

UCC Green Campus Annual Renewal Application Academic Year 2017/18

AY 2017/18 marked 10 years since UCC students embarked on their Green Campus journey. This last year has seen a comprehensive action plan put in place to deliver on the university's Sustainability Strategy (Annex 1). 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

The SDGs will also be central to the university's new Academic Strategy, which will be launched this Autumn.

On the ground, the "Love our Library" campaign has engaged both staff and students in reducing their environmental impact. The campaign, which developed out of the "Saver Saves" scheme, has inspired action in other departments and buildings across campus. The B&E team are working closely with the target departments and from 17/18 more student participation will be encouraged on each building's "green team", e.g. PharmSoc joining the Pharmacy (Cavanagh building) campaign. Long term, the steps taken in these buildings, and lessons learned from them, will enable the rolling out of similar campaigns across all departments in the university.

This year UCC has also become the first university in Ireland to submit for a rating under the Association for the Advancement of Sustainability in Higher Education's STARS programme. This is regarded as one of the most comprehensive quantitative assessments of sustainability in higher education. We are currently awaiting the review of this submission, and following this our action plan will be updated accordingly.

1. Green-Campus Committee

In 17/18, the Green Campus Committee continued to run as in previous years, with the deputy president of the Student's Union (Seán Ó Riabhaigh) and Chairperson of the Environmental Society (Asha Woodhouse) chairing the committee. Students from Biological, Earth and Environmental Sciences, Arts, and Computer Science held positions on the committee this year. Key members of the B&E Department are also represented as is academia (e.g. Claire O'Neill, Management and Marketing). Again, this year a number of student members (8 in total) took the UCC Works pathway, whereby they were then eligible to have their participation recorded on their academic transcripts. The nature of the Green Campus committee (being made up of students and staff) makes finding suitable times for meetings very difficult. Much of the communication is therefore done through Facebook groups and emails, which are then supplemented by physical meetings. This year a dedicated "Food Waste" committee was set up by students, as well as staff members from the Centre for Global Development.

For AY 2017/18, UCC student's Union have nominated a part time environmental officer onto the campaigns working group. The SU Deputy President is also working closely with Darcy Lonergan, USI Energy and Sustainability manager to include sustainability and environmental improvement into their offices and events. From 17/18, the committee will run in such a way that it will mirror a society, with its own budget for running its own campaigns. It is hoped that this will give more authority to the student members of the committee and will enable them to implement more measures in the short term, as the university's timescale for projects is often longer term. The committee membership will also be strengthened by having the clubs and societies presidents as members, and a new constitution has also been drawn up.

The Green Forum continues to sit twice a year, with broad representation, particularly in the academic community. During the development of the Sustainability Strategy, key personnel responsible for delivering each of the objectives were identified. In 2017/18, the Green Forum will ensure that all of these personnel sit on the Green Forum and attend or are represented at its meetings. The Sustainability Review Group sits within the Buildings and Estates Department, meeting every six weeks to review progress against the Sustainability Strategy. The Deputy President also sits on this group.



Figure 1. UCC Sustainability Governance.

2. Environmental review, monitoring and Evaluation

Energy

Under the National Energy Efficiency Action Plan ([NEEAP](#)) UCC, as a public body, has been tasked with improving its energy efficiency by 33% by the year 2020. Despite undergoing a significant increase in footprint since 2008 with the addition of buildings such as the Western Gateway Building, Tyndall

National Institute, Mardyke Arena and Beaufort, UCC has achieved a 34.4% reduction of its total primary energy requirements (TPER), compared to a baseline of 2006-2008. The annual electrical consumption of UCC has decreased by 1.65 GWh/annum, the equivalent of the electrical energy to power over 350 homes for a year. Through energy efficiency upgrades and closer management of the building services as well as collaboration with the building managers, the majority of buildings have seen an annual reduction in electrical consumption since 2008/9.

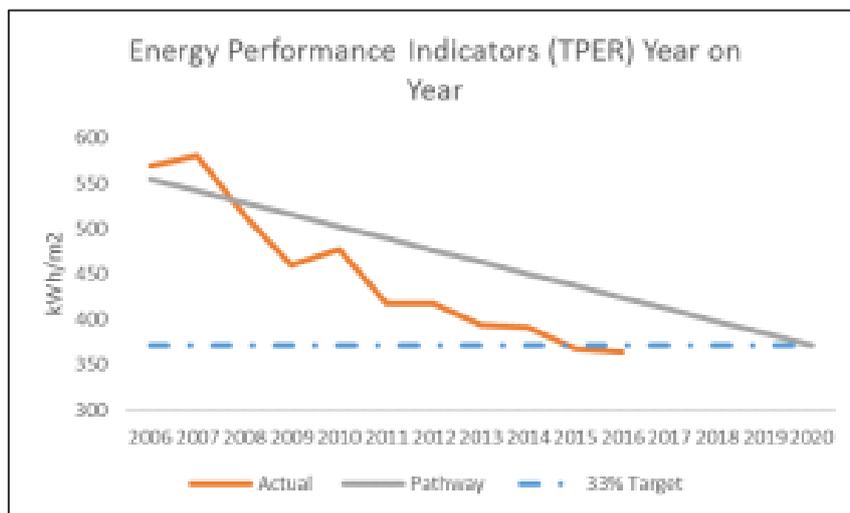


Fig. 2. UCC Energy Performance – 33% target met in 2017.

The “Saver Saves” scheme, in which the annual energy budget is devolved to individual departments, is now up and running in the Boole Library, Glucksman, ERI, and Cavanagh building. There are plans to roll it out in the main Quad, BioSciences, BEES and Food Science buildings as well. In the former two buildings, teams have already been established.

The Boole Library, which accounts for 8.6% of UCC’s energy consumption, has seen a 7% reduction in its annual consumption. Savings were achieved through closer management of its significant energy users, reduction of lighting levels during the summer and other minor changes. In September 2017 the savings were reinvested to install an air barrier at the main entrance to reduce the impact of draughts and cold air flows, improving the building comfort levels as well as saving energy. Due to the success of the program in the Boole, the Library staff have implemented an environmental campaign, love our library, with the aim of keeping the Boole clean and green. The Pharmacy building, which was also part of the pilot “Saver Saves” project, has achieved annual savings, despite an increase in its utilisation of lab spaces. Savings have been reinvested in lighting upgrades and installation of more energy efficient equipment for lab services. The Glucksman Gallery has seen a 32% reduction in its annual energy use by closer management of its significant energy users. Savings by the Gallery have been reinvested in replacing existing exhibition lighting with more efficient and reliable LED lighting.

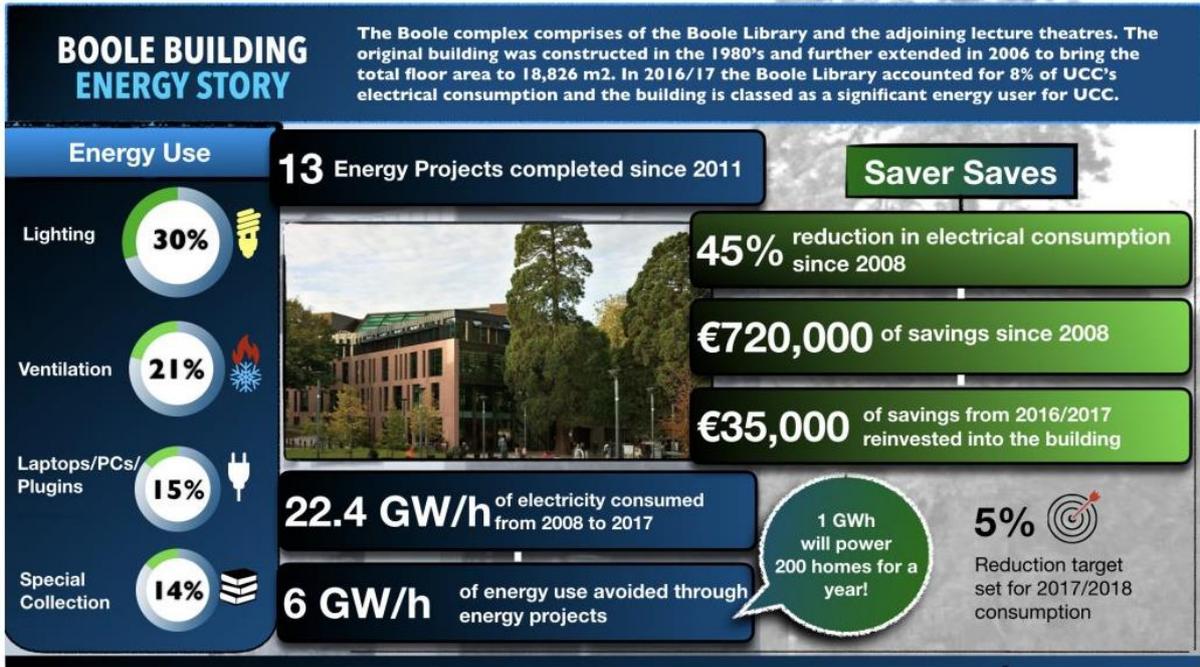


Fig. 3. Highlights from the Boole Library Saver Saves scheme. Similar infographics have been created for all other sites, and will be displayed on the UCC Green Campus webpage.

Waste

UCC's recycling rate remains high, as does overall diversion from landfill. The main campus recycling rate is at 67%, while diversion from landfill is 95%.

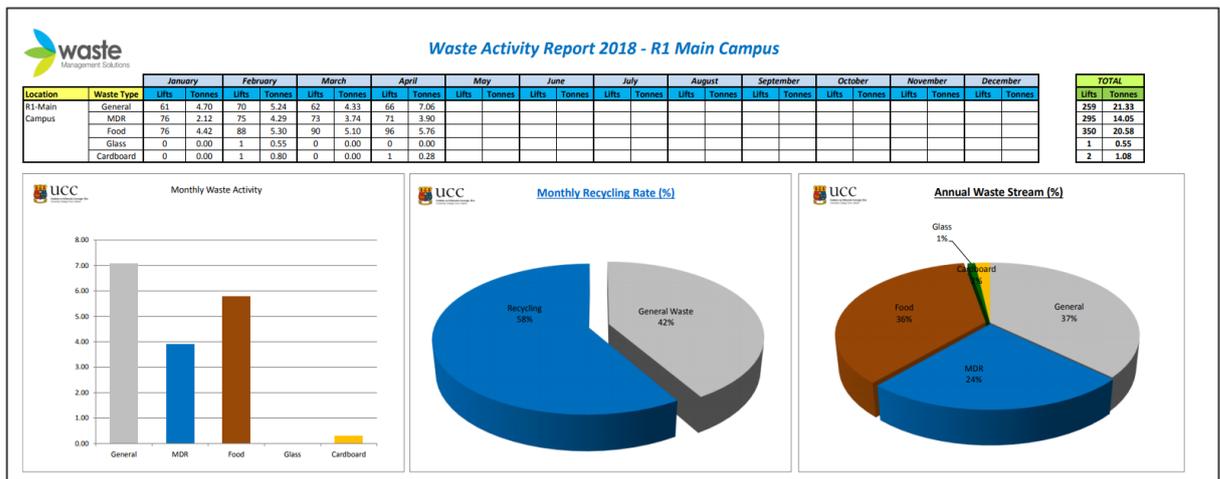


Fig. 4. UCC Waste Activity Report to April 2017

In 17/18 however, we have concentrated on:

- Reduction of waste produced on site
- Audits of buildings to improve granularity in our data
- Education and behavioural change to encourage our campus community to take responsibility for the waste that they produce.

In September 2017, a step-change was initiated taking the Boole Library as a pilot location. The library was chosen as it is a centre point on UCC campus and has the highest footfall of any building in the university. An audit of bins in the library revealed high levels of contamination, much of which was due to disposal of coffee cups. It was clear that coffee cups were a significant waste stream in the library and they also represent a “single-use” item that have become prolific in our culture. We wanted to tackle that culture of using an item once and then throwing it away. Having made steps to reduce waste production, we then wanted to focus on ensuring that what waste remains is recycled correctly. Therefore, the decision was made to take a two-pronged approach to reducing waste in the library

- 1) due to historic library policies around the consumption of food and drink, a complete ban on disposable coffee cups was possible. This was complemented by giving away a (limited) number of reusable bamboo mugs and negotiating a discount for the use of reusable mugs at all campus coffee outlets.
- 2) Introduction of a “binless” office system – all small bins were removed from all offices and public spaces within the library. Two waste recycling stations were established on the ground floor. Both staff and students must now take their waste from their desks upon leaving the library and dispose of it in at the waste stations. This means that there are no more confusing single small bins dotted around the building. When people take their waste to the stations, they are greeted with a well laid out system, with proper labelling, informing them of what goes into which bin. It also is estimated to be saving 8,000 plastic bags a year (that would have lined the smaller bins previously) as well as 625 full bags of recyclables that could have gone to landfill.



Fig. 5. Photos of campaign around the coffee cup ban and new bin system.

Staff training was undertaken wherein our waste management contractor visited offices to talk to staff members about what can be recycled or not. The cleaning services contractor provided training to their staff on implementing the new system. Regular information stands for students are held in the library foyer. The new bin stations each have a clipboard attached and cleaning staff record number of bags collected, fill rate, and contamination rate at each collection time.

Since the coffee cup ban was introduced, the Student’s Union have secured funding to give every incoming first year student a reusable cup at orientation. In addition, water fountains in the library have been upgraded in recent years and signage erected to make sure people know where they can dispose of their bottles.

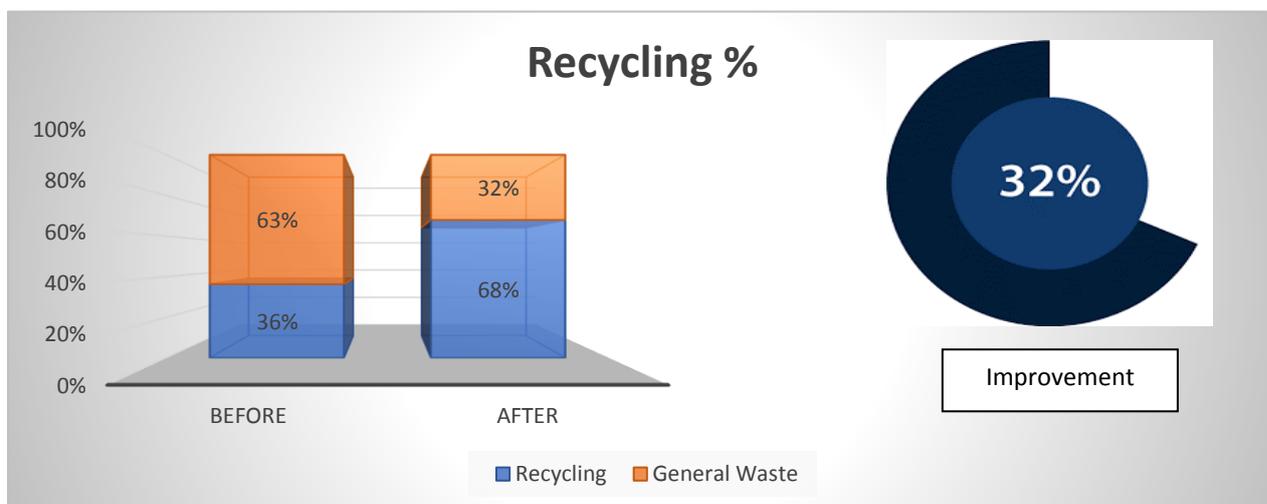


Fig. 6. Recycling improvement since introduction of new bin system.

Following on from the success of the Love our Library campaign, the new bin layout is being rolled out in other buildings across campus on a phased basis.

In addition to the library campaign, UCC B&E commissioned a report from our waste contractor to follow the waste that UCC disposes of and determine where it eventually ends up. The completion of our STARS assessment also means that we are now collecting data on construction and demolition waste. The Buildings and Estates office are currently in the process of developing guidelines and policies around capital projects and maintenance, which will include the sourcing (and potential reuse) of materials as well as final disposal.

On the 22nd November, UCC Green Campus committee held a “Zero Waste Day” to coincide with the European Week for Waste Reduction (EWWR). The aim of the EWWR is to raise awareness around waste prevention, and the reuse and recycling of waste materials. As the focus of Green Campus this year has been to “Ditch the Disposables”, this was the perfect opportunity to highlight how we, as a campus, can reduce the amount of waste that we generate. Events on the day included:

- Clothes Swap and Resource Exchange
- Information stands at the Boole Library and Student Centre
- Reusable bamboo mug giveaways
- Recycling workshop with Voice Ireland Recycling Ambassador Programme
- Origami Christmas Decorations workshop using old papers and magazines
- Screening of “A Plastic Ocean” with talk by UCC Researcher Alicia Mateos.

Transport

The purchase of two electric bikes has been authorised, as well as further campus bikes. The new electric bikes will be based at the ERI. A secure bicycle storage area is being installed in the underground carpark of the BioSciences building. Cycle to Work bike sales to staff have continued, as of the last submission 93 more staff members have made use of the scheme.

The annual UCC travel survey was undertaken in April. Car use continues an overall trend of decline amongst both staff and students. Public transport use has increased significantly, though this is not surprising given that last year's survey was undertaken during the Bus Eireann strike. Cycling decreased slightly for both groups.

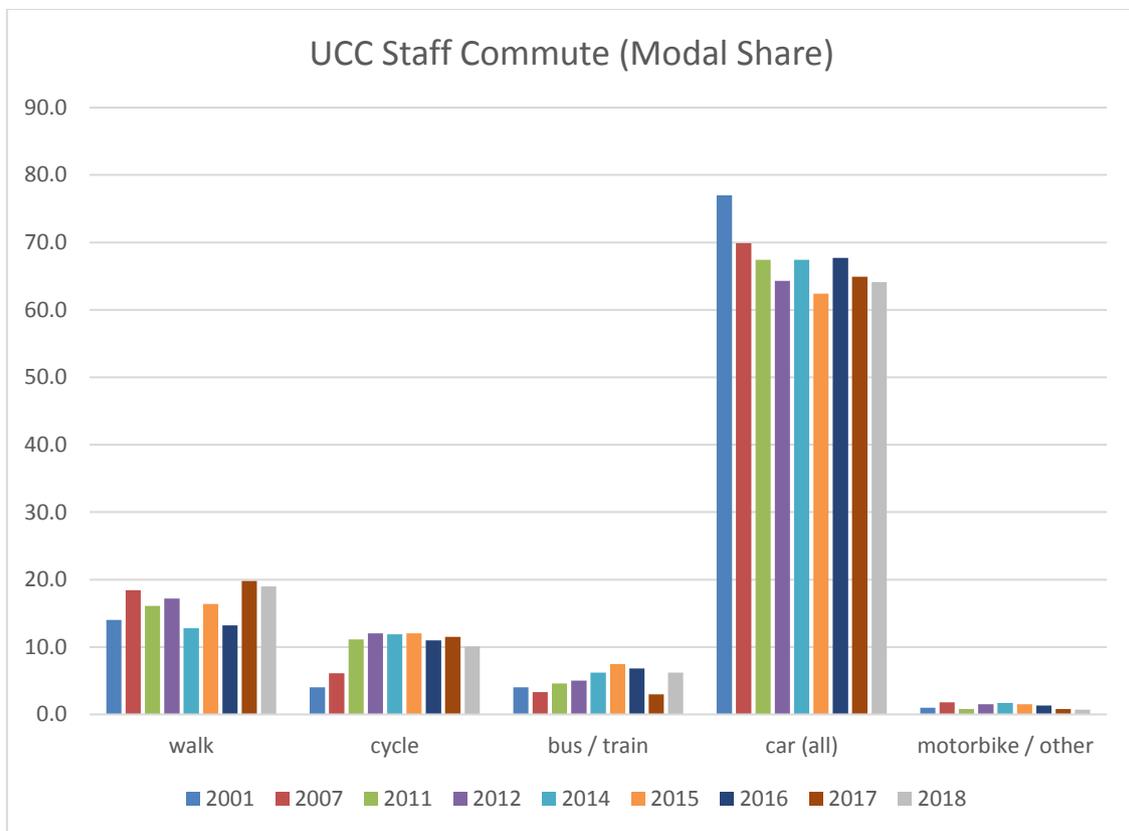


Fig. 7. Modal share 2001-2018 staff

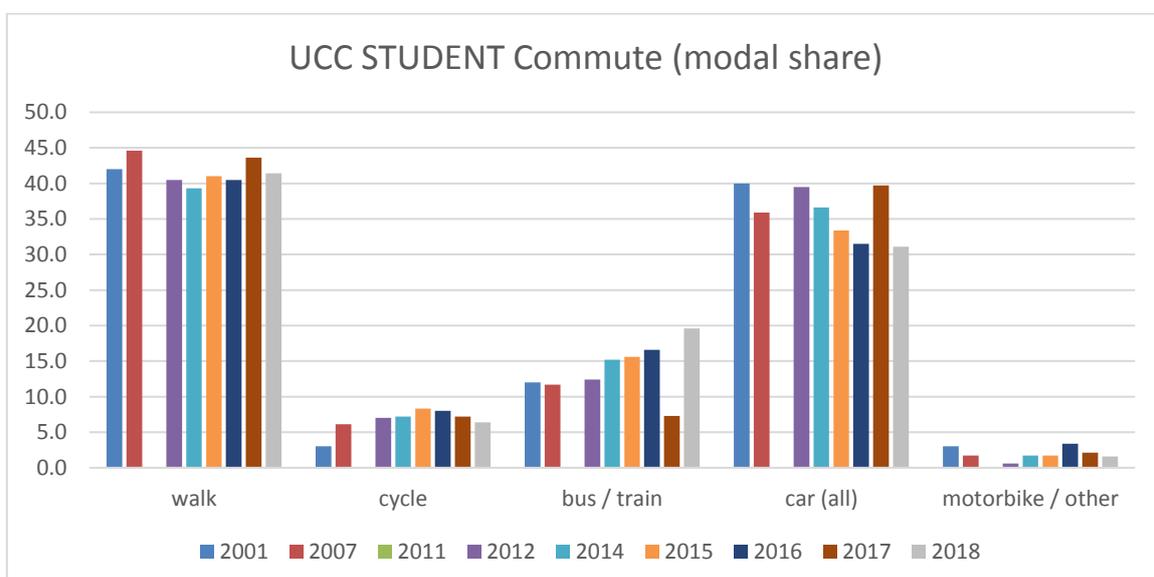


Fig. 8. Modal share 2001 – 2018 students

This year, campus cycle week has become a biannual event, with one occurring in the Autumn and another in the Spring term. It has also grown to encompass more of the third level education institutions in the city. In October 2017, the second campus cycle week included a “Bike Olympics” on the Quad, lunchtime roundtable discussion with UCC Commuter Plan Manager, Cork Cycling Campaign, Cork City Council and National Transport Authority, a presentation on “Velo-City 2017 conference – A cork perspective”, a “Bike Breakfast” with UCC’s most famous cyclist, president O’Shea and a lunchtime cycle between the three participating campuses.

The third “Campus Cycle Week” was held from the 12th to the 16th March and featured UCC, CIT, CUH, Coláiste Stiofáin Naofa, Cork College of Commerce and St John’s Central College. Activities included bike doctors on each campus, a bike repair workshop, a lunchtime cycle and roundtable discussion. The highlight of the week was the screening of “Why We Cycle” a new Dutch film that explores the reasons why people cycle, as well as the impact of cycling on individuals, cities and societies. The screening took place in the Boole Theatre in UCC and was followed by a lively discussion from those in attendance.

UCC also took part in Cork Bike Week, Cork Bike Week is an integral part of the overall National Bike Week initiative and is organised by a multi-agency group comprised of the Cork City Council, Cork County Council, Cork Sports Partnership, HSE South-Health Promotion Department, Cork Cycling Campaign, Cork Environmental Forum, UCC and An Taisce. UCC organised a lunchtime “Secret Cycle” as part of the schedule of events. UCC Green Campus was again involved in the organisation of the UCC Marchathon 2018, which took place from the 26th March to the 24th February. UCC logged an average of 1,811,147 steps over the month. The UCC team “Insighters” were placed second nationally.

Water

The university continues to improve its water metering, currently 54% of main campus is metered. Water use for AY 17/18 came in at 79,750m³, down on the same period last year. Rainwater harvesting for toilet flushing is utilised in the Beaufort building, while the Glucksman Gallery and Western Gateway Building reuse water from the heatpump for toilet flushing. Following the broadening of the “Saver Saves” scheme to other sustainability themes beyond just energy, water use is being looked at in all of the focus buildings. From September 2018, waterless cleaning will be rolled out in the Cavanagh Building as part of their campaign.

The Environmental Research Institute at UCC is host to the UN Environment GEMS/Water Capacity Development Centre, which provides capacity development in water quality monitoring and assessment. Under the leadership of Dr Debbie Chapman, the GEMS/Water centre is the implementing partner for Sustainable Development Goal Indicator 6.3.2 for Water Quality. In March 2018, UCC Green Campus joined forces with GEMS to run a number of events as part of World Water Day. World Water day was established by the UN to focus attention on this important subject, and the theme for 2018 was ‘Nature for Water’ – exploring nature-based solutions to the water challenges we face. UCC turned blue for the day, with the UN flag flying over the Quad and our campus community encouraged to dress in blue. That night, the UCC Quad and City Hall were lit up in blue. Water information booths were held in the Student Centre, informing people of their “water footprint”. For example, students were informed that it takes 2000 gallons of water to grow the cotton

for and manufacture one pair of jeans. Cork Nature Network gave a guided tour along the River Lee to inform people about all the species of plants and animals that rely on our waterways. The day ended with a talk from Dr Simon Harrison (School of BEES, UCC), on the topic “Towards nature-based solutions to river pollution and flooding”, the first in a series of weekly lectures around water, nature, and humanity organised by the CDC. Details on the talks are available here <https://www.ucc.ie/en/gemscdc/wwd/watertalks/>. More information on the activities of the GEMS CDC can be found on their most recent [newsletter](#).

UCC are looking at the development of “green” guidelines for all construction and renovation works, which will include measures to control/minimise water consumption.

Food

UCC’s “Farm to Fork” initiative continues to see vegetables grown in a local farm delivered to UCC campus for use in the main restaurant. 300kg/week of fresh produce is delivered from September to February from an 8 acre farm in Curaheen, within a five-mile radius of UCC campus. The vegetables are being used in 6 of 13 outlets on campus as well as for hospitality events and in soups which are made in the main kitchen and transferred around campus to the smaller satellite units that have limited facilities. KSG is operating the vegetable plot in conjunction with Nigel Martin, a local Curraheen farmer who has assisted with the planting, growing and harvesting of crops, including carrots, turnips, parsnips, beetroot, rosemary, mint and thyme. Nigel uses no synthetic chemical on his crops and utilises crop rotation measures to ensure soil health. KSG also grow herbs and salad leaves on campus grounds in two glasshouses behind the Food Sciences Building.

As mentioned in last year’s report, sustainability was one of the award criteria for the new catering contract. At UCC, the Restaurant Committee monitors the performance of the catering contractor against these criteria. From AY 17/18, the sustainability officer and energy manager now attend meetings of the restaurant committee to ensure that sustainability is adequately covered. Other members of the committee include the procurement officer, finance officer, and members of the SU.

As part of the STARS accreditation process, KSG provided Green Campus with a full inventory of all of the food that is purchased in a year. This inventory revealed that 40% of all food purchased for use in UCC is either third party verified for sustainability (e.g. organic or Fair Trade) or is locally sourced.

Meatless Mondays have continued in the main restaurant this year, with two events taking place; one in the Autumn term and one in the Spring term. A strong communication campaign is put in place around these events, by KSG, Green Campus and the Student’s Union.



Fig. 9. Herbs being grown in UCC campus greenhouse.

Climate Change

UCC's carbon footprint has been updated (for scope one, two, and some scope three emissions). In the coming months a carbon management plan will be produced, outlining our plans to decarbonise our energy supply and address the CO₂ emitted due to university activities such as commuting and business travel.

UCC continues to be a world leader in Climate Change Research. Highlights over the last year include

- The launch of new EPA funded "Imagining 2050: Engaging, Envisioning and Enabling Dialogue on Pathways towards a Low Carbon, Climate Resilient Ireland". This interdisciplinary research project is led by Ger Mullally (UCC Green Forum).
- ERI Climate Lab seminar series and open day (see section 6 "Informing and Involving").
- A number of UCC students and staff have become "Climate Ambassadors" under the An Taisce Climate Ambassador Programme. Some of the experiences of our student ambassadors can be found in the April edition of our UCC Green Campus [newsletter](#).
- Launch of UCC air monitoring station, which will contribute to the National Ambient Air Quality Monitoring Programme run by the Environmental Protection Agency (EPA), which aims to deliver enhanced air quality information for Ireland in real-time.

Nationally, two UCC researchers (Dr Aine Ryall and Dr Margaret Desmond) were appointed expert advisors to the Citizen's Assembly on Climate Change.

On the 6th of November 2017, UCC hosted Cork Climate Action's Political Forum "Storms are brewing, what are we doing?" The panel on the night included Michael Martin (FF), Eamon Ryan (Green Party),

Mick Barry (PBP) and Donnchadh Ó Laoghaire (SF). Dr Aine Ryall, UCC School of Law, and member of the expert advisory group to the Citizen's Assembly on Climate Change, acted as academic rapporteur. Deirdre O'Shaughnessy of Cork's 96FM chaired. Over one hundred people were in attendance at what was a particularly timely event; the recommendations of the Citizen's Assembly had been released the previous evening and the country was still dealing with the aftermath of Storm Ophelia. The panel were provided with two set questions ahead of the event; the first concerned the progress of the Fossil Fuel Divestment Bill through the Dáil and the second asked how each of the party's manifestos would address Ireland's greenhouse gas emissions targets. The audience was then invited to put questions to the panel. Transport was a major topic on the night, with a call to quadruple current investment in public transport. Eamon Ryan also called for a light rail service in Cork. Frustration over Ireland's lack of progress in meeting its emissions targets was palpable amongst those in attendance, however Dr Ryall reminded the audience that the public can exercise their collective power by continually urging our politicians to take action.

The UCC Environmental Society held the "UCC Climate Conference" in the Aula Maxima on the 26th February 2018. The conference was sponsored by the Environmental Research Institute and featured a host of speakers from across UCC and further afield. The day began with a panel discussion on the politics and legalities of climate change with Dr Aine Ryall and Dr Bjorn Oliver-Magsig from UCC's School of Law, as well as Lorna Bogue of the Green Party. The second panel focused on solutions and featured Aisling Byrne (Nu Wardrobe), Sean Lynch (Open Litter Map) and Eimer Delahunty (FoodCloud). Keynote addresses were given by Dr Debbie Chapman (UN GEMS/Water CDC) and Brian Ó Gallachóir (ERI). The focus on solutions was refreshing, and the power of the student body in pushing for change was highlighted in both the opening address delivered by Prof Sarah Culloty and closing remarks made by Professor John O'Halloran.

As a global leader in Climate Change Research, the ERI's active participation in the Green Campus Forum and "Saver Saves" scheme will create a living laboratory for climate science where both global and local issues are tackled on and off campus by an interdisciplinary team.

Biodiversity

UCC B&E have now completed habitat assessments of all UCC grounds, as well as bat, small mammals, and bryophyte surveys. This work has led to the development of UCC's Biodiversity Action Plan. Some highlights from this work include the discovery of an Annex 1 habitat under the habitats directive, and numerous bat species found on campus. Two species of bryophyte recorded are considered to be Nationally Scarce in Ireland. These species are Green-tufted Stubble-moss (*Weissia controvers* var. *densifolia*), which was recorded at Lough Hyne, and Brook-side Feather-moss (*Hygroamblystegium fluviatile*), which was recorded from the ERI Campus.

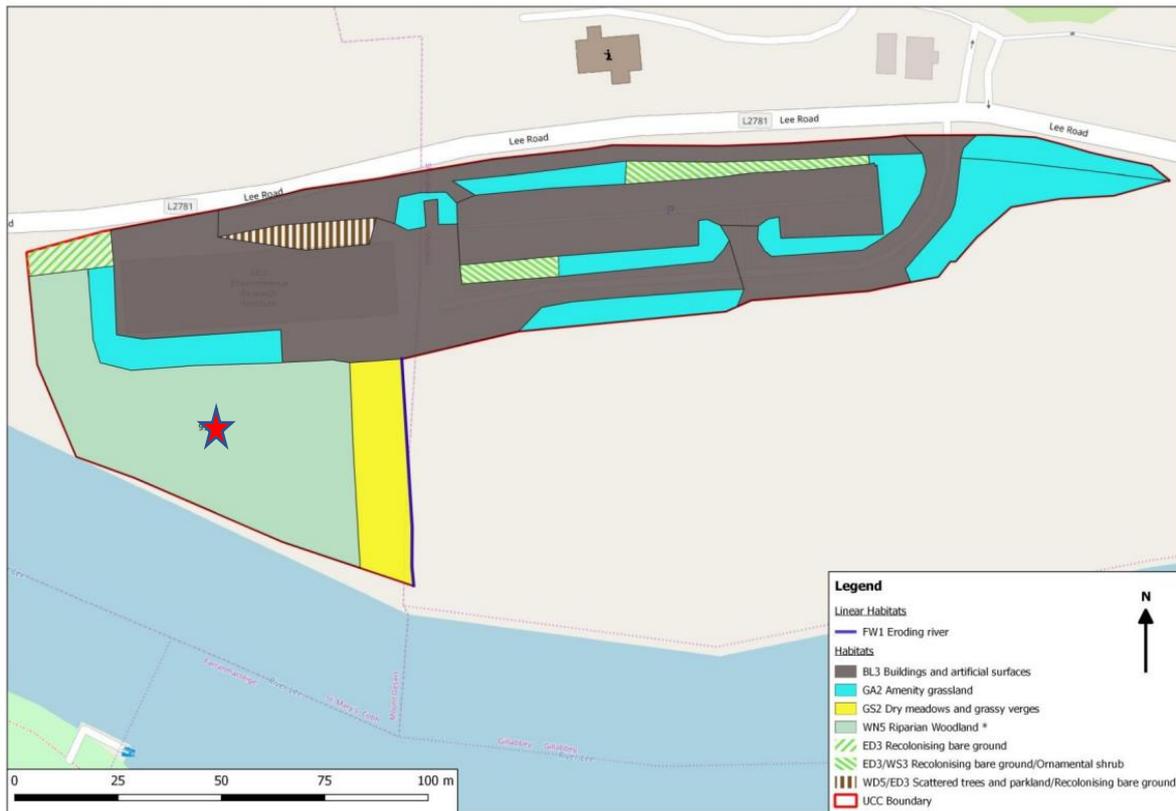


Figure 10. ★ Marking area of Annex 1 Alluvial Woodland habitat at UCC ERI Lee Road building.

A Biodiversity Action Plan has been put in place, the overarching objectives of which are:

1. To identify and implement measures to enhance and protect biodiversity in UCC.
2. To ensure that biodiversity is integral to the planning and design process across all of UCC's developments.
3. To encourage student and staff engagement with biodiversity and increase knowledge and awareness of biodiversity.

The installation of bat boxes, where recommended, has already been completed.

In April 2018, UCC welcomed six honey bee hives at the North Mall campus. The hives are being managed by a local beekeeper and are in the process of settling into their new location. It is hoped that once the bees have settled, the hives can be used as a resource for teaching. These hives add to UCC's increasing areas of wildflower meadows and feed into the overall All Ireland Pollinator Plan.

In March 2018, to mark World Water Day a river walk was organised by UCC Green Campus, the UCC UN/GEMS Water CDC and the ERI. The walk was delivered by Karen Loxton from Cork Nature Network and took participants along the River Lee by UCC campus to hear about the many species of plants and animals that rely on the river for their survival.

Green Procurement

UCC's new procurement strategy was launched in 2017, the strategy sets out Sustainability as one of six key principles and commits that "In conjunction with the Green Campus Committee, UCC will strive to minimise the local, regional and global impact the delivery of education has on our environment.

UCC will embed the use of Green Procurement practices in its processes and procedures to sustainable use of resources is considered in procurement decision making.” The university is increasingly incorporating Life Cycle cost analysis into its purchases, particularly purchases made by the Buildings and Estates department.

UCC’s University Management Team have taken the decision to sign up to the United Nations Principles of Responsible Investment (UNPRI). Divestment from the fossil fuel industry is imperative if we are to achieve the target set out in the Paris Agreement of limiting global temperature rise to 2°C. UCC divested from fossil fuels a number of years ago, and all of the university’s trust fund is ethically invested. The UNPRI were developed by an international group of institutional investors through a process convened by the United Nations Secretary General to consider the broad environmental, social and governance issues of investment funds and commit signatories to actively promote and encourage ethical investment. This commitment by UCC goes further than divestment from the fossil fuel industry as becoming a signatory requires the University to openly report on those ethical investments. It also covers a broader range of environmental and ethical considerations. The UNPRI have been instrumental in large fund managers divesting of assets that are harmful to the environment and/ or undermine social justice. UCC will be required to openly report on its investments as part of its membership of the PRI.

Awards and Recognition

UCC was ranked 9th in the UI Green Metric 2017, out of a total of 619 campuses. UCC maintains its status as the top ranked campus in Ireland, and was ranked number 4 internationally in the category of urban campuses. The Green Campus committee have undertaken an in-depth analysis of the results to determine where gaps might exist.

In November 2018, Professor John O’Halloran was nominated for a “Leadership” award by the Environmental Association for Universities and Colleges (EAUC). The judges commented that “John’s academic, research and intellectual leadership is an inspiration. Embracing local, national and international scope and scale has put sustainability centre stage at Cork, the local community and beyond. Building on this personal drive, student and curricular engagement, sustainability should now truly flourish.”

The “Love our Library” campaign has received the “Best Public Sector” award at the annual Cork Environmental Forum Awards. Cork Environmental Forum is a non-profit that promotes engagement and debate around environmental issues, working to foster sustainability in the region. The judges said that the library campaign was “inspiring”.

UCC Works Green Campus Intern, Susan Butler, was awarded the “Star Award” by UCC Career’s Service and Green Campus Committee Chair Asha Woodhouse was awarded “Individual of the Year” at the annual UCC Societies Awards.

5. Link to learning on campus

As part of the STARS Accreditation process, an inventory of all modules in UCC was carried out, which revealed that 6% of modules either directly addressed sustainability or were related to one or more SDG. 45% of academic disciplines taught at least one module related to sustainability. This inventory was very conservative and in the coming years there are plans to incorporate sustainability more widely into the curriculum. UCC's new Academic Strategy will be launched in the Autumn, and the draft strategy commits that "Our institutional focus on transdisciplinary thematic areas will be informed by UCC's Research Strategy as well as external drivers including the United Nation Sustainable Development Goals. Finally, in this context, UCC's Strategic Plan 2017-2022 underscores our ambition to implement UCC's Sustainability Strategy 2016."

In addition, AY 17/18 the following highlights in relation to teaching and learning on campus:

- UCC's University Wide Module in Sustainability

AY 17/18 was the third year of UCC's Sustainability Module. This year, as well as being delivered in the classroom in UCC, the module was also streamed live into the Ludgate hub in Skibbereen and the Dingle hub in Kerry. A total of 30 people took the module remotely, while 70 people registered for the UCC component. The interdisciplinary module is delivered by staff across the Colleges of ACSSS, Medicine and Health, SEFS, and Business and Law. The module introduces participants to the complex challenges of sustainability at global and local levels through lectures, online web-blogs and multimedia group projects.

- UCC-UMASS-UNAL Sustainability Summer School

In May 2018, a Sustainability Summer School was hosted by UCC as part of ongoing collaborations with the National University of Colombia (UNAL) and the University of Massachusetts, Lowell. The week-long summer school was attended by PhD students, postdocs as well as academic and sustainability staff from all three institutions. The Summer School "Global Goals, Local Action: Making Sustainability Work" looked at sustainability through the lenses of food production, gender, peace, and economy. The week was broken up between lectures at UCC and a field trip to Skibbereen in west Cork. Some highlights included a "Sustainability Showcase" in the Aula Maxima where various members of the UCC community highlighted their activities in relation to sustainability and community engagement. In west Cork, the EU Special Envoy to the Peace Process in Colombia, Eamon Gilmore, gave a keynote speech on the role of sustainability in the peace process.



Fig. 11. International participants and organisers of UCC's Sustainability Summer School.

- UCC Green Campus, ERI and Blackstone LaunchPad Climathon

On the 27th October 2017, UCC's Environmental Research Institute hosted Cork's "Climathon", a global hackathon event coordinated by Climate-KIC to address climate challenges through innovation. The Climathon took place simultaneously across 247 cities that same day. UCC Green Campus joined forces with the ERI and Blackstone LaunchPad at UCC to run an event focussed on sustainable mobility solutions for UCC and the wider Cork City area. The 22 participants were presented with an overview of the transport challenges facing our cities by Aoife Long, ERI, and those specific to an urban campus like UCC by Stephan Koch, UCC Commuter Manager. Páidi O'Reilly (CUBS) gave an overview of how to ideate, while Jeremy Hayes (CUBS) introduced the concept of a business model canvas to help the participants to critically appraise their ideas. The six teams spent the day developing their ideas, before pitching to a jury comprised of Professor John O'Halloran (OVPTL), Stephan Koch and Dr Damien Organ (CUBS). Ideas ranged from a low carbon commuter bus service to a water taxi for Cork Harbour, but the winner on the day was TIDE, an interactive transport app that incorporated carbon savings and store discounts. There was a generous prize fund of €2,000 for the top three teams, sponsored by Climate-KIC, Blackstone LaunchPad at UCC and Energy Cork.



Fig. 12. “TIDE” Climathon winners, with judges and organisers.

6. Informing and involving campus and wider community

A new UCC Green Campus [website](#) was launched in Autumn 2017. The website is continually updated with new information on activities across all the key areas of our strategy, as well as blog posts and newsletters; quarterly [newsletters](#) are now produced and emailed to all exchange users. Over the summer of 2018, B&E took on an intern from the UCC MSc. in Management and Marketing. Killian Kelly has been working on our social media, writing blog posts, and developing new campaigns, as well as some other exciting outreach materials that will be launched in the autumn.

6.1 The campus community

Green Campus is specifically covered in all incoming students’ orientation talks, and, as mentioned, from AY17/18 all incoming first year students will receive a reusable mug in their orientation pack. The Sustainability Officer also speaks at the Clubs and Societies training days for committee members. A Green Campus stand is held at Clubs and Societies days, and at the Orientation Café for all new staff.

Through the “Saver Saves” scheme, UCC’s energy manager emails teams in each SEU every Monday to update them on their energy consumption over the previous week. A monthly update is also sent. A new campaign is being planned for the coming Autumn to engage all staff members more widely in their energy usage. Green Campus is also working with the USI’s “SAVES2” campaign, which is targeting students living in campus accommodation through competitions and peer-to-peer outreach campaigns.

The GCC are continuing to engage with UCC Health Matters and the Health Promoting University Initiative. The Sustainability Officer now co-convenes the Health Matters working group on Sustainability, Food and Nutrition, while the Transport Manager sits on the Active Travel Group.

In keeping with our ambitions to be a “disposable free” campus, a UCC Farmer’s Market was launched in Spring 2018. The market started on the 27th February and ran until the end of April. Stalls included:

- “The Filling Station”, which sells household products in bulk, so you can bring you own containers and refill them.
- “All the Glisters”, which sells reclaimed and vintage jewellery.
- “Martin’s Homemade Jams”, which sells homemade jams, chutneys and marmalades.
- “Organic Republic”, selling their fresh produce alongside pre-packed veg boxes.
- “Chicco Foods”, homemade chutneys and relishes.

The trial market indicated that there is significant appetite in UCC for a market of this type. It is hoped that over the next year, it might be possible to amalgamate the “sustainability market”, with the other food markets that run periodically on campus and are managed by the student centre. These would also be open to the wider public and form part of UCC’s strategy to engage better with the local community.

6.2 The wider Community

UCC Green Campus continues to engage with the CARL (Community Academic Research Links) office. Green Campus contributed to the development of the UCC Civic Engagement Plan “[Together with and For the Community](#)”. Green Campus are also members of the new Student’s Union Community Engagement Group, which hopes to improve the relationship between UCC and local residents. As part of this group a fund is being established whereby local residents could bid to pay for small projects that would enhance the local community.

UCC Green Campus and Glucksman Galelry educational outreach

Green Campus as working with the Glucksman Gallery on their educational outreach programmes with local schools. The “Classroom Museum” project, for example, takes artworks by a local artist Fiona Kelly to three primary schools in rural Cork: Glanworth National School; Scoil Bhride, Rathcormac; and Kilmagner National School. Fiona’s work explores themes of environmental degradation and urban encroachment. At the workshops, the schoolchildren are encouraged to explore the themes of the artworks, and then create their own in response. The students begin by looking at the artwork in detail, then looking at their local community, their local environment and then finishing with global environmental issues. The project is supported by Cork County Council Arts office and UCC Green Campus were delighted to provide background information on the environmental themes that would be explored in the workshops. The students produced some beautiful and thought-provoking artworks, which were then displayed in the Glucksman Gallery in June. Ultimately, the outputs of the projects will feed into a resource pack for use in schools across the country, and perhaps even further afield.



Fig. 13. A selection of pieces created by children as part of the “Classroom Museum” project.

Sick of Plastic Day of Action

On June 16th and 17th, the UCC Green Campus committee hosted a stand at the Cork Summer Show. This show is attended by families and members of the farming community from throughout Munster. The theme of our event was the importance of pollinators in agriculture and food production, and actions that individuals and communities can take to contribute to the All-Ireland Pollinator Plan.



Fig. 14. Love our Library Team and UCC Students join forces to declare they are #sickofplastic

In April, as part of the national day of action against plastics organised by Friends of the Earth Ireland, UCC students and Library staff got together to make an art installation from the plastic bottles that were disposed of over the course of a month in the library. The “making waves” installation was

accompanied by an information stand, encouraging the campus community to “shop and drop” as part of the national campaign.

Environmental Research Institute Climate Lab

The Environmental Research Institute at UCC established its Climate Lab initiative in 2016, which brings together internationally leading researchers to provide a platform for collaborative, integrated research enabling the transition to a zero carbon and climate resilient economy and society. It has over 50 live research projects focused on climate action across a range of areas including: energy modelling, marine renewables, biofuels, building national platforms to support adaptation, community engagement, climate technologies, atmospheric chemistry and financial appraisal of renewable energy assets, carbon liabilities and climate law and governance. The Climate Co-Lab runs a series of seminars open to the wider community, by experts in the field. The seminars to date included:

- Michael John O'Mahony, Assistant Environmental Education Unit Director, An Taisce "An Taisce and UCC, partnership for a greener campus". Thursday, May 24th at 19:00 - 20:00 in West Wing 5, Main Quad.
- Dr. J. Patrick Megonigal, Smithsonian Environmental Research Center, USA "Carbon Cycling at the Coastal Terrestrial-Aquatic Interface". Tuesday, May 22nd at 13:00 - 14:00 in the Ted Nevill Lab, CEC School of BEES, Distillery Fields, North Mall.
- Prof. Ganti S Murthy, Department of Biological and Ecological Engineering, Oregon State University, USA "Are biofuels sustainable? If so, under what conditions?". Monday, May 21st at 15:30 - 16:30 in Seminar Room 1.28, ERI, Lee Road Building.
- Dr. Paul Oquist Kelley, Minister for National Policies of the Republic of Nicaragua "The prospects for Climate Finance in addressing Climate Change". Thursday, April 19th at 12:00 noon in Room 304 of the Western Gateway Building.
- Dr. Simon O'Rafferty, Environmental Protection Agency "The role of co-design and sustainable communities in an environmental policy context". Monday, December 11th at 2:00 p.m. in Seminar Room 1.28, Environmental Research Institute, Lee Road, Cork.
- Dr. Matthew Hannon, Chancellor's Fellow of Technology & Innovation, University of Strathclyde Business School "UK Wave Energy Innovation since 2000 - Lost at Sea or a New Wave of Innovation?" Wednesday, November 29th at 2:00 p.m. in the main Seminar Room, Beaufort Building, Ringaskiddy, Cork.
- Dr. Diarmuid Torney, School of Law and Government, Dublin City University "The new geopolitics of climate change in the Trump era". Tuesday, 17th October at 6:30 p.m. in Room 1.07, Western Gateway Building, UCC, Western Road, Cork

Presentations

Over the past year UCC Green campus members have delivered presentation at the following campus sustainability events:

- An Taisce Changemakers Summit, Dublin, October, 2017.
- Green Campus Network Meeting, Dublin, Feb 2018.
- UI Green Metric Steering Committee Meeting, Semarang, Indonesia, April 2018.
- EAUC Conference, Keele, United Kingdom, April, 2018.



Fig. 15. UCC Students take part in An Taisce Changemakers Summit.

7. Green Charter

UCC's Sustainability Strategy was launched in June 2016 and is available to download on the [Green Campus website](#). The strategy focuses on nine key areas, which broadly mirror the themes and seven steps of the Green Campus programme.

UCC have also recently become members of the International Sustainable Campus Network, an "association of globally leading colleges and universities representing over 30 countries and working together to holistically integrate sustainability into campus operations, research and teaching". This commits UCC to the ISCN charter which focuses on three principles:

1. To demonstrate respect for nature and society, sustainability considerations should be an integral part of planning, construction, renovation, and operation of buildings on campus.
2. To ensure long-term sustainable campus development, campus-wide master planning and target-setting should include environmental and social goals.
3. To align the organization's core mission with sustainable development, facilities, research, and education should be linked to create a "living laboratory" for sustainability