in just thirteen minutes. This demonstrates the appetite for such events amongst students and a key action in UCC's new Sustainability and Climate Action Plan (2023-28) is to develop a similar type of event for the general student body, in collaboration with UCC Campus Accommodation.

3.1.4 Sustainable Print Management Policy

In September 2019 a new Sustainable Print Management Policy was implemented at UCC. The new printing system saw a transition from old desktop printers to new, more efficient, networked multi-function devices. "Follow-me printing" reduces the likelihood of printing by accident. The new managed system saw UCC move from "consumer" to "user", a key component in transitioning to a more circular economy. These EQ80 machines have reached end of contract with other customers (after 3-5years of use) and are then taken to Germany by Canon to be disassembled and rebuilt. The process maintains the highest quality control standards at up to 80% lower carbon emissions compared with supplying brand new printers. The new print contract and Sustainable Print Policy work together to centralise and streamline printing in order to reduce waste, and energy consumption. The whole process involved many months of preparatory work by the Procurement Office, IT Services, and Buildings and Estates. The new policy was quickly embraced by the UCC community, who once again demonstrated their strong commitment to sustainability on campus.

Also in September 2019, UCC Graduate Studies Office announced that research thesis submission was going digital. Research graduate students can now submit their theses online, via google docs. The electronic process replaced the old paper-based practice which required each research student to submit two soft-bound theses for examination and one final hardbound thesis to the Graduate Studies Office. The new process saves the students €230 each in printing costs and approximately 400,000 sheets of paper a year.

The Covid pandemic had a significant, and positive, impact on printing behaviours amongst staff and students with the majority of assignments now submitted electronically.

3.1.5 Results

The impact of the plastic free UCC initiative has been staggering. To date, the University has reduced its consumption of disposable cups by almost one million units. Plastic bottle consumption has fallen by over 70,000 units and the Freshcup machines have been used over 27,000 times.

Overall UCC's total waste tonnage has reduced dramatically in the post-Covid years. From 2013 to 2019 the total amount of waste collected from campus sites over the course of a year remained above 800 tonnes. In 2022, the first year that operations fully returned post-Covid, 500 tonnes were collected. This trend looks set to continue into 2023; the first seven months of the year saw 294 tonnes of waste collected in total. There is no single obvious cause for this, which indicates that reductions have occurred across all waste categories. Food waste, for example, has been reduced by almost 20%. In addition, the impact of UCC's new printing policy has been significant. In 2019, the pre-tender print volume was measured at 18.7 million prints per year. This has now fallen to just under 5 million. This has seen a direct impact on waste tonnages; in 2019, confidential shredding accounted for 93 tonnes of waste (almost 9% of total waste), in 2022 this number was 12 tonnes.

UCC SUSTAINABLE PRINT POLICY

In 2019 our Procurement Office tendered for a managed printing service with sustainability as a key service deliverable.

The positive environmental impact of the tender approach, coupled with value for money, just shows what can be achieved when we put sustainability to the fore.

Tender Outcome:
The print management service was awarded to Cantec Ireland who:

- Will help realise an 80% reduction in the number of printing devices across the University.
- Only install reconditioned printing devices.
- Set all printers to duplex and mono printing settings.
- Deployed network print management software to give insight into UCC's printing consumption.

Sustainability Impacts:
Through the new service, we have:

- Avoided the manufacture of new printing machines.
- Reduce our CO2 emissions attributed to printing by 60%.
- Eliminated unnecessary printing through user authentication.
- Reduced the energy consumption of printing by 50%.
- Inspired Cantec to move to electrification of their fleet.

Our Printing Policy:
Developed by the Procurement Office our new policy promotes:

- Printing only when no practical alternatives exist.
- Duplex and mono printing as the default settings.
- Single source service provider for all printing devices.
- Recycling program for used toners.
- Visibility on the Universities printing needs and quantities.
- Use of automated processes to further reduce the need for printing.

Thank you!
A big Thank You to the procurement office, IT services, Cantec Ireland and our staff who together ensured the successful roll out of our new printing policy.
You can read more about the project [here](#).

Fig. 5. Poster detailing UCC Sustainable Print Policy

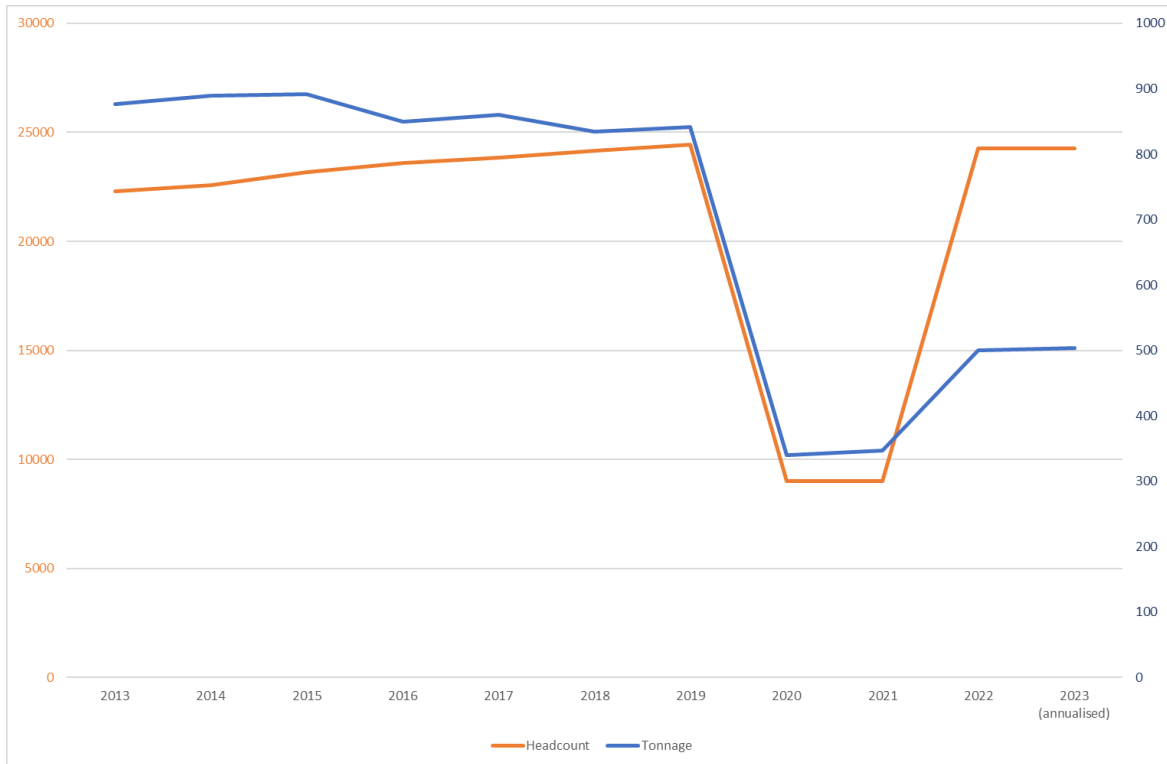


Fig 6. Total waste tonnages and total headcount 2013 – 2023.

UCC’s total diversion of waste from landfill is currently at 96%. While the dramatic decrease in amount of waste generated is a positive, there is still more to be done in terms of recycling rates. UCC’s overall recycling rate for 2022 was 49%. This is well below the national targets for recycling. For the first 7 months of 2023, the rate was 57% and it is hoped that this demonstrates an improvement brought about by the removal of disposable coffee cups, a major contaminant in campus bins. With continued rollout of the binless office system and further removal of single use plastics we hope to continue this trend of improvement.

3.2 Energy (Scope 1 & 2 Carbon Emissions)

UCC was the first university worldwide to achieve the ISO 50001 standard for Energy Management and has been particularly successful in winning grant support from the Sustainable Energy Authority of Ireland (SEAI) for energy saving initiatives.

3.2.1 The Saver Saves Scheme

UCC Saver Saves scheme is also the first of its kind in Ireland, devolving power and responsibility to building users to drive energy savings within their areas and reinvest savings in environmental projects. 13 of UCC’s 130 buildings are responsible for using 87% of the university’s €4 million energy budget. These Significant Energy Users (SEUs) are targeted with the “Saver Saves scheme”. With this scheme, the energy budget for the SEU is devolved to that

department/school at the beginning of the financial year. A team is established within the department/school to drive the scheme locally. With support from the university's energy manager, projects are implemented to improve the efficiency of the building. Any financial savings made remain with the department/school to be reinvested in further environmental projects. This scheme had the effect of devolving power to the people who spend most of their time within the building and giving them the responsibility to make decisions related to how they would reduce their consumption. By 2020, over 300,000 KWh of electricity use had been avoided thanks to the scheme.

The Covid pandemic also had a huge impact on energy consumption. While overall consumption fell dramatically thanks to the lockdown, the requirement for increased ventilation on returning to campus resulted in an increase in some buildings. However, the lockdown also provided the opportunity to assess, in more detail, the main consumers of energy. In AY 2019/20 our weekly electrical consumption reduced by 40% while our natural gas consumption, used to heat our buildings, reduced by over 50%. By the end of the academic year the University reported that the total energy load reduced by 11%, when compared to the 2018/19 Academic Year. This reduction in energy load is smaller than you would expect when you consider that campus was only at approximately 20% occupancy for much of the year. The WGB building was by far our largest significant energy user (SEU), followed by the Kane, Food Science & BSI. It is evident that research intensive buildings, as well as data storage, are clearly our biggest electricity consumers.

3.2.2 Our Carbon Emissions

UCC, like all state bodies, is required under the government's Climate Action Plan to reduce absolute carbon emissions by 51% by 2030. UCC's scope 1 and 2 carbon emissions are reported annually to the SEAI. UCC's "Glidepath" as determined by the SEAI, details the total target carbon emissions across thermal and electrical energy for 2030. In March 2023, UCC submitted its Climate Action Roadmap to the government; the roadmap outlines how we will achieve the 2030 target and lists 23 projects ranging from improved energy efficiency measures to deep



Fig. 7. Example Switch off poster

retrofit programmes. The total cost of these projects is estimated at almost €30 million. The full Roadmap is provided in Annex Appendix D.

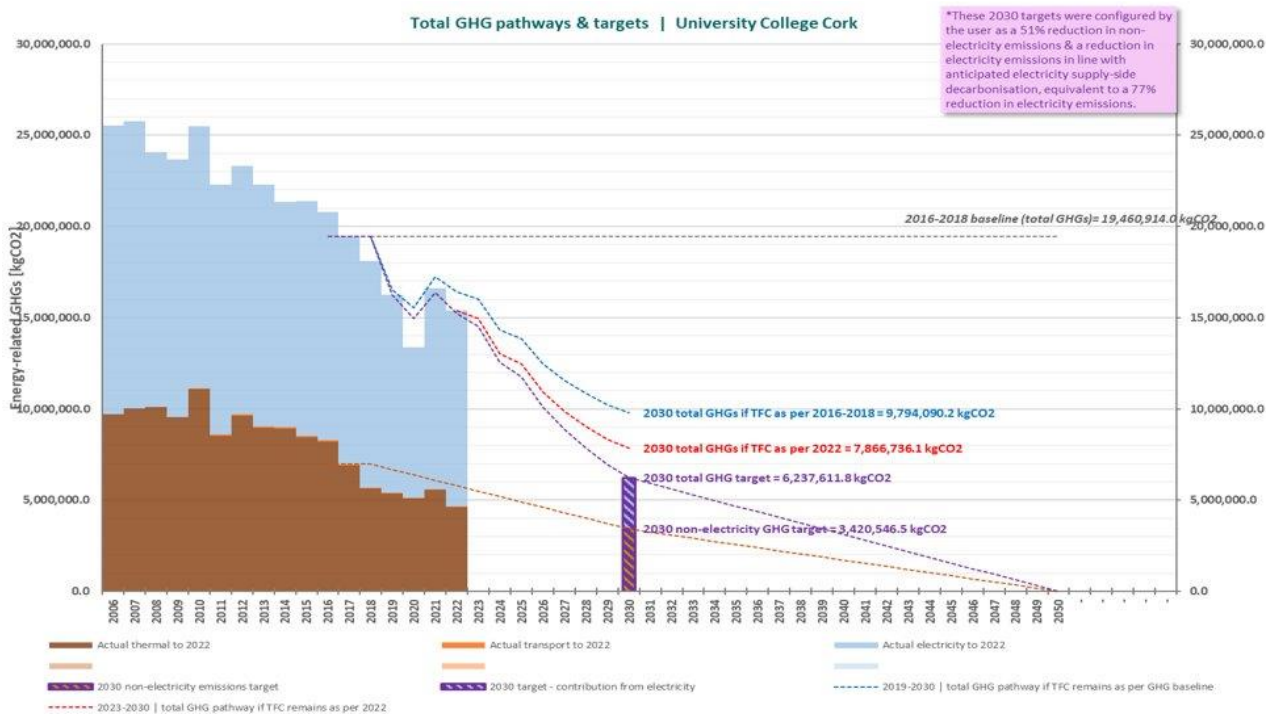


Fig. 8. UCC's Glidepath to 2030.

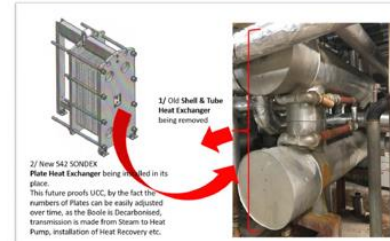
The University has been successful in receiving Pathfinder funding from the government for two large scale decarbonisation projects. To date €4.4 million has been secured. The O’Rahilly Building Heat Pump project was completed in 2022 and will see that buildings energy related carbon emission reduced by 40%. The Enterprise Centre Deep Retrofit is currently underway and will see that the building’s emissions reduced by over 60%. Decarbonisation projects are currently underway in the Pharmacy Building and the Brookfield Health Sciences Building. A number of others are at design stage. Lighting and Heatpump upgrades are being undertaken across the estate, while some of the smaller “houses” along College Road have had solar PV installed. The approach across the campus is to move from gas heating to electricity or more renewable sources of energy. As a “Living Laboratory”, different approaches are being trialled on different sites to determine which will work better for the campus.



ORB Heat Pump



Carrigside Upgrade



Steam Exchanger Upgrade



Tyndall Phase 3



Kane Chemistry Upgrade



Dryer Upgrade

Fig. 9. Example energy and carbon projects completed to date.

In 2021, UCC's Buildings and Estates team picked up an "Energy in Buildings" award from the Sustainable Energy Authority of Ireland for the Tyndall phase three project which has delivered Ireland's oldest A-rated building. This project demonstrates how universities can act as testbeds for solutions to the climate crisis, demonstrating innovative and effective solutions.

UCC were also successful in being awarded Erasmus Funding for a European wide project: "Eco-Schools as New European Bauhaus Labs" which will see the Enterprise Deep Retrofit project used as a demonstration of a Living Laboratory for deep decarbonisation and community engagement.

3.2.3. Buildings

UCC's estate comprises of 295,000 m² of buildings, 86 hectares of grounds and property and approximately 149 individual buildings. Guided by our internal design policies and guidelines as well as current statutory building regulations the University requires that all new buildings and significant refurbishment projects meet the Near Zero Energy Building (NZEB), achieve a minimum Building Energy Rating of A3 and a BREEAM Excellent Standard. From conceptual stage to construction and building operation Sustainability is considered at every phase in the project. The orientation and form of the building as well as the materials to be used are chosen at the concept stage and specified to give the most sustainable design for the purpose and location of

the building. Designers are also tasked with achieving and/or incorporating as many Passive House Institute principle as possible into the building design.

The new Student Hub Building, which was officially opened in May 2022, achieved BREEAM Excellent and was designed to maximise daylight and natural ventilation.



Fig. 10. Timber Frame installed in Mardyke

In July 2023, the Mardyke Arena's new Strength and Conditioning Squad Gym was officially opened. This 420m² gym serves as a pilot project for low carbon design and construction. During the design process every material was challenged from a cost and carbon aspect. A proprietary Low Carbon Analysis software was used to compare building fabric options to minimise embodied carbon in the construction. The roof structure is a lattice of glulam beams combined with a cross laminated timber (CLT). The new building exemplifies how digital technologies like Building Information Modelling (BIM) and LCA can significantly enhance sustainability within the construction sector.

From the outset, much consideration was given to the design of the building fabric, and a life-cycle analysis of the embodied carbon was conducted. The project was delivered onsite in just 6 months. Given the approach was not standard for these types of buildings in the area, it required significant interaction with the fire officer to obtain certification; in the end all structural timber had to be fully treated and immersed in resin. The building maximises natural light and ventilation, has CO₂ and occupancy control and a heat recovery fresh air unit with local heat pump controls. The building has less than 40% of the embodied carbon of a "traditional" building and has been an eye-opener for the Capital Projects team in terms of future directions.

3.2.4. Results to date

To date, the University has seen a 24% absolute reduction in energy use and a 21% reduction in scope 1 & 2 CO₂ emissions. There has been a 45% reduction in energy use per m². In addition, the overall percentage of electricity within our energy mix continues to grow, thanks to the continued installation of heat pump technology across the estate.

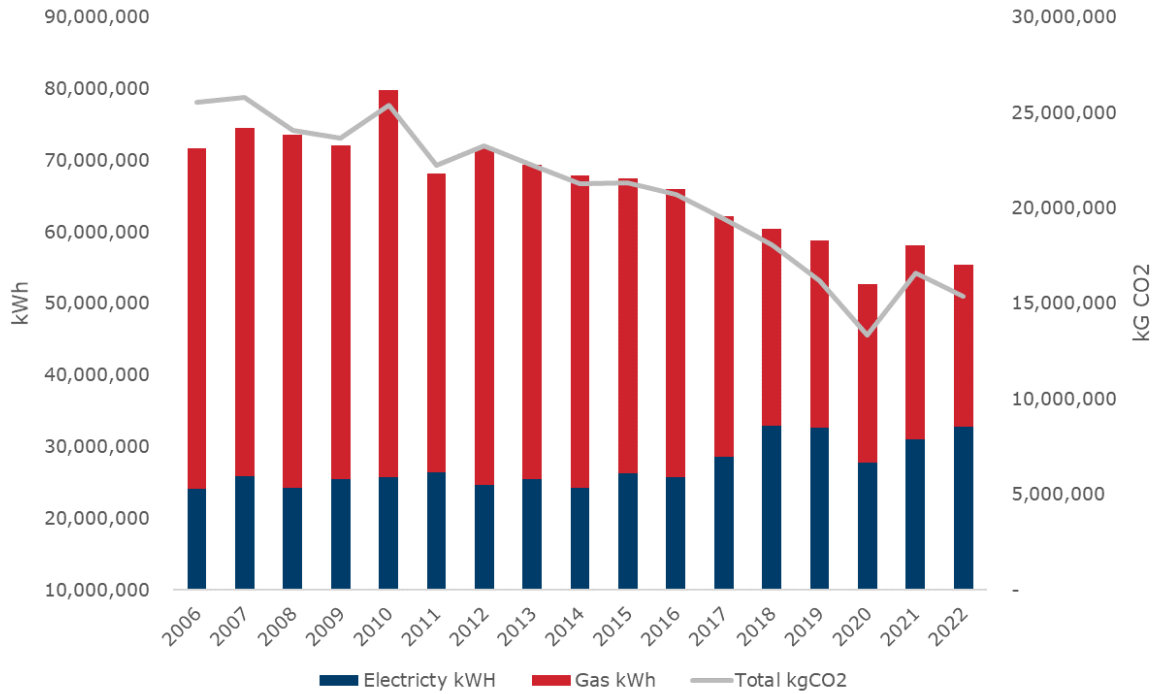


Fig. 11. Total Scope 1 and 2 carbon emissions.

3.3 Water



In 2019 the Estates office became a Certified Water Steward with the help and guidance of Irish Water's "Water Stewardship Programme". Through the program the Estates office developed a water charter, outlining 12 priority areas for the University to take action on. Actions range from creating awareness of water conservation across the University, installation of additional water metering and improved operational controls across the Estate. The main consumers of water are the cafes, restaurants, toilets systems, drinking fountains, research labs and deionized water generation plants. In 2019, a comprehensive study of water usage across campus was undertaken. This study indicated that out of 102 separate water accounts, 6 consumed over 81% of our annual water use. A focus was then placed on mapping out the water users in those buildings and implementing water conservation measures. Some initiatives completed include:

Fig. 12. Sample water saving poster

- Embedding water conscious behaviour in the campus community through education & awareness.
- Upgrading to water efficient facilities including sensor technology & dual flush.
- Installation of water flow restrictors on tap outlets and sensor technology.
- Comprehensive underground leak detection & remediation program.
- Installation of metering and alarming systems to identify any leakage, excess consumption.
- Auto water shut offs to match building opening times.
- Use of grey water reuse systems for toilet flushing. For example, grey water from GSHP in the Western Gateway Building feeds WC Tanks with an average of 10m³ per day.
- Use of rainwater harvesting for toilet flushing, plant watering and use in glasshouse facilities.

In 2020, a new cleaning contract Bidvest Noonan was appointed. The supplier was tasked with incorporating an environmental & sustainability proposal into its tender (see Section 3.8 on procurement). Actions taken to date include switching to alternative mopping systems to reduce water and chemical consumption, and waste generated. A chemical-free cleaning system has also been adopted. The Tersano system converts oxygen from the air into aqueous ozone when infused with tap water to become a safe & effective disinfectant. The only byproducts of the process are oxygen and water.

3.3.1 Results



Fig. 13. Water savings across campus 2009-2022.

The measures implemented have seen a 38% absolute reduction in water usage based on a 2019 baseline.

3.4 Green Labs

As mentioned, a small number of spaces use a disproportionate amount of both energy and water. These tend to be the more intensely used spaces including research laboratories. This prompted the Green Campus team to establish a “Greening Labs Programme”.

There are two primary accreditation systems available for greening laboratory practices, namely ‘My Green Lab’ (A US based accreditation body) and the ‘Laboratory Efficiency Assessment Framework (LEAF)’ (Developed by ‘Green Lab Associates’ in the UK). UCC took the approach of trialling each system in different labs to with a view to standardising the greening of

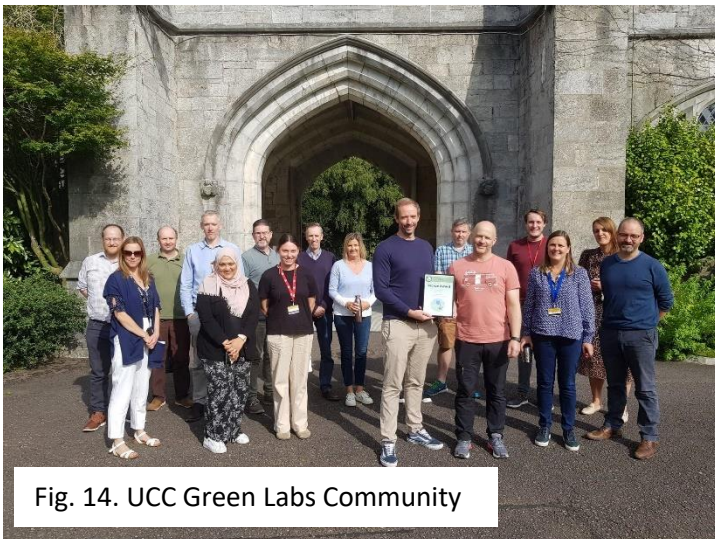


Fig. 14. UCC Green Labs Community

research facilities across UCC in the coming and ensuring that a whole institution approach is taken. Having completed the trial, a decision was made to use the LEAF system. LEAF is a self-assessment tool targeted for use at research, teaching, and medical labs. It was developed in University College London and is currently operational in 70 institutions across 12 countries. LEAF contains a variety of actions which enables lab users to reduce plastic, water, energy, and other resource usage. This in turn will help reduce the overall carbon emissions created by the lab in question and help to support an environment that champions quality research. There are 3 different levels of interventions labs can introduce to reduce their impact: Bronze, Silver, and Gold. Each step is increasingly more ‘sustainable’. One benefit of the LEAF programme is it is multifaceted and covers not only direct environmental aspects (e.g. waste management, equipment efficiency, chemical management etc.) but also targets areas such as business travel, research quality and procurement.

The Green Labs community in UCC has representation from the Kane, Pharmacy, BioSciences, Western Gateway, and Food Science Buildings. In 2022, a [Green Labs guide](#) was created covering areas such as energy, fumehoods, freezers, waste, chemicals, and purchasing. Currently 5 labs have now been certified.

3.5 Biodiversity

UCC has four campuses on the western edge of Cork City (Main Campus, North Mall Campus, Western Campus and Mardyke Sports Campus), three slightly west of the city within Cork County (ERI Campus, Curraheen Agricultural Campus and Curraheen Sports Campus) and one approximately 97km south-west of the city (Lough Hyne Campus) totaling 74ha. Two-thirds of UCC's campus is green space and the campus encompasses treelines of a combined length of 2.3km, comprising more than 2,500 trees. An ecological assessment of UCC campus carried out between 2014 and 2018 highlighted the potential of the campus to facilitate the enhancement and protection of biodiversity at a local level. UCC's campus area encompasses a variety of habitat types, which cater for multiple species. [UCC's Biodiversity Action Plan](#) contains this information in full. The plan, created in 2018, includes a series of actions to take on campus to promote biodiversity.

3.5.1 "Pollinator-friendly" habitat

In 2018, the decision was taken to manage UCC's green space for biodiversity. A matrix approach was adopted, whereby green areas were assessed based on their main use type and then a decision taken on the mowing schedule. Many areas were left to become completely wild, while others were managed on a reduced mowing schedule. Only the main Quad and President's Garden are now maintained as traditional "lawns". UCC's wildflower meadow, established in 2018, supports a huge variety of wildlife. An informal bioblitz of the area as an activity of the Greenshoots Programme (see "Environmental Citizenship" section) carried out in 2023 found the following species: Ox-eye Daisy, Red Clover, Plantain, Cock's-foot grass, Knapweed; Black Meddick; Yellowrattle; Meadow Buttercup; Creeping Buttercup; Yarrow; Poppy; Germander Speedwell; Ragged Robin; Cut-leaved Cranesbill; Cowslip; Vetch; Thistle; Broad-leaved Dock; Hemlock

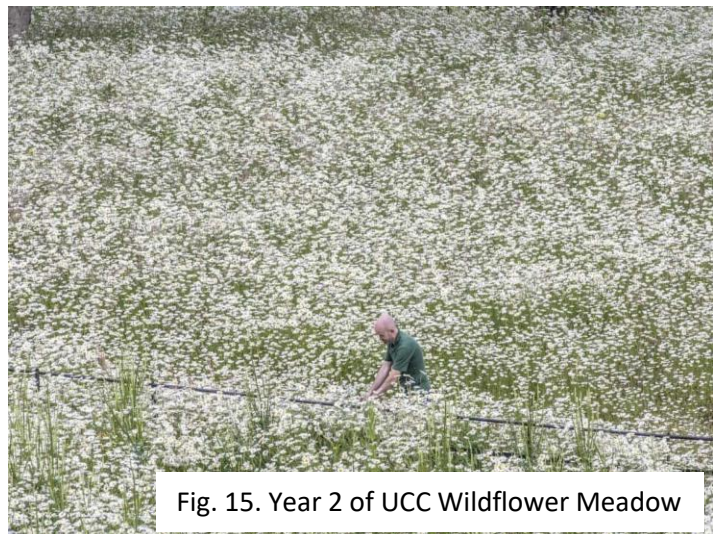


Fig. 15. Year 2 of UCC Wildflower Meadow



Fig. 16. Signage employed in wild areas

(unconfirmed); Common Carder Bumblebee; Ladybird; Dandelion; Cleavers, and Barn Swallow. This diversity evidences the importance of no-mow areas, and areas cultivated for nature.

UCC's no-mow areas are not only good for pollinators; they are also drawing compliments from the public, highlighting a potential cultural shift in public perception of what defines beautiful green spaces in institutions such as UCC. Recently, a number of events have been organised to raise awareness on the issue of biodiversity on campus and also to contribute to the enhancement of biodiversity locally. These are detailed further in the "Greenshoots Programme," section below. In 2023, two new species were added to the list of UCC's recorded biodiversity. Discovered by Head Gardener John Murphy, they include Nettle-leaved Bellflower (*Campanula trachelium* - an endangered species protected by the Flora Protection Order), Greater Burnet Saxifrage (*Pimpinella major*), and Square-stalked St. John's Wort (*Hypericum tetrapterum*). The reaction to this no and low mow policy has at times been mixed. Some of the UCC and wider community have complained that the areas look "unkempt". The Green Campus team, and in particular the UCC Grounds Team have put significant effort into communicating the importance of this approach and over time it has served as a tool for deeper discussions around human-environment interactions.

3.5.2 UCC Open Arboretum

Under UCC's 2019 Living Laboratory programme, Drs Eoin Lettice and Barbara Doyle Prestwich received funding to develop UCC campus as an "Open Arboretum" and was officially designated as such by ArbNet in 2020. The UCC Arboretum has a collection of approximately 2,500 trees across the campus (c. 42 acres). There are approximately 120 different tree species in the collection. In 2021, the Open Arboretum team was awarded funding from Science Foundation Ireland for a new "Tree Explorers" project. Tree Explorers' makes use of the Arboretum to engage primary school students as well as adults with STEM topics. The primary school strand of the project has been specifically co-created with primary school teachers to target schools in communities at risk of disadvantage and social exclusion (DEIS schools). Engaging audiences with such living scientific collections has been shown to have significantly positive effects on educational attainment, mental and physical health, attitudes and knowledge of STEM subjects and careers, as well as willingness to engage in dealing with global challenges such as climate change and biodiversity loss. The Arboretum has since received two further SFI grants and has hosted 14 schools for tours and educational activities reaching approximately 600 children. The arboretum has organized approximately 18 talks and tours for various groups, with a particular focus on trees and STEM. The UCC Arboretum team has successfully engaged with over 2,000 people including a one day symposium on 'Delivering Sustainable Urban Forests'.

3.6 Environmental Citizenship

Facilitating and encouraging students' development as environmental citizens is an essential aim of the Green Campus Committee and UCC overall. Numerous environmental citizenship events

occurred between 2019 and 2023; these are detailed in the timeline of events in the “Green Campus Committee,” section above.

3.6.1 Eco-Grief

UCC’s Green Campus has been offering an Eco Grief program for staff and students since 2021. Our Self Care is Climate Care sessions are communal spaces for activists to break free from drama cycles and embrace emotional freedom in an empowered community. These spaces help to prevent activist burnout, expand self-awareness, and support deep restorative healing of ourselves, our communities and the earth.

UCC’s Eco Grief programme consists of monthly Meditation Sessions, Bliss Dance Workshops, Sound Baths and Foraging Nature Walks. These activities provide a space for students, staff, and climate activists in our community to share and listen with compassion to one another as we process and navigate the climate emergency. The goal is to help participants feel a little lighter, and energized and have a few new tools to manage their climate anxiety with guided, earth-based meditations etc. that can help you find peace and calm within yourself.

The monthly guided meditation sessions and mindful practices are suitable for beginners and offer a chance to relax, reflect and regenerate while the Bliss dances offer a trauma-informed somatic dance experience designed to support people to move through deep-seated and powerful emotions in a mindful and fun way, and also help build community relationships.



Fig. 16. EcoGrief series poster.

The Foraging and nature walks are held along the banks of the river to support students and staff to learn about and understand the ecosystem they are studying and living in while at UCC while the Guided Sound Baths offer a chance for a deep full-body relaxation to support activists calm their nervous systems and emotional stresses.

3.6.2 Graduate Attribute’s Programme and “Success it’s in Your Nature”.

In 2021 UCC Green Campus joined forces with the Graduate Attributes Programme to develop a Canvas Space for students on the theme of green space and wellbeing. "Success: It's in Your Nature" draws on expertise from across the university and years of collaboration between Green Campus and Dr Annalisa Setti in UCC's School of Applied Psychology. Success, it's in your nature showcases all the ways in which students and staff can engage with nature on our campus to enhance mental and physical health and wellbeing, enhance their academic and personal success

and build their graduate attributes and values. Dr Setti has also been collaborating with the University of Bologna to undertake survey of students in both campuses (UCC and UNIBO) and assess the impact of time spent in green space on their mental wellbeing and in particular exam anxiety. The success of this initiative then led to the establishment of UCC's Green Shoots Programme.

3.6.3 Greenshoots Programme

In 2022, members of the Green Campus committee and the Student Union applied for funding through the UCC Student Charges and Fees Forum for a new programme "Greenshoots UCC". The Greenshoots Programme was designed to engage students in pro-environmental actions and behaviours on campus, while cultivating a culture of nature-connectedness and reciprocity within the student community. Irene Ní Shúilleabháin was hired as the programme's coordinator in January 2023. Since then, Irene has organised a variety of events to promote and develop environmental citizenship amongst the UCC student community. Many of these events involved collaboration with either students or staff or both and have included:

- A mini-bioblitz (assessment of UCC meadow) which involved UCC students, staff and members of the public, and shone a light on the diversity of plants and insects found in the meadow
- A workshop on permaculture, which emphasises the importance of growing food in a way that promotes rather than hinders biodiversity
- A student-led biodiversity walk on campus
- A mindfulness and nature walk co-delivered with UCC's Student Wellbeing Coordinator
- A number of events held during Green Week
- UCC Community Garden events
- A tour of campus green spaces during Orientation Week
- A collaboration with UCC Enactus Society to clean plastic for conversion to skateboards as part of an Enactus-ReFrame project
- A collaboration with UCC Environmental society which involved a nature tour of campus and a herb-planting session

Two student interns were hired under UCC's "student help," stream to support the Greenshoots Programme.

Within UCC, Irene has promoted Green Campus efforts and the Greenshoots programme through collaborative efforts with UCCTV and UCC's radio channel, UCC98.3FM. She has appeared on local radio also, having done an interview about UCC Community Garden with C103 radio channel. RTÉ also visited UCC in 2023 to film part of a tv series entitled, "My Uni Life." Irene facilitated the filming of the student-led biodiversity walk and UCC Community Garden. The Greenshoots

Programme and associated events and values are promoted on social media. Irene collaborated with the Greenshoots Garden Intern to create a Tiktok account, and participated in an Instagram Live-stream panel conversation hosted by UI Green Metric. The Garden Intern and Communications Intern continue to provide regular posts and updates related to sustainability initiatives on campus.

During orientation week 2023, Irene and Emer (Greenshoots Communications Intern) presented information on Green Campus, the Greenshoots Programme and how to get involved in environmental action to approx. 4,416 first year students. Thousands of students of all years and disciplines were also reached during Societies and Clubs days, respectively. Irene continues to present to classes of all years and disciplines through collaboration with UCC school managers and lecturing staff, to broaden the reach and accessibility of the programme.



Fig. 17. Greenshoots at Orientation



Fig. 18. Green week Greenshoots events included a Repair and mend workshop in collaboration with UCC Knit and Crochet Society and FASHforward and A student-led Biodiversity Tour of the main campus

As part of her work, Irene manages student engagement with the community garden. This led Irene to assume the role of garden liaison within UCC, given that the garden was in need of continuous representation. In 2023, the garden infrastructure was repaired and replaced where necessary. Polytunnels were repaired and a new hose was installed. Garden open times were set. Events coordinated by the Greenshoots Coordinator and the Greenshoots Garden Intern include:

- A permaculture workshop
- A “pitch-in,” event, where students and staff worked in the garden and went home with fresh produce
- A garden tour, with an introduction to pollinators, delivered by the Garden Intern
- Weekly garden open hours, which take place between 12.30-13.30 on Tuesdays and 12.30-14.30 on Thursdays



Fig. 19. Students taking part in garden open days

As part of the Greenshoots Programme, student interns were hired for 16 hours a week to promote and establish Greenshoots values and practices. Two interns were hired in 2023. Ella Barron Carton was hired as the Greenshoots Garden Intern, while Emer Neville was hired as the Greenshoots Communications Intern.

These events included:

- a “pitch-in,” day, in which attendees were invited to help with various tasks in the garden (7 attendees)
- an “introduction to the garden,” event, during which Ella provided attendees with a tour of the garden and spoke about gardening for biodiversity (30 attendees)
- An introduction to the garden for international students
- An introduction to the garden for first-year students
- Manning a stand during Clubs and Societies Days, respectively

3.7 Climate Change

3.7.1 Our Carbon Footprint

UCC, like all state bodies, is required under the government’s Climate Action Plan to reduce absolute carbon emissions by 51% by 2030. Within our own Sustainability and Climate Action Plan, we have gone one step further to commit to being a Carbon Neutral Campus by no later than 2040. This commitment covers our scope 1, scope 2 and scope 3 carbon emissions. It follows on from the University signing the UNFCCC’s “Race to Zero” Campaign in 2021. The last full assessment of scope 3 emissions was undertaken in 2019 and the University is currently in the process of repeating this exercise.

From the 2019 exercise we know that staff and student academic travel accounts for almost 15% of our total carbon footprint and that procurement accounts for just over 8%. Our approach to greening procurement is outlined in section 3.8 Green Procurement. In relation to academic travel, UCC’s Sustainability and Climate Action Plan commits us to developing carbon budgets for staff travel and we are in the process of establishing an Action Group, with associated ToR, to lead this initiative (See Appendix E).

3.7.2 UCC at COP

Since 2015, UCC has held official observer status on the UNFCCC and since 2021 an official UCC delegation has been sent to the COP meetings to represent the University. Each year, the President’s Office establishes a COP working group which selects the group that will travel to the meeting and organises a series of events on campus to bring attention to this important event.

In 2021 UCC sent eight researchers and students to the summit in Glasgow. Professor of Energy Engineering at UCC & Director of MaREI, the Science Foundation Ireland Research Centre for Energy, Climate and Marine at UCC, Brian O Gallachoir led the delegation, which also included: Ms Alicia O’Sullivan; Dr Kian Mintz-Woo; Ms Clara Felberbauer; Ms Vera O’Riordan; Dr Rhoda Jennings; Mr Jason McGuire; and Dr Eoin Lettice. Dr Marguerite Nyhan, lecturer in Environmental Engineering & Future Sustainability, was also invited to partake as a member of Ireland’s national delegation. UCC’s delegation travelled



Fig. 20. UCC Staff and students with the Sustainable Cities Mural

sustainably, via boat and train. Back on campus Dr Fionn Rogan held a “Mock COP” event for students while a “Sustainable Cities” mural was unveiled at the College Road entrance. On

Thursday 11 November, as COP26 drew to a close in Glasgow, we were particularly delighted to welcome the British Ambassador to Ireland, H.E. Mr Paul Johnston, to our historical campus where he met with members of the UCC delegation who had just returned from the conference. President O'Halloran then presented Ambassador Johnston with a copy of UCC's COP26 Declaration.

In 2022 UCC was successful in obtaining 10 badges to attend COP27 in Sharm El-Sheikh, Egypt. The delegation was led by Professor Hannah Daly, who is an expert in national energy modelling and included two undergraduate students, Natasha Sutton and Dearbhla Richardson. The group held a debrief session back on campus, with RTE Correspondent George Lee, where they detailed their experiences from the trip. In 2023, UCC has again received 10 badges to attend the COP28 meeting in Dubai. The University will take a slightly different approach this year by giving three of the badges to youth activists from MAPA (most affected people and areas) countries. This approach has been spearheaded by Dearbhla Richardson, UCC Student Union Sustainability and Environmental Rep, and Dearbhla will also travel with the delegation.

3.7.3 Carbon Literacy Training

In October 2022, UCC launched a Carbon Literacy Training Course, which was developed in collaboration with the UK-based Carbon Literacy Project (CLP). The CLP develops toolkits for different sectors, which can then be adapted by institutions to make their own bespoke courses. The course comprises 5 modules, and a mixture of online and in-person sessions. On completion, participants are expected to be able to:

- Recognise the main drivers of climate change and situate yourself within the context of the local and global climate crisis.
- Appreciate the imbalance of the impacts of climate change and critically reflect on the complex social injustice issues associated with a just transition.
- Calculate your personal carbon footprint and collaboratively contrast high and low impact actions.
- Discriminate between different policy and mitigation scenarios and their potential to reach international climate targets while valuing the use of policy levers to effect systemic change.
- Envision a positive climate future and outline key steps as a group that can be implemented at a personal, institutional, and local level and detail the consequent action plan.

Participants who complete all 5 modules will receive a UCC Digital Badge and a certificate from the Carbon Literacy Project. In 2023, Green Campus are working with the UCC Societies Guild to ensure that all elected societies representatives take the training.

The final assessment involves participants creating an Action Plan for their own team, office or community, outlining how they will work towards reducing their carbon footprints individually and collectively.

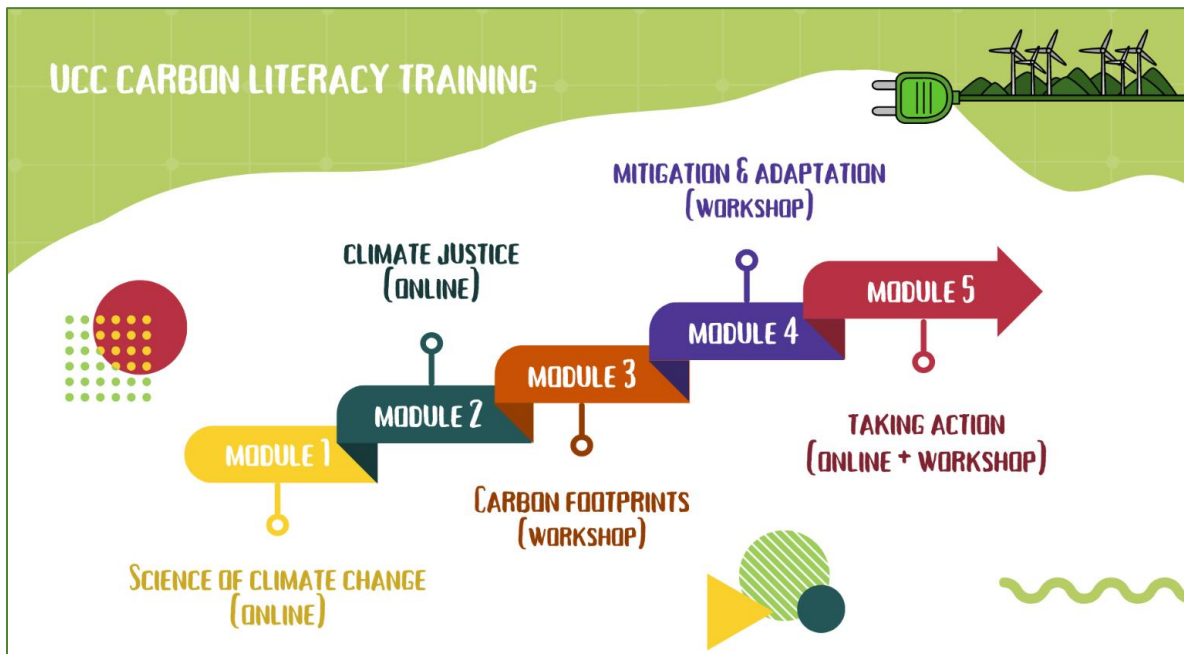


Fig. 21. Outline of UCC Carbon Literacy Training Course

3.8 Green Procurement

In recent years the University has placed significant emphasis on sustainable procurement owing to the significance of procurement to our overall carbon footprint.

Table 1. Recent Tenders with Green criteria and the outcome.

Service	Background and Objectives	GPP Specification	GPP Selection and Award Criteria	GPP Results and Outcomes
Cleaning	<p>Contract value approx. €2 million per annum</p> <p>110 buildings Cork city & county</p> <p>High impact on sustainable ambitions</p>	<p>UCC's sustainability strategy</p> <p>Collaborative approach to share & generate innovation</p> <p>Approach sought on:</p> <ul style="list-style-type: none"> - Chemical free cleaning - Water free cleaning - Reduced packaging - Reduced plastics - Reduced deliveries - Innovative ideas on sustainable practices 	<p>Sustainability Award Criterion – 5% weighting</p>	<p>Implementation of more environmentally cleaning practices e.g., i-mop machines, flat mopping, binless offices</p> <p>Rollout of chemical free cleaning Terzano – 80% reduction of chemicals</p> <p>Consumable changeover</p> <p>Use of EV for contract activities</p> <p>Quarterly business reviews – sustainability agenda</p> <p>Member of UCC Green Campus Forum</p>

Managed Print	€800k p.a. across staff + students (exc. paper cost) 120 + buildings Ambitions to transition to full MPS model.	UCC's sustainable credentials & strategic ambitions Planned to implement sustainable print policy Collaborative approach engage & share ideas with UCC.	7.5% A.C. on Sustainability - Corporate commitment to sustainability - Energy efficiency of devices/toners - Recycling/recovery & disposal of devices/consumables - Approach to sustainability in MPS in UCC.	Significant cost savings Only install re-manufactured devices 80% consolidation fleet Network print management software to monitor consumption.
Catering	14 onsite restaurants + hospitality services Contract value approx. €3.5 million per annum High impact on Sustainability	Info on UCC's sustainability strategy Dialogue held on: - Food Sourcing - Consolidated deliveries - Food Packaging - Menu planning - Waste Mgt - Energy Mgt - Campus Transport - Accreditation	Sustainable Proposal 5% Award criteria	First plastic free café in Ireland Enabler of Single Use Plastic Free Policy -Jan'23 Growing food on campus Use of EV for contract activities Catering Committee reviews inc. Sustainability agenda Member of on UCC Green Campus Forum
Exam Answer Booklets	Significant paper usage, approx. 400,000 booklets used each year.	UCC's sustainable credentials & strategic ambitions	Award criteria 10%	ISO 9001, ISO 14001, FSC and PEFC Chain of Custody Cert Paper is REACH free. FSC material harvested from FSC, sustainable and renewable sources Biodegradable Inks and Volatile Organic Compounds (VOCs) free

The table above outlines some of the significant recent tender processes that have included sustainability and their impact.

A number of other significant tenders are currently in progress. For example, UCC went to tender for Waste Management Services in June 2023. Sustainability accounted for 20% of the award criteria and the tenderers were asked to specifically address how they would contribute to UCC's ambitions within the Sustainability and Climate Action Plan and in particular our Zero Waste target.

UCC has become a recognised leader in Green Procurement nationally and internationally. Over the past year UCC Procurement Officer, Fiona Thomson has been working with Maria Kirrane and postdoctoral researcher Alexandra Revez to write a scientific publication on the experience of UCC in this area. A focus group was held in November 2022, with procurers from across the University to gather insights into the opportunities and challenges of Green Procurement. In July 2023, this work was featured in an RTE Brainstorm Article "Is the Government climate-friendly when buying goods and services?". In May 2023, UCC and KSG co-hosted a Business in the Community Munster Members meeting focused on Green Procurement.

3.9 Transport

UCC's Commuter Plan was updated in April 2020. The COVID pandemic obviously had a significant impact on commuting patterns and 2023 was the first year that an accurate estimate of new commuting patterns post-pandemic could be assessed. While for teaching, all courses are predominantly on campus again in the AY 2022/23, remote working has remained a widely used practice, where applicable. UCC's "Pilot Blended Working Policy" remains in effect until January 2024. This partly eliminates the need for a physical commute between home and Campus for some days during the week.

2023's annual commuter survey saw the highest response figures ever (staff: 28%, students: 8%). Normally conducted on an annual basis, no surveys were run in 2020 and 2021 (due to Covid),

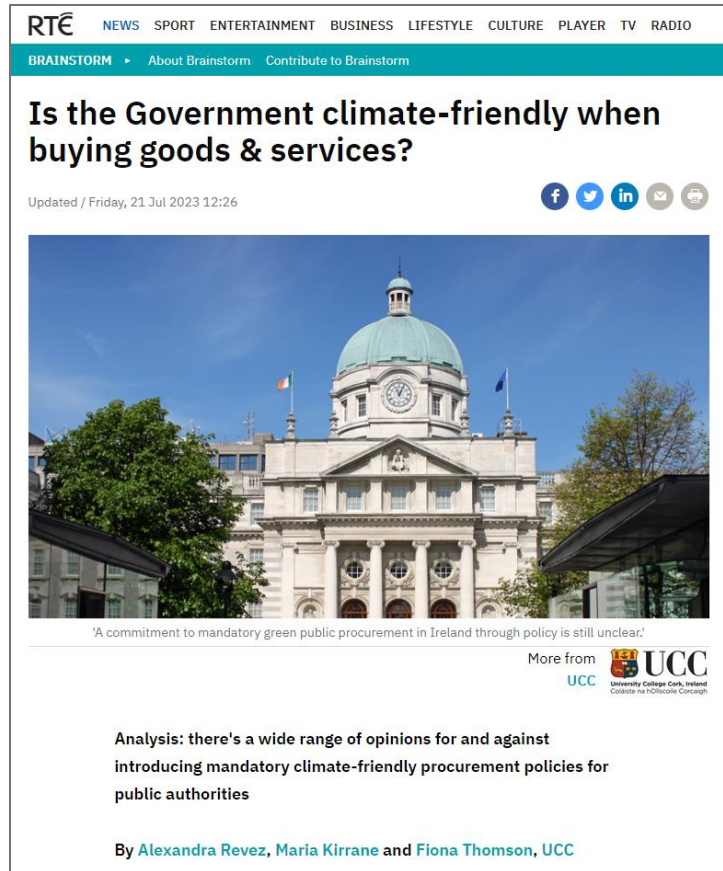


Fig. 22 UCC Brainstorm Article on Green Procurement

2022 only gave results on staff travel, while returns from students were too low to have a valid database. Some questions were added in consultation with Dr Marguerite Nyhan to get more detailed data for calculating Scope 3 Emission figures and data for trip origins from outside the Cork Metro Area were now gathered on a far more granular level, using Eircode routing keys.

3.9.1 No idling policy

In March 2022 Stephan Koch (UCC Commuter Manager) and Dr Dean Venebles (lecturer) brought a “No-Idling Policy”, for all UCC premises and UCC owned/operated combustion engine vehicles, for consideration by the Green Forum. The policy was formally adopted by the University Leadership Team in September 2022.

Signage outlining the policy has been erected at the entrance to campus and a UCC Press release was featured in the Evening Echo for World Clean Air Day as well as an opinion piece in Irish Independent by Dean Venables.

3.9.2 Cycling Promotion on campus

A new covered bike parking facility north of the new Student hub building was opened in June 2022 with 70 spaces and including cargo bike friendly. At the South Lodge courtyard 20 spaces have been created with 50% covered and swipe locked access. 3 self-service pumps/repair stations (North Mall, HUB (Main Campus) and WGB), have been created. UCC Campus bike scheme now has its 9th location (Medical Service at Crow’s Nest, 09/2023).

The UCC E-bike trial began a demonstration project in 2019 supported by the Green Campus Programme. The objective of the project was to provide staff (users) with E- bikes for a trial period, allowing the individual staff member to determine if an E-bike is a suitable method of travel for commuting to/from work. Over 180 staff members trialled the bikes with more than 15 then going on to purchase an e-bike through the Government “Bike to Work Scheme” administered through UCC.

President John O’Halloran and Students Union President Asha Woodhouse were presented with electric bikes for their use during the academic year 21/22 by UCC’s Green Campus Team. Both



Fig. 23. Stephan Koch and Dean Venebles reveal “No Idling” sign

President of the UCC and the Students Union President used the e-bikes for commuting, off campus meetings and to get to official duties and appointments where possible.



Fig. 24. Handover of e-bikes to UCC Presidents.

UCC also held an E-bike show and tell event. Show and tell is said to foster team building and camaraderie and encourages participation. We used it to share the benefits of E-Biking with the wider UCC staff community with the help of our E- Bike Ambassadors (staff who have already availed of the E-bike trial and are experienced E-Bikers). On the day staff members followed a route around campus on an E-Bikes under the watchful eye

of our E-Bike Ambassadors and got to feel for themselves how wonderful travelling by E-Bike can be

As part of a research project by Applied Social Studies (Eileen Hogan), a 2-day public symposium was held in UCC (Co-op between UCC Applied Social Studies, Cork Cycling Campaign and Cork Environmental Forum, supported by Cork City Council), with a focus on non-technical aspects of cycling as a form of sustainable transport. The key-note speaker was world renowned expert Meredith Glaser from Urban Cycling Institute, Amsterdam. A documentary film was produced on the results of the Symposium, which will be released in Sept 2023, during European Mobility Week).

3.9.3 Engagement with policy makers

Cork Busconnects is an extensive programme for revised road layout to prioritise bus (and pedestrian/cycling) traffic over private motor traffic on 11 corridors in the city (2 of which directly touch UCC Main Campus). UCC is fully supportive of the overall measures and submitted detailed responses to the 2 rounds of public consultation. Other submissions that UCC have actively engaged in include the City and County Development Plans (2022-2028), 30km/h speed limits around Main Campus (06/2022) and the NTA Cycle Connects programme (11/2022).

UCC is leading a joint proposal (UCC, MTU (Munster Technological University), Cork and Kerry ETBs (Education Training Board), Bus Eireann, Cork and Kerry LocalLink) for a 'Pathfinder Project' to improve sustainable transport options for students and staff travelling to 3rd level campuses in Counties Cork and Kerry. For UCC, the main aim is to reduce car dependency for daily or weekly travel from outside the Cork Metro Area to Campus. A Proposal officially submitted to the Department of Transport by UCC president in July 2023.

3.9.4 Results

Figures from the 2022 and 2023 (March) staff travel surveys show that 24% (2022) or 16% (2023) of staff didn't travel to Campus for work on the day in question. In pre-Covid years, this figure was around 1% or less. While the long-term trend has seen an increase in walking to campus, the post-covid years have unfortunately seen a decrease in active travel and a corresponding increase in those staff travelling to campus via bus, train and car. This could be a reflection of the impact of the accommodation crisis within the city centre, which is also seen in student modal share.

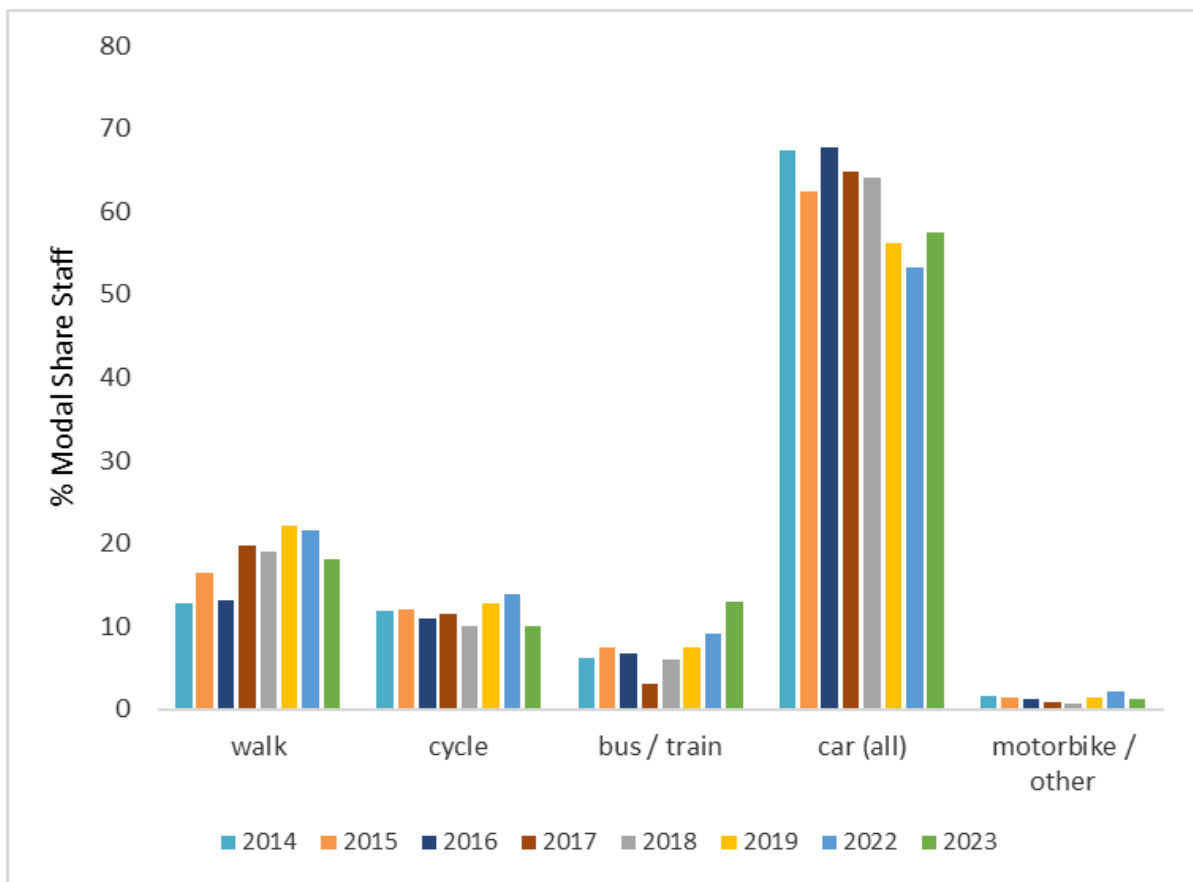


Fig. 25. Staff Modal share 2014-2023

For students, walking and cycling again declined over the last number of years, however much of this seems to have been absorbed by a significant increase in bus and train use. In 2023, 39.2% of students travelled from Term Accommodation (down from 47.4% in 2019). 16% of student respondents travel a distance greater than 30km to get to campus. One silver lining is that the numbers of people arriving as car passengers has risen in both groups. Car occupancy rates for students driving to UCC is at around 1.4 P/car (incl. driver and both passengers to UCC or to other destinations on the way)

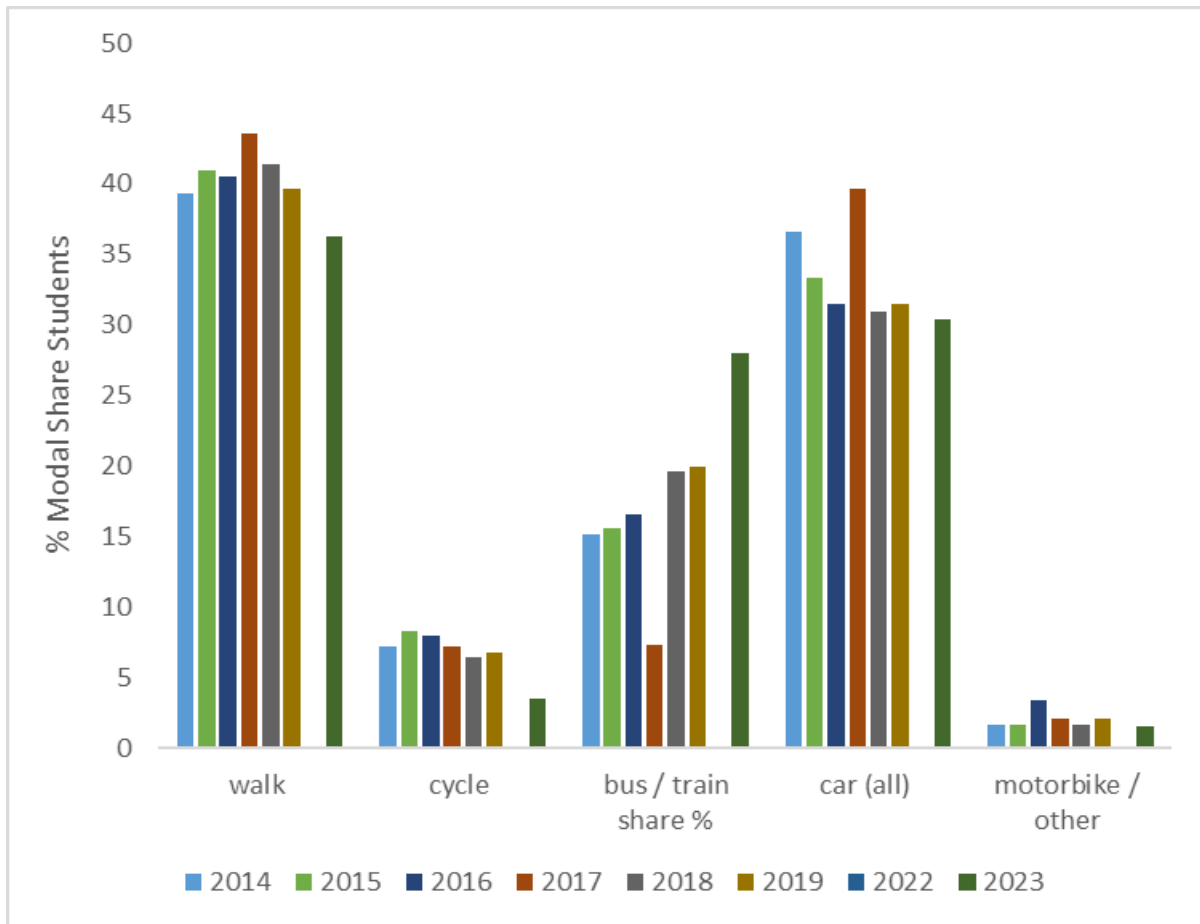


Fig. 26. Student Modal Share 2014-2023.

Chapter 4. Action Plan

In June 2023, UCC launched its Sustainability and Climate Action Plan 2023-28. The Plan lists 62 actions that the University commits to undertake over the next 5 years to reduce our environmental impact and support the ambition of our University’s Strategic Plan which aims to “Radically reform our practices and use of space and technology to meet our ambitious sustainability and climate action goals.” It also commits the University to being carbon neutral across all scopes of emissions by no later than 2040 and to being a certified Zero Waste campus by 2030. A copy of the Plan is provided in Appendix F.

It is important to note that this Plan was developed following extensive consultation with the UCC community, including the two student run Climate Assembly events.

Chapter 5. Linking to Learning on Campus

5.1 SDG Toolkit and Digital Badge

In 2018 UCC launched its Academic Strategy, with Sustainability called out as one of six themes within a new “Connected Curriculum”. To support staff in implementing the strategy a Digital Badge course was rolled out called “The Connected Curriculum and You”. The course highlighted the Green Campus programme as central to sustainability on campus.

In the same year, an audit of all UCC modules was conducted to determine the coverage of SDGs within the Curriculum. The audit found that only approximately 5% of modules directly addressed the SDGs. Further analysis of this outcome uncovered two important findings:

- that there was ample enthusiasm to include the SDGs in teaching, but a lack of resources to support this, and
- that many staff were already including the SDGs implicitly in the curriculum but hadn’t made them explicit.

With funding from the National Forum for Teaching and Learning, UCC Green Campus together with the Centre for the Integration of Research, Teaching and Learning hired a Research Support Officer to develop an SDG teaching toolkit, which would enable staff to self-assess their modules against the SDGs and provide a Resource Library of easily integrated teaching tools that would help them to make the SDGs more explicit in their teaching. The toolkit has been internationally recognised as best practice in integrating the SDGs within the Teaching and Learning. It was featured as a case study by the UN Academic Impact and was the basis of an Erasmus funding grant with a number of Universities in Greece and the Mediterranean region.



As part of the development of the toolkit, the RSO Dr John Barimo gave guest lectures, focus groups and design sprints to further engage the community. It quickly became apparent that more support was needed to instill a sense of confidence within the teaching staff that they could adequately address sustainability in their modules. The team received further funding from the National Forum for Teaching and Learning to develop a Digital Badge Course called “Teaching and Learning with the SDGs”.

5.2 University Wide Module in Sustainability

UCC’s University Wide Module in Sustainability continues to go from strength to strength and is now held fully online, opening it up to a wider variety of students, staff and members of the public. Participants can avail of a Digital Badge, additional university credit or CPD. 20 contributors from 15 different disciplines teach on the module, representing all Schools in UCC. The first lecture gives participants an overview of the Green Campus programme in UCC. The Module is built on:

- A student-led, research-informed and practice focused approach
- Openness to contributions and participation across all of UCC and available to the public
- An institutional ecosystem that supports sustainable development
- A co-created design, with a built-in mechanism for evaluation, review and re-design
- A model for integral learning
- Prior experience of interdisciplinary and transdisciplinary collaboration

The inclusive, university wide approach has been adopted to develop a university wide module on sustainability, through partnership and collaboration across all sectors of campus and beyond. In 2021 the team delivering UW0005 Sustainability Module were honoured to be awarded the Presidents Prize for Excellence in Teaching and Learning. This awards scheme, the longest-running scheme of its kind in Ireland, recognises the outstanding efforts of teaching staff to ensure that UCC students receive the highest quality learning and teaching experience.

From AY2019-2020 the University Wide Module in Sustainability was joined on the college calendar by a number of other University Wide Modules that touch on the themes of Sustainable Development. This included two new modules from the Centre for Global Development; UW1201 - ‘Global Sustainable Development: Interdisciplinary Perspectives’ which reflects on global sustainable development through the lenses of the SDGs; and UW0012 – ‘Development & Global Citizenship Education’ which is part of a larger ‘Praxis’ project which aims to integrate Development & Global Citizenship Education into pedagogy at UCC.

5.3 Human Capital Initiative: Sustainable Futures

Over the last number of year’s UCC has been particularly successful in receiving funding under the government’s HCI Programme to develop enterprise focused educational offerings. Of particular note is the “Sustainable Futures Programme” run by Dr Marguerite Nyhan, which links into Green Campus in a number of ways. UCC’s Energy Manager Pat Mehigan delivers an

annual lecture as part of the courses and students are also invited to undertake on-campus projects in collaboration with the Office of Sustainability and Climate Action.

Sustainable Futures offers a Certificate, Higher Diploma, MSc, and Leadership course in Sustainability in Enterprise and is a collaboration between UCC, Maynooth University and ATU. Enterprise partners include Microsoft, Logitech, Arup and Eirgrid.

5.4 Living Laboratory

A “Living Laboratory” utilises the knowledge and research capabilities of an Institution’s students and staff to solve issues relating to its infrastructure and practices. In 2019, with thanks to funding from the HEA, UCC Green Campus established the Living Laboratory Seed Fund to research and address real-life problems using UCC campus as a testbed. A second call for proposals was announced in November 2021, and in July 2023 we launch a third funding round in support of the University's new Sustainability and Climate Action Plan (2023-28). The second and third funding rounds have been supported by the President’s Strategic Fund and the Buildings and Estates Office. A Living Laboratory project should aim to:

- Solve a real-life problem,
- Be based on a partnership among key stakeholders, often crossing disciplinary and/or sectoral boundaries,
- Trial and test ideas in real life settings in order to further refine solutions proposed,
- Share data and findings generated openly.

The UCC Green Campus Living Laboratory Seed Fund will support two types of projects:

- Research Masters projects (including fees of €5,770, stipend of €18,500, and associated costs up to a maximum of €26,000).
- Demonstration projects up to the value of €10,000.

In total 9 projects have been funded so far and many of the highlights featured in this report detail their impact.

Table 2. Funded Projects under UCC Living Laboratory.

Lead Applicant	Partners	Project Name	Description
Prof. Edmond Byrne School of Engineering and Architecture	Dr Claire O’Neill (CUBS), Dr Ger Mullally (Sociology)	Plastic Free UCC	Ambitions for a single-use plastics free UCC; exploring societal and marketing levers.
Dr Niall Dunphy Cleaner Production Promotion Unit	Tad Kirakowski (VOICE Ireland), Caroline Jensen (KSG)	ReCircle UCC	Develop and demonstrate a tailored deposit-return scheme for reusable lunch

			boxes for takeaway food.
Dr Eoin Lettice, Dr Barbara Doyle, School of Biological Earth and Env. Science	Jack Murphy (B&E), JP Quinn (Visitor Centre), Síofra Richardson (EnviroSoc), Gill Weyman (Cork Nature Network).	UCC Open Arboretum	Establish a knowledge platform based on the UCC tree collection. Demonstrate the use of the collection for teaching, research and as a visitor attraction.
Natalie O'Byrne, Suzanne Buckley International Office	Community Academic Research Links (CARL)	International Office Swap Shop	Development of a Swap Shop to rehome goods & reduce waste generated by departing international students.
Dr Wesley O'Brien, (School of Education)	Dr Fiona Chambers, Mr Conor Philpott, Mr Brian Donovan (School of Education), Dr Tadhg Nagle (BIS), Sylvia Curran (UCC Staff Wellbeing)	Activity2Longevity	Develop and evaluate the effectiveness of a 10-week tailored 'Physical Literacy' intervention for staff. Promote health, well-being & active travel.
Dr Annalisa Setti (School of Applied Psychology)	University of Bologna	Green Space and Wellbeing	Exploring exposure to campus green spaces and impact on student wellbeing
Dr Ruth Ramsay, School of Biological Earth and Environmental Science	School of Applied Psychology, Local Schools.	Community Connections and Conservation	An exploration of the efficacy of UCC as an outdoor classroom for promoting biodiversity and climate awareness
Eimear Ní Mhaoldomnaigh, School of Microbiology UCC	Cork Urban Soil Project, UCC Environmental Society, UCC Community Garden	UCCUSP	Examination of microbial load and nutrient density of output of food waste in a small circular system.
Dr Barbara Doyle Prestwich School of Biological, Earth and Environmental Science	MaREI, Green Towers	Farm to Cork	Establishing an Urban Farm using vertical green towers on UCC campus.

Chapter 6. Informing and Involving Campus and the Wider Community

6.1 Events and Communications

Green Week continues to be a highlight of each calendar year for the Green Campus Committee. In addition, numerous other events and campaigns are organised by the committee throughout the year. In 2019/2020 Niamh Guiry led the Committee in establishing the first university-wide Earth Week. This involved over 25 events run by 17 UCC societies, and close collaboration with UCC Societies, UCC Students' Union, UCC Community Garden, The Climate Ambassador Programme, Mardyke Arena, and the UCC wider community. The Committee created a campaign with UCC Environmental Society called *The Clime: a booklet series* to provide people with a condensed resource pack relating to specific environmental topics. The booklets comprised a Fashion edition, LGBTQ+ Community and Environmentalism edition, Intersectionality edition, Climate Activism edition, and Sustainable Living edition.



In September 2021, the UCC Green Campus podcast was established by Mark Falvey, following The podcast continues to be recorded and features interviews with UCC students and staff working towards a sustainable future. Numerous blogs are also regularly posted on the Green Campus UCC website, including for example "[A Fresher's Guide to Sustainability](#)" (UCC Green Campus, September 2022), [What is Wildlife Crime & What Can We Do About It In Ireland?](#)' (UCC Green Campus, 14th January 2022) to '[Energy Security & Climate Transitions: Is LNG The Answer?](#)' (UCC Green Campus, 25th May 2022).

In Semester 2, 2022, the committee organised a series of "Green Zone" online talks, where national experts would speak on a topic of relevance to the community. Topics covered ranged from energy consumption to waste reduction and how to spot greenwashing.

6.2 Collaborations on campus

Collaborations with other UCC Societies and Clubs helps to ensure a broad engagement with students from many different backgrounds. For example, in 2021/22, UCC Green Campus established a Green Market in collaboration with the UCC Enactus Society. Other collaborations have included upcycling workshops with the Crochet Society and events, a climate justice workshop with SVP, A Medica Gone Green event with the UCC Surgical Society, and sustainable

agriculture talks with UCC Macra na Feirme. Over the last number of years UCC Green Campus has collaborated with Envirosoc and the Environmental Research Institute to run two editions of the “UCC Climate Conference” (in 2019 and 2020). In 2023, Green Campus and the ERI ran the UCC Green Week “Research Symposium”.

UCC Green Campus works with colleagues across the University to support them embed sustainability communications and engagement opportunities in their areas of expertise and influence. The UCC Visitor’s Centre, under J.P. Quinn, has embraced sustainability messaging across all of its activities and J.P. has written two children’s books which highlight UCC’s sustainability mission and the green campus programme. “A Bee at UCC” and “A Tree at UCC” are both available in libraries across Ireland. In 2022, UCC Green Campus sponsored a mural of “A Bee at UCC” in the School of Clinical Therapies, which would replace the toys and books that had to be removed due to the Covid pandemic and create an engaging, bright and cheerful atmosphere for the thousands of children that visit the clinic for assessments each year.



Fig. 27. Artist Kevin O’Brien and 8-year-old James Lee at launch of A bee at UCC mural.

6.3 Collaboration locally nationally and internationally

UCC students and staff further engage with sustainability-promoting groups off campus. Examples include the Cork Nature Network, Cork Environmental Forum, Cork Climate Action and the Cork Learning City Network. UCC Green Campus was a founding member of the Cork Nature Forum. UCC Sustainability is also represented on the University’s local community engagement group, which is looking at ways to improve the relationship between the university and residents living in the vicinity of UCC’s campus. In 2023, the Greenshoots Coordinator contributed to a brochure delivered to local residents to highlight ways in which everyone can participate in environmental action at the community level.

The UCC community is collaborating extensively with Cork City Council in supporting them to achieve their ambitions to be a carbon neutral city by 2030.

6.3.1 ESD Workshop with Green Campus Ireland

In November 2021, UCC Green Campus and Green Campus Ireland hosted two workshops for Green Campus registered institutions, with funding from the National Forum for Teaching and Learning. The workshops involved open discussions to identify existing obstacles to ESD and potential collaborative solutions. Both students and staff were invited to attend these sessions to facilitate open dialogue and meaningful peer-to-peer collaborations. While the main

challenges identified were related to lack of skills, knowledge and resources, the principal opportunities available to facilitate the creation of the ESD curriculum included:

- Developing comprehensive professional development training around sustainability, with an emphasis on peer-to-peer learning.
- Utilising the existing Green-Campus Network to facilitate the development of an interdisciplinary ESD curriculum.
- Developing a standard for ESD across all further and third-level institutions.

The findings of this report can be regarded as a call to action. ESD must be amalgamated into the building blocks of our third-level education system and our approach to sustainability issues should strive to empower individuals to become proactive and avoid falling into the trap of climate doomism. The student voice is critical to the development of the curriculum for sustainable development. The report can be accessed on the [UCC Green Campus website](#).

6.3.2 SDSN Ireland

In May 2022, UCC was successful in its bid to co-host (together with Queen’s University Belfast) an All-Island Sustainable Development Solutions Network (SDSN). The international SDSN was established under the auspices of the United Nations to mobilize universities, research centres, civil society organizations, and other knowledge centres to translate the latest expertise in sustainable development into concrete action in support of the 2030 Agenda for Sustainable Development. Local SDSN networks focus on providing support to the implementation of the SDGs, promoting high-quality education and research collaboration and promoting practical Solutions Initiatives and pathways for sustainable development. SDSN Ireland is a North-South cooperative network focused on developing context-specific solutions and mobilising local action for the SDGs. Engaging universities, research centres, local authorities, NGOs, civil society organisations and policymakers, the Network would bring the latest research to bear on

producing solutions for the SDGs and would seek to empower individuals and organisations to achieve impact through education and engagement.

SDSN Ireland was officially launched in February 2023 at an event in NUI Headquarters Dublin. This also included the first meeting of the SDSN Ireland Leadership Council, which is chaired by Professor John O’Halloran and Professor Ian Greer. An executive committee has been established, chaired by ex-Ambassador David Donoghue. In May



Fig. 28. Launch event for SDSN Ireland

2023, Dr John Barimo took up the post of Manager for the Network, based in UCC. The Network currently has 14 members.

6.3.3 UCC Research and the SDGs

UCC’s sustainability research is globally recognised. The Environmental Research Institute works to generate new research knowledge for the understanding and protection of our natural environment, and develop technologies, tools, services and policy knowledge to facilitate a transformation to a zero carbon, resource efficient, and sustainable society. There are currently 274 projects, with funding of over €77million euro active within the ERI. The Institute hosts MaREI, the SFI-funded Research Centre for Energy, Climate and Marine research and innovation. The Centre comprises over 220 researchers focusing on defined global challenges such as the Energy Transition, Climate Action and the Blue Economy. Examples include Dingle Peninsula 2030, a multi-partner initiative based on the Dingle Peninsula and in collaboration with the Dingle Creativity and Innovation Hub, ESB Networks, and North-East West Kerry Development.

In 2022, the University launched “UCC Futures: Sustainability”. The UCC Futures initiative is an ambitious programme of research prioritisation coupled with an innovative academic recruitment strategy across 10 areas of strategic research importance. The UCC Futures Sustainability call saw 27 whole-time academic posts advertised in sustainability and including the position of Associate Vice President for Sustainability and Climate Action.

In 2022, The UCC President funded a strategic project to map all of UCC’s research against the Sustainable Development Goals. A year-long project was instigated, led by Research Support officer Julie O’Donoghue and a action group of staff from across the University. As part of the



Project Julie undertook workshops in all 32 schools across the University, helping the research community gain a better understanding of the relevance of the SDGs to their research and how to make this more explicit in grant applications and publications.

8. Green Charter

As outlined, sustainability at UCC is guided by the University's new Sustainability and Climate Action Plan which commits the University to undertake 62 concrete actions in delivering an overall ambition on becoming carbon neutral by 2040 and zero waste by 2030. This plan supports the University's overall Strategic Plan "Securing Our Future", which states that UCC will "Radically reform our practices and use of space and technology to meet our ambitious sustainability and climate action goals." Both documents were developed in consultation with the entire UCC community.

9. Ensuring Continuity

The Green Flag is one of the few flags that permanently flies over the Quad in UCC as a symbol of the importance of the programme to the University. Chapter 2. outlined the structure of the Green Campus committee in UCC and highlighted the fact that it is mandated for the Student Union and Envirosoc to co-chair the committee. The establishment of an Office of Sustainability and Climate Action, within the President's Office, ensures that Sustainability and Green Campus remain key priorities for the institution. So too does the fact that both the University Strategy and Sustainability and Climate Action Plan commit the University to doing more in this regard. Students continue to be at the centre of the Green Campus programme and the broader sustainability agenda in the University. Students are represented on the Green Forum and on the ULT Subcommittee on Sustainability and Climate Action. The Students' Union has, for the past three years, had a part time role dedicated to sustainability. Reaching the entire student body is a challenge but each year, both the Students' Union and the Sustainability Office deliver presentations and trainings as part of orientation for new and returning students. The ethos of Green Campus at UCC is "progress not perfection", we are proud of all that has been achieved but we know that we need to do more and are committed to continual improvement in ensuring a better future for all.