

Dublin City University

Renewal for Green Campus Flag

June 2019

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1. Introduction

Dublin City University, originally established in 1989, is located to the north of Dublin City and is the most significant and comprehensive provider of university education on the rapidly growing and economically important Eastern corridor. DCU’s first An Taisce Green Flag was awarded in July 2014. There are five campuses - three academic, one innovation and one sports all within a 2.5 km radius with over 75 buildings (~300,000m2) on 128 acres. The figure below identified the locations.

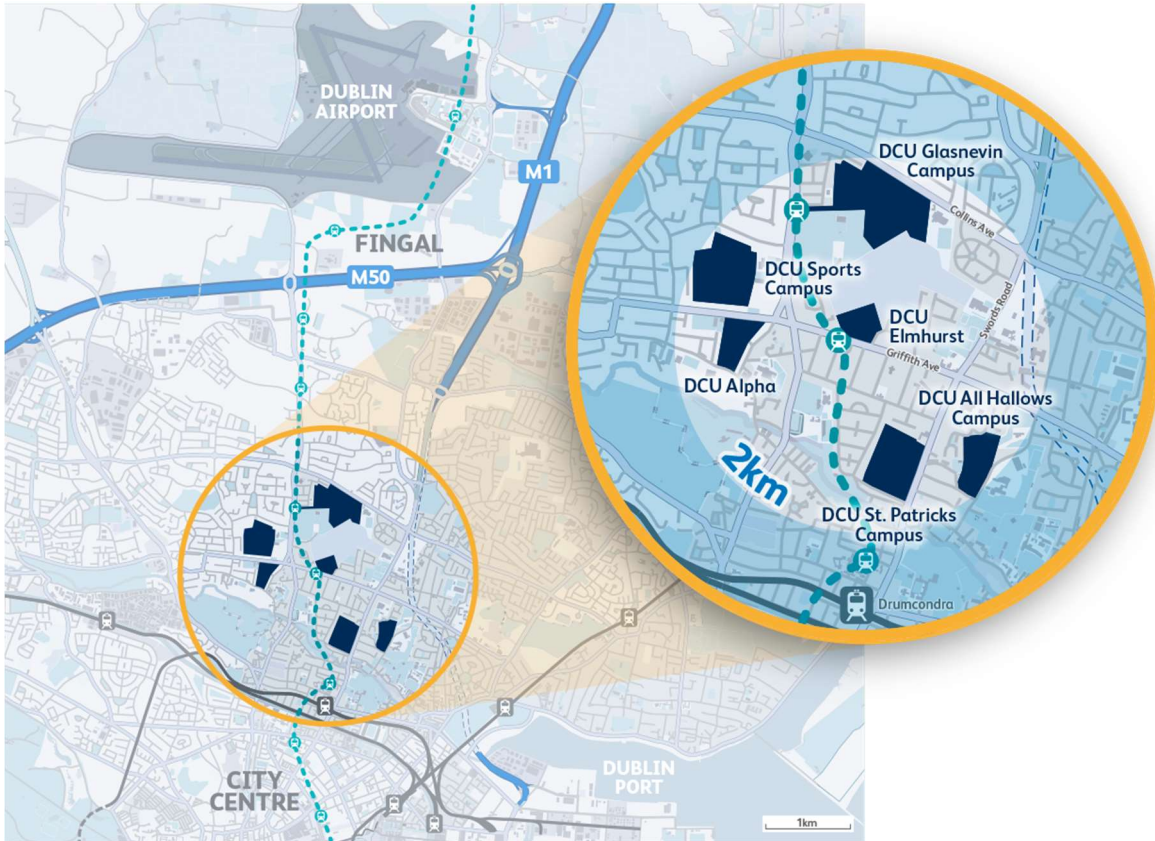


Figure 1: DCU Campuses 2019 (Note DCU Elmhurst is a green field site)

In 2018/2019 DCU has a total of 17,396 students (10,120 Female and 7,276 Male). The table below give a breakdown of the student numbers across disciplines at DCU and the type of award registered for. There are also 1,561 staff across all campuses.

Table 1: Breakdown of students at DCU in 2018/2019

Faculty Description	Female	Male	Overall
ADMINISTRATION	19	38	57
DCU BUSINESS SCHOOL	1764	1696	3460
DCUBS/HSS	132	197	329
ENGINEERING AND COMPUTING	421	1502	1923
HUMANITIES AND SOCIAL SCIENCES	2268	1371	3639
INSTITUTE OF EDUCATION	2830	782	3612
INTERNATIONAL OFFICE	17	10	27
NON AWARD VISITORS	26	20	46
OPEN EDUCATION UNIT	416	476	892

SCIENCE AND HEALTH	2227	1184	3411
Grand Total	10120	7276	17396

Type of Qualification	Total
minor/ non award	899
Postgrad Research	734
Postgrad Taught	2993
Undergraduate	12770
Grand Total	17396

2017 seen the launch of the new **DCU Strategic Plan: TALENT, DISCOVERY, AND TRANSFORMATION (2017 – 2022)**¹. In presenting this plan the DCU President Prof. Brian MacCraith said

“Our purpose must surely be to address the major challenges facing the world today and to develop the talent and knowledge that society needs.”

Continuing its mission statement DCU aims to transform lives and societies through education, research, innovation and engagement.

DCUs vision is to be a globally significant University of Transformation and Enterprise that is renowned for:

- the development of talent;
- the discovery and translation of knowledge to advance society;
- its focus on creativity and innovation;
- the advancement and application of technology, and
- **its commitment to sustainability.**

DCUs commitment to sustainability is clearly articulated in one of the nine strategic goals for the University over the next five year – Strategic Goal 8 : Place sustainability at the core of the university.

At the core of the Strategic Plan 2017-2022, DCU will seek to further develop and implementation the DCU Sustainability Plan created by a cross-institutional Sustainability Council. This council will also play a key role in monitoring the implementation of the plan.

From the narrower environmental perspective of sustainability, DCU will seek to embed best practice across the broad range of DCU multi-campus operations. It will establish ecological footprint metrics and set ambitious targets to reduce these. As an extension of this objective, a specific campus will be identified and developed as a carbon-neutral exemplar campus. Sustainability will play a key role in academic and research activities, with a view to enhancing the insight and commitment of students, the principles of sustainability and sustainability literacy will be integrated into the undergraduate curricula. Specific degree programme(s) will be developed at postgraduate level. Research focusing on sustainability will continue to be focused on and fostered. Such activity is likely to build on existing strengths and existing international collaborations.

¹ <http://www.dcu.ie/sites/default/files/marketing/digitalmedia/presidents-office/strategic-plan/index.html>

The DCU Sustainability Council is responsible for the further development, approval and implementation of the DCU Sustainability Plan. This cross institutional council, chaired by Dr. Declan Raftery, DCU Chief Operations Officer is currently being established with its first meeting planned for September 2018.



Figure 2: DCU Sustainability Council at initiation workshop in Rediscovery Centre

The DCU Sustainability Council –established in late 2018 - chaired by the COO with membership from all faculties, the SU and professional support units is responsible for the development and implementation of Sustainability Plan - this plan outlines the mitigation and adaptation actions needed for DCU to deliver a healthier and more sustainability University for students, staff and the local community. The Sustainability Plan establishes science based reduction targets across DCU operations including building management, energy, water, CO₂ emissions, transportation, operational resilience, public realm spaces and in the construction of new buildings.

Council Membership:

Chief Operations Officer* (Chair) - Dr. Declan Raftery

Director of Sustainability & Transport* (Secretary) - Ms. Samantha Fahy

Academic Staff Representatives (6)

1 representatives from DCUBS (*Faculty of Business*) : Dr Marta Rocchi

1 representatives from the Faculty of Engineering and Computing : Dr. James Carton/Dr. Lorna Fitzsimons (alt)

1 representatives from the Faculty of Humanities and Social Sciences : Dr. Diarmuid Torney

1 representatives from the Faculty of Science and Health : Dr. Jenny Lawler, Mr. Michael Burke

1 representative from Institute of Education: Dr. Orla Kelly

Representative of Faculty Administrative Peer Group TBC

Representatives of DCU Estates (3) Mr. Stephen Toomey, Mr. Richard Kelly, Ms. Kathleen Whelan

Representatives of Support / Service (Human Resources, ISS, Library, Research & Innovation, Finance, SS&D) offices (5)

HR - Mr. Gareth Yore

External Affairs - Ms. Jordana Corrigan

Research & Innovation - Dr. Rachel Barrett

Finance - TBC

ISS - Mr. Ian Spillane

Quality Office - Ms Celine Heffernan

Library - TBC

Nominees from Students' Union (2)

President - Mr. Vito Moloney Burke

VP Engagement & Development - Karl McGovern

2. Green Campus Committee

In January 2012, DCU formally began its campaign towards 'Green Flag' accreditation with An Taisce. A Green Committee was set up comprising of 15 staff and students. The figure below shows the flow of membership over the years.

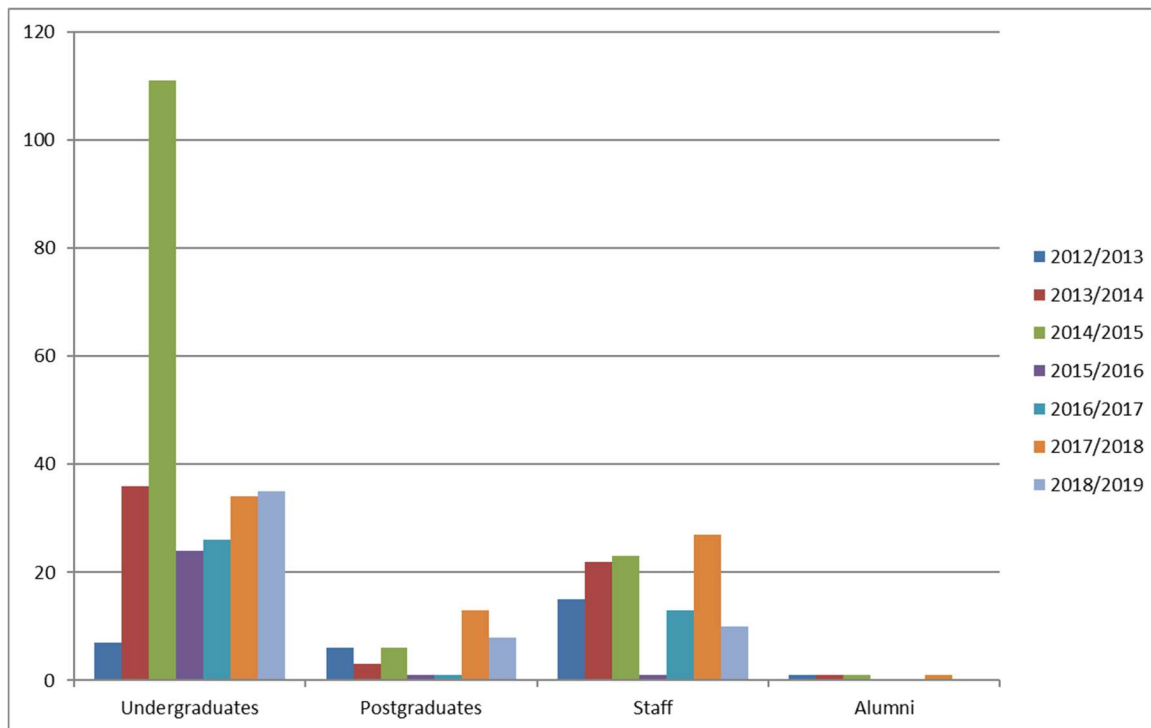


Figure 3: DCU Green Committee Membership 2012 – 2019

Review of 2018/2019 Committee

The Green Committee at DCU is renewed each year early in semester one. There is one Green Committee bringing together representatives from all campuses. A call to all staff and students via email was circulated early in term 1 with a very positive response. In addition, the students continued their work with the student established society DCU Sustainable Living. The society aims to not only advocate and educate, but to equip students with sustainability skills to last a lifetime to aid the individual to live a minimal damage and conscious lifestyle. Throughout the year the society led educational documentary screenings, clothes repair workshops, climate strikes, sustainable fairs/festivals, swap shops, upcycling workshops, beach clean ups, charity shop crawls and trips to sustainable communities.

There was an initial introductory Green Committee talk/meeting which was well attended by both staff and students. At these meetings the achievements of the previous year were reviewed and plans for 2018/2019 were discussed. There were several meetings throughout the year. Meetings were monthly and rotated on each campus.

Outlook for 2018/2019 Committee

Over the summer 2017, with the help of Conall Ó Dubhir, an interin working with Sustainability DCU from the Stockholm Resilience Centre at Stockholm University, significant work has focused on how to engage and facilitate a multi-campus green committee. The outcome has been the development of an online platform for the capturing and prioritisation of activities as well as a remote participation methodology for online meeting. There have been over 70 responses from right across campus.

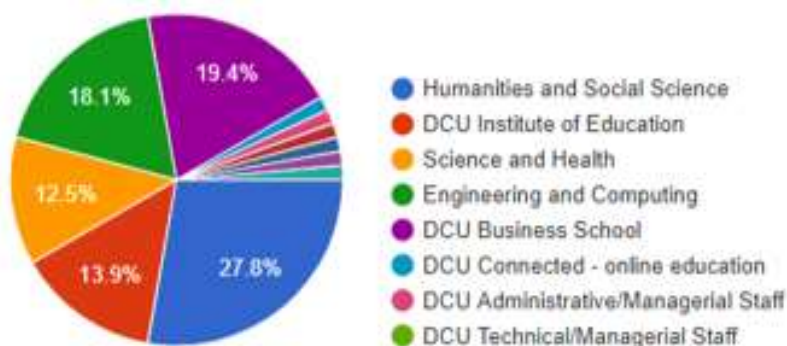


Figure 4. Breakdown of responses from each DCU faculty

The figure above shows the breakdown of the response rate to the online Sustainability/Green Committee. The table below compares this with the percentage of student in each faculty – this would appear to indicate that the response rate is in line with the representation of students with perhaps less student responding from the Business School and more from the Humanities & Social Sciences.

Table 2: Comparison of students per faculty to response rate on Green Committee Email

Faculty	Percentage of student 2018/2019	Response rate
Humanities and Social Sciences	28%	31.1%
Science and Health	13%	25.2%
DCU Business School	19%	12.6%
DCU Institute of Education	14%	19.4%
Engineering and Computing	18%	8.7%

There is a good breakdown across Staff, postgrads and undergrads and as well as giving their input on different projects there was also the opportunity to indicate if they wanted to join the Green Committee as can be seen in the table below.

Table 3: Breakdown of respondents

Role in DCU	Total	Membership of Green Committee		
		Maybe	No	Yes
Postgraduate Student	13	4	1	8
Staff	19	7	2	10
Undergraduate Student	40	5	0	35
Grand Total	72	16	3	53

It is planned that at least some of the committee meetings will align with DCU SU Green Day events with the SU VP for Engagement (Karl McGovern, Vice-President, Engagement and Development) also sitting on the DCU Green Committee. Note that these events are being co-supported by the DCU SU and the Union of Students under the EU funded Students Achieving Valuable Energy Savings (SAVES) programme.

Green Committee Associations

DCU Green committee has several links and associations

Organisation	Activity
Cloughjordan Eco Village	Memo of Understanding, Working together on shared learning journey.
DCU Sustainable Living Society	Strongly linked to green committee and activities to promote sustainability to student body
DCU Students Union	Work together with Sustainability and Green Committee to communicate message and organize and support events
Global Consortium for Sustainability Outcome (GCSO)	The Global Consortium for Sustainability Outcomes is a non-profit international consortium of universities that collaborate to implement and scale solutions to sustainability challenges. GCSO membership spans seven countries on three continents, enabling universities to work together in partnership with each other and with governments, businesses, schools and NGOs.
Sustainable Energy Authority of Ireland (SEAI)	DCU have several links to SEAI including grant aid under the Better Energy Communities Awards, as members of the Better Energy Communities Network, and also working with SEAI to increase awareness of energy reduction and efficiency by DCU Staff through energy awareness workshops
Union of Students of Ireland (USI)	DCU is one of the four universities participating in the EU funded SAVES (Students Achieving Valuable Energy Savings) Programme in conjunction with DCU Residences.
Other third level institutions	DCU participated in several forums and event where it works together with other HEI's to develop and delivery the sustainability message! Eg coffee cups campaign.
An Taisce Green Communities	DCU and particularly DCU community gardens work with the An Taisce Green Communities team to provide access and support for project in the community.
Mens Shed Association & Ballymun Mens Shed Association	DCU is working together with the Mens Shed association and Ballymun Shed to establish a Shed on the DCU Community Garden.
Dublin City Council	DCU Sustainability/Green Committee have several engagements with DCC including the removal of hot

Organisation	Activity
	water from public sanitary facilities, refurbishment of sheds on the DCU Glasnevin Community Garden and the Adopt a Street programme
Drumcondra Tidy Towns Association	DCU Sustainability/Green Committee are working with the Drumcondra TT Ass to help increase biodiversity on the Drumcondra facing perimeter of St. Patricks Campus including new flower baskets, propagation of native ivy, support maintenance of DTT planters etc
Phibsboro Tidy Towns Association	DCU Sustainability/Green Committee are working with the Phibsboro TT Ass to raise awareness on waste and water issues
The DCU Vegan Society	To support positive choices in the DCU restaurants
DCU Cycling Club	To promote cycling facilities on campus and intercampus
IBikeDCU Society	To promote biking, basic skills incl rules of road etc.
Smarter Travel Campus Group	Working to achieve a 90% of campus users using a sustainable form of transport.
DCU Office of Student Life	Several linkages including sustainable bottle/cups, community employment and engagement
Rediscovery Centre	Several linkages including weekly bike clinics, fashion workshop and education and awareness raising programmes.
North Dublin Chamber of Commerce (NorDubCo)	Working on sustainable project implementation including hot water and policy recommendations
RCE Dublin United National Regional Centre for Expertise in Education for Sustainable Development	RCE Dublin is coordinated by Dublin City University (DCU) and its partnership includes educational organisations (DCU, Educate Together), Public bodies (An Taisce, Dublin City Council), industry-academia networks (Sustainable Nation) and non-governmental organisations (FightingWords, Exchange House Ireland and ECO-UNESCO).
National Transport Authority	Smarter Travel Campuses programme and several support awards to improve transport related initiatives at DCU

3. Environmental Review

This section will give an overview of Energy, Water, Waste, Biodiversity and Transport at DCU in 2018/2019.

Energy

DCU continues to work toward its agreed target of 33% energy reduction by 2020 on 2010 figures and has undertaken several infrastructural projects include LED retrofit, insulation upgrades, building fabric and glazing upgrades with several more in the pipeline. In 2017 DCU exceeded the 33% target reaching 35.3% and while provisional results for 2018 have not yet been confirmed the provisional results indicated that DCU will reach 43% energy efficiency.

Energy Performance Indicators - 2017

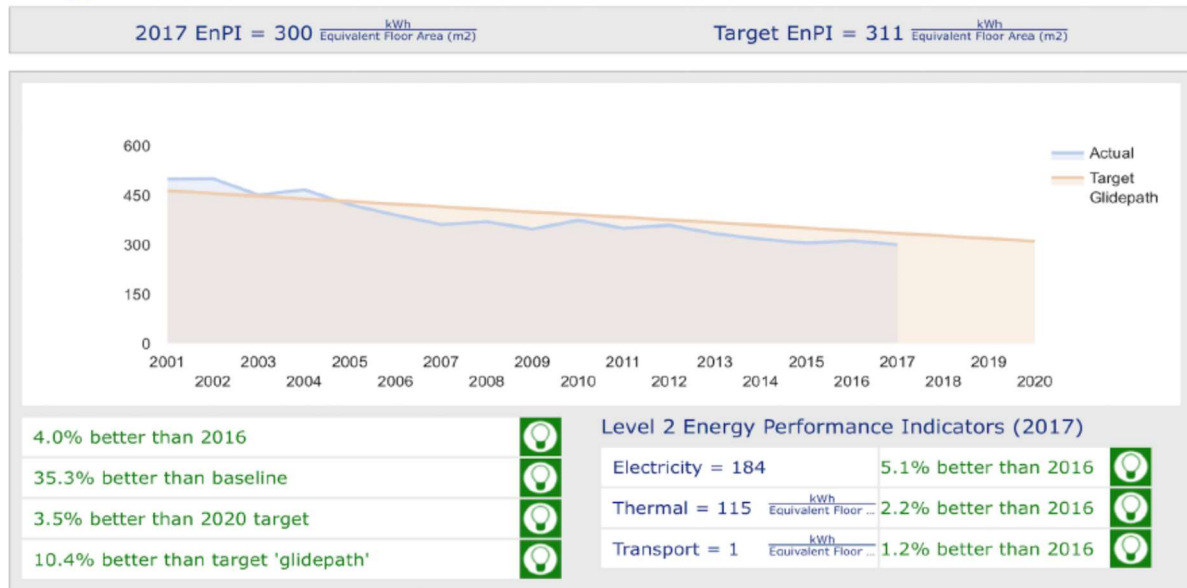


Figure 5: DCU SEAI M&R for 2017

This should of course not be confused with absolute energy reductions and ultimately CO2e emissions. DCU does strives to reduce overall consumption in 2018 the total consumption across all the DCU campuses fell by 80,348 kWh (figure below). This was despite the increased need for heating that was caused at the start of the year from abnormally cold weather.

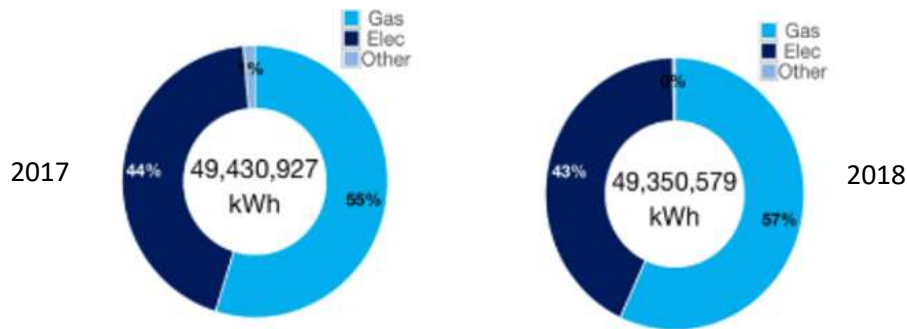


Figure 6. Energy consumed in 2017 vs. 2018

This reduction in energy is largely due to the strong energy management of the university. DCU achieved ISO 15001:2011 certified in 2017 (figure 12) and makes efforts annually to manage and reduce their energy consumption.



Figure 7. DCU ISO 15001:2011 Certification

As with all public sector bodies DCU makes annual returns to SEAI under the energy consumption in the public sector scheme. The DCU report based on the data collected through the monitoring & reporting system can be seen in the figures below.

Water

With a specific focus on addressing water as a theme in 2016 DCU commissioned LowFlow to undertake a full audit of water consumption on the St. Patricks and All Hallows Campuses. In addition, leak detection surveys were undertaken on Glasnevin campus following the previous year's

Waste

DCU continues to closely monitor its waste and is working towards reducing total waste. The table below identified the progress made between 2017 and 2018. The campus had an overall 12% reduction of on waste.

Table 4: DCU Glasnevin Waste for 2017 and 2018 in metric tonnes.

	MMW to Landfill		*Recovery		Compost		Recyclables	
2018	60.53	↓	529.62	↓	73.19	↓	151.63	↓
2017	65.13	↓	578.92	↓	81.63	↓	189.48	↓
	Glass		WEEE		C & D		Total	
2018	33.43	↓	31.33	↓	6.0	↑	885.73	↓
2017	45.37	↓	44.46	↓	0	↑	1004.99	↓

Percentage Breakdown of DCU Waste 2018

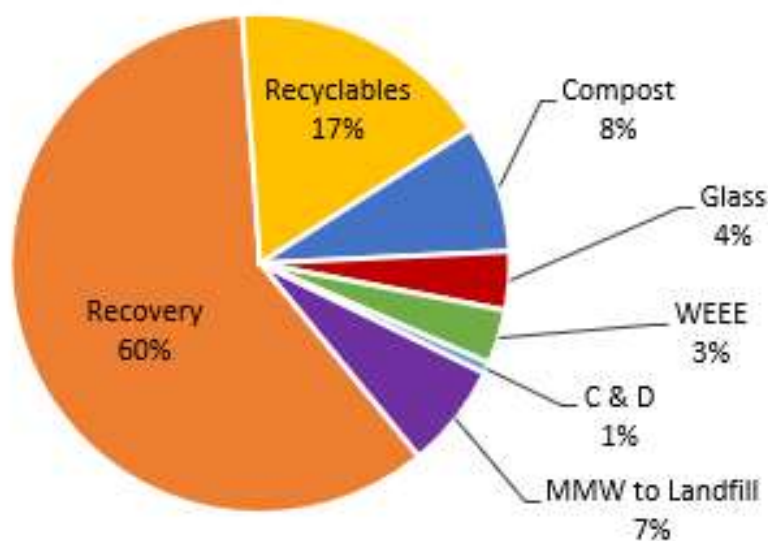


Figure 10. Percentage breakdown of 2018 DCU waste all campuses

Biodiversity

As part of the Sustainability Council actions in 2018/2019 DCU commissioned a full Biodiversity plan for the campus including how such a plan should link to the national pollinator plan. This plan has not yet been approved by the DCU Sustainability Council but a copy will be forwarded just as soon as it is.

In summary this plan covers DCU's commitment to protecting biodiversity and embedding this protection into decision making across all sectors of the University including: building and grounds management, public realm spaces and in the construction of new buildings.

The overall aim of DCU's Biodiversity Action Plan is to enhance and protect biodiversity, and to ensure that every member of the DCU community understands its importance in our lives.

This Biodiversity Action Plan has been developed to:







- I. Highlight DCU's unique biodiversity value
- II. Propose recommendations to maintain the University's biodiversity
- III. Enhance pollinator diversity and increase the carbon absorption by vegetation
- IV. Identify opportunities for the University to enhance and protect its biodiversity
- V. Communicate the importance of biodiversity to the DCU community
- VI. Support the Dublin City Council Climate Change Action Plan 2019-2024, the All Ireland Pollinator Plan 2015-2020, the EU Biodiversity Strategy and the United Nation's Sustainable Development Goals.

Transport

Dublin City University is now a multi campus university and the second largest commuting hub in the north Dublin region after the airport. In early 2018 DCU undertook a survey of all staff and students across all incorporating institutions to assess current transport choices vs a similar survey undertaken in 2017. This project was undertaken in conjunction with the National Transport Authority. The survey received over 2,000 responses from staff and students in 2018 with an overall response rate of 12%.

STAFF Analysis

Table 5: DCU All Campuses Staff comparison 2017 V 2018

Answer Options	2017	2018	Change
Driving a car	52%	51%	1% 
Bus, minibus or coach	14%	16%	2% 
On foot	13%	12%	1% 
Bicycle	16%	15%	1% 
Train or DART	4%	4%	0% 
Other	1%	2%	1% 

STUDENT Analysis

Table 6: DCU All Campuses Student 2017 v 2018

Answer Options	2017	2018	Change
Driving a car	23%	19%	4% ↓
Bus, minibus or coach	41%	42%	1% ↑
On foot	19%	22%	3% ↑
Bicycle	9%	7%	2% ↓
Train or DART	7%	7%	0% ↔
Other	1%	3%	2% ↑

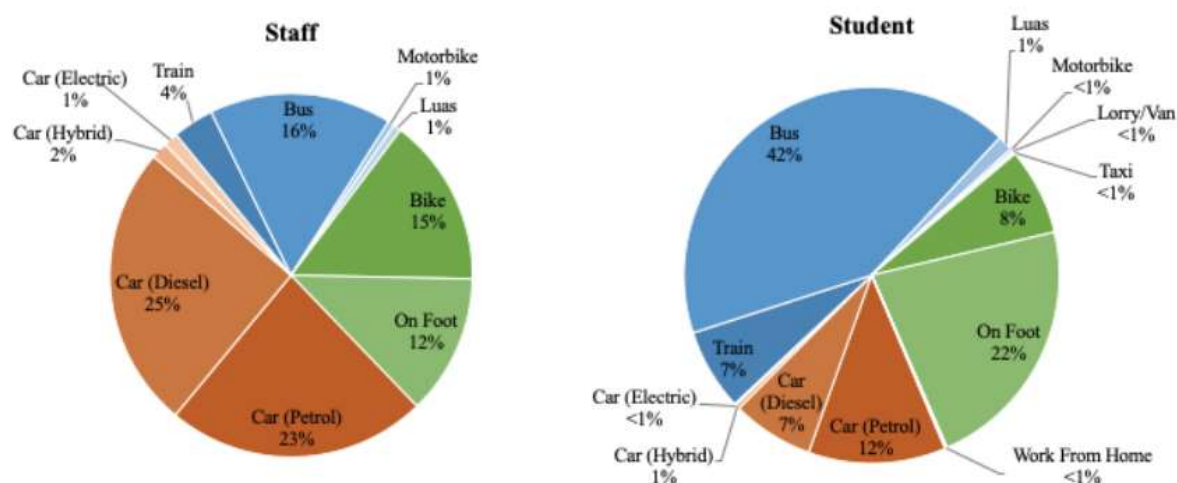


Figure 11. Percentage breakdown of each mode of transport for staff versus students

Summary

Table 7. Summary of Staff and Student sustainable and non-sustainable transport choices by percentage in 2017 v 2018

	Students		Staff	
	2017	2018	2017	2018
Sustainable Commute	76%	78%	47%	47%
Non-Sustainable	23%	19%	52%	51%
Other	1%	3%	1%	2%

Carbon Footprint

DCU seeks to actively contribute to the creation of a post carbon world and in doing so it is seeking to become a carbon neutral campus. Following the **Greenhouse Gas Protocol Corporate Standard** DCU carried out a comprehensive carbon footprint for the 2018 calendar year. The university included a number of Scope 3 categories that had not been included in previous year’s carbon footprints (figure 25). Total DCU emissions for 2018 was 64,212 tCO₂e.

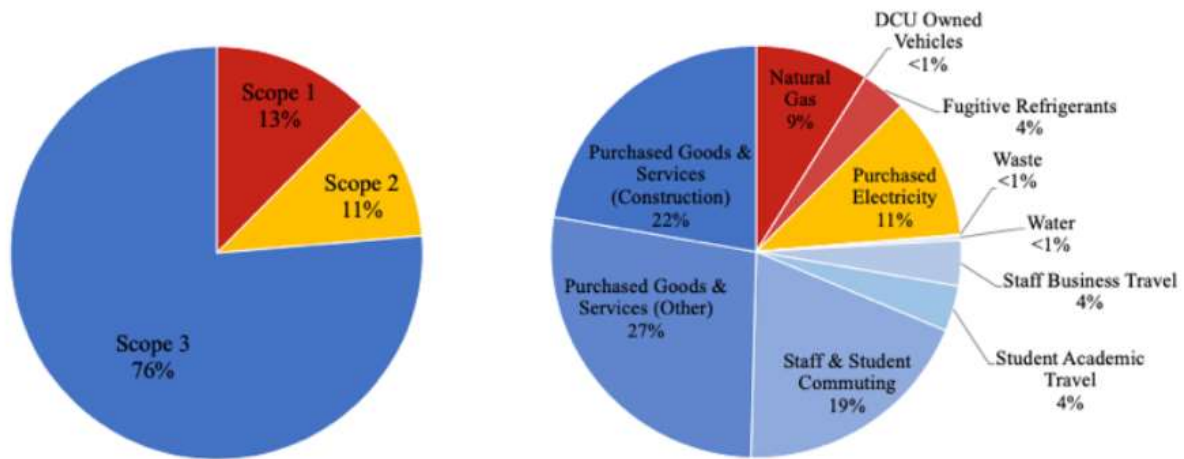


Figure 12. Total breakdown of DCU CO₂e emissions in 2018

Most overall emissions could be categorised in to four main categories: procurement related emissions, transport related emissions, construction related emissions and heat & energy related emissions (figure 26).

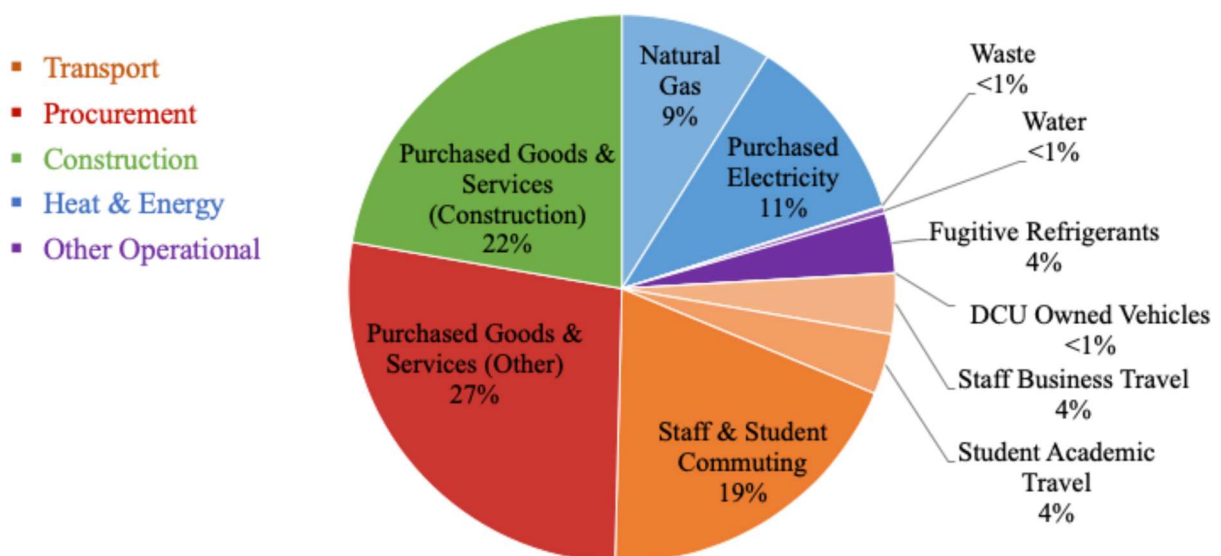


Figure 13. Further breakdown of DCU's carbon footprint

4. Action Plan for 2018/2019

The DCU Green Committee endeavours to keep our Action Plans up to date. They are available on a share drive for individuals to update. This sometimes does happen! However, most updates are done by the Sustainability Manager with information supplied by different groups etc. New actions are added to the end of the list to ensure that where projects have not been finished that they are not forgotten and have to be reinvented. It is evident from the Action plans which measures are new and which are ongoing. One of the ongoing challenges is the capturing of ideas and suggestions from enthusiastic new members and the management of their expectations on who should deliver the absolutely fantastic solution that they propose. An attempt to manage this in 2018/2019 was the circulation of a feedback form to all staff and students – part of this form was a question on what the individual themselves could do to make the DCU campus more sustainable – there were over 70 responses. The figure below breaks down the theme of these responses across the An Taisce Green Campus themes.

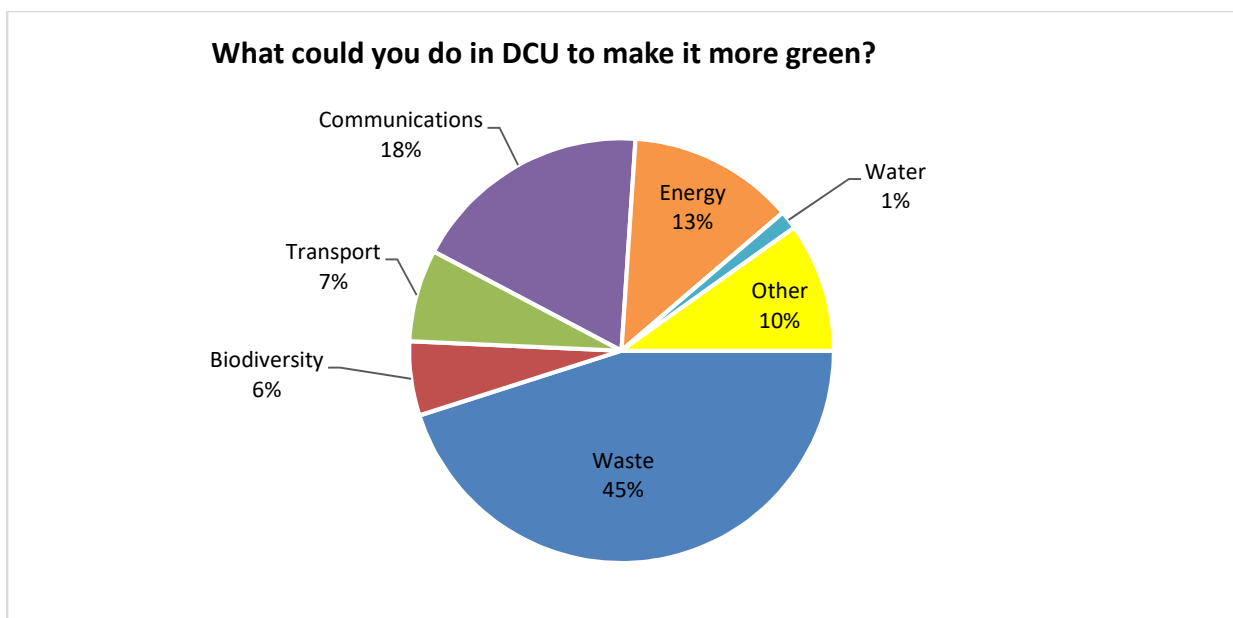


Figure 14: Thematic analysis of ALL responses to individual contribution, note that in several cases more than one theme was identified in the response.

It is really interesting to note the prevalence of waste focused responses. While, of course, waste is a significant issue its impact on the carbon footprint of the University is significantly (many orders of magnitude) less than for instance energy or transport. It could be that people 'see' waste more frequently in their daily lives and feel that they can make an impact on it.

In addition to this open ended question specific projects – as identify by previous green committees – were proposed to see which would be most likely to gain support. The figure below shows a breakdown of support for these projects with sustainable food promotion gaining the highest level of support at 58% of respondents supporting it. Other highly supported projects included a beach clean up and recycling workshops.

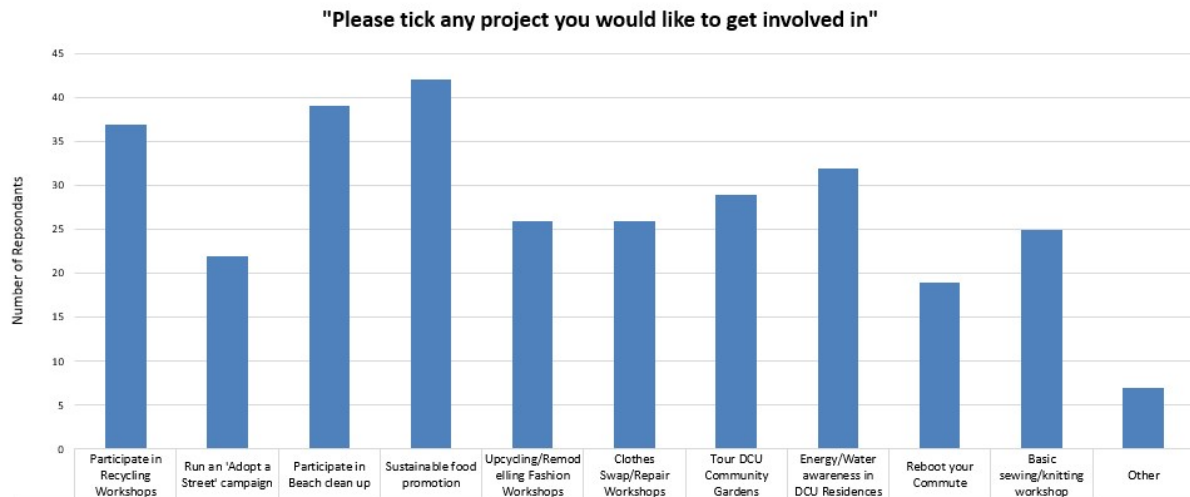


Figure 15: Support for specific projects at DCU

Below is a summary of the proposed actions planned for 2018/2019 – these have been drawn from suggestion from the all staff/student engagement

Energy

- Maintain ISO 50001:2011 Standard
- Develop and communicate an energy/carbon management plan
- Continue raising awareness of energy consumption by Students, Staff and Visitors
- Energy consumption awareness & behavioural change programme in DCU Residences with SAVES Prog
- Seek larger portion of renewable technology (Solar/wind)

Water

- Water consumption awareness & behavioural change programme in DCU Residences with SAVES Prog
- Continue to identify leaks and fix
- Communicate water consumption data to all staff and students
- Treat as a valuable resource
- Continue 'Adopt a Street' campaign around your campus
- Drinking water fountains on all campus

Waste

- Continue efforts for the removal of all NON Recyclable Cups on ALL CAMPUSES
- Communicate waste information to all staff and students
- Ensuring University keeps its commitment to remove single use plastics by end 2020 (all cups, glasses etc by Dec 2018 – plastic bottles by 2020)
- Bin-less office pilot using desktop sorter

Biodiversity

- DCU Community Garden – Programme of works and engagements
- Pollinator plan for DCU
- Increase awareness of the importance of biodiversity
- Update biodiversity database
- Increase biodiversity on campus through tree planting events

Transport

- Mobility management plan support active commuting
- Continue Smarter Travel Campus' Walking and Cycling Challenges
- Support for 'Like Bike' in Week 11

Communications

- Info wall on all campus providing current consumption data on key metrics including initiatives to reduce and scope to accept suggestions
- Create a Green Guide for DCU Students
- Whole day event/fair – to highlight sustainability, recycling, SDG etc.
- Develop leadership skills – possible talk from Youth lab
- Campaign for Meat free Mondays
- Promoting awareness of Sustainable Development Goals (the Sustainability Living Society with support for several clubs/societies etc have launched a 17 week campaign to promote the UN SDG)

A full list of the completed and ongoing actions plans for the DCU Green Committee are in Appendix 2. These are in the appendix as they make more sense when seen as part of the total document rather than a snippet.

5. Monitoring and Evaluation

This section covers the monitoring and evaluation of actions undertaken in 2018/2019.

Energy

DCU Estates is working with the DCU Green Committee and together working toward maintaining ISO50001 Certification and further exceeding our energy efficiency targets. To promote the actions that are being undertaken, i.e. LED projects, light sensors etc DCU Estates issue a regular newsletter. In addition in 2018 DCU Sustainability was awarded funding under the QUID programme to put information screen in place across the campuses to highlight the sustainability activities including information on current consumption etc.



Saves Project

DCU continues its involvement in this project and is working closely with the DCU Students Union, Sustainability Office and Green Committee to capitalise on the potential impact of this innovative behavioural change programme.

Irish Targets

University	No. of Dormitories	No. of Students in dorm
Dublin City University	15	1,400
NUI Galway	8	1,100
NUI Maynooth	23	986
University College Cork	5	1000

DCU Sustainable Energy Community

DCU Sustainability have established a Sustainability Energy Community at DCU and over the coming months there will be the opportunity for all staff at DCU to access a Home Energy Kit to allow them to identify their private home energy needs and workshops will be hosted across all campuses to advise on what grant aids are available to address the energy needs and supports given to help in completing application – once the model is established for staff the programme will be rolled out to our local community around our campuses.



Table 8: Table of energy consumption in 2018 for DCU Academic Campuses

2017	Elec (MWh)	Gas (MWh)	Total energy (MWh)	Carbon (tonne)	Students (FTE) 18/19	Carbon tonne per student
DCU All Campuses	22,244	27,187	49,431	13,958	16,080	0.87
2018	Elec (MWh)	Gas (MWh)	Total energy (MWh)	Carbon (tonne)	Students (FTE) 18/19	Carbon tonne per student
DCU All Campuses	21,221	28,130	49,351	12,914	16,080	0.80

As can be seen from the table above both the absolute energy carbon footprint and the energy carbon footprint intensity per student has reduced from 2017 to 2018.

Water

Water continues to be a concern at DCU. The DCU Estates office has undertaken several measures to enable the identification and rectification of leaks on all campuses and this was reflected in both the consumption and financial reports in 2018.

World Water Day

Supported by DCU Healthy Campus, DCU Water Institute and DCU Trispace, the DCU GC ran a water day event to highlight the impact of climate change on potable water and its availability.



Figure 16: World Water day event at DCU

Water Badge

Following significant work from the Estates office under the ISO50001 there has been a significant reducing in the number of leaks on campus. In June 2019 DCU was issued with a badge under the Certificate Water Steward Programme for its efforts.

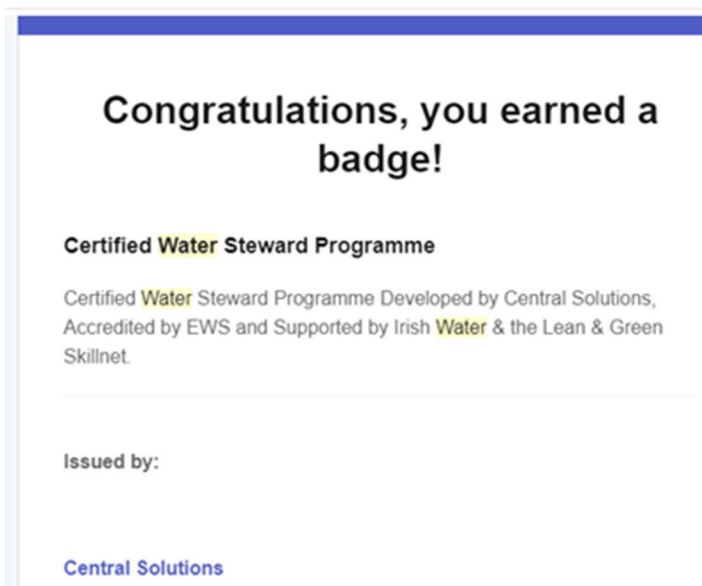


Figure 17: Water Badge issues in June 2019

Waste

Figure 29 below shows DCU total waste for 2018 by waste type versus 2017. As discussed in environmental review, overall waste has decreased from 2017 to 2018.

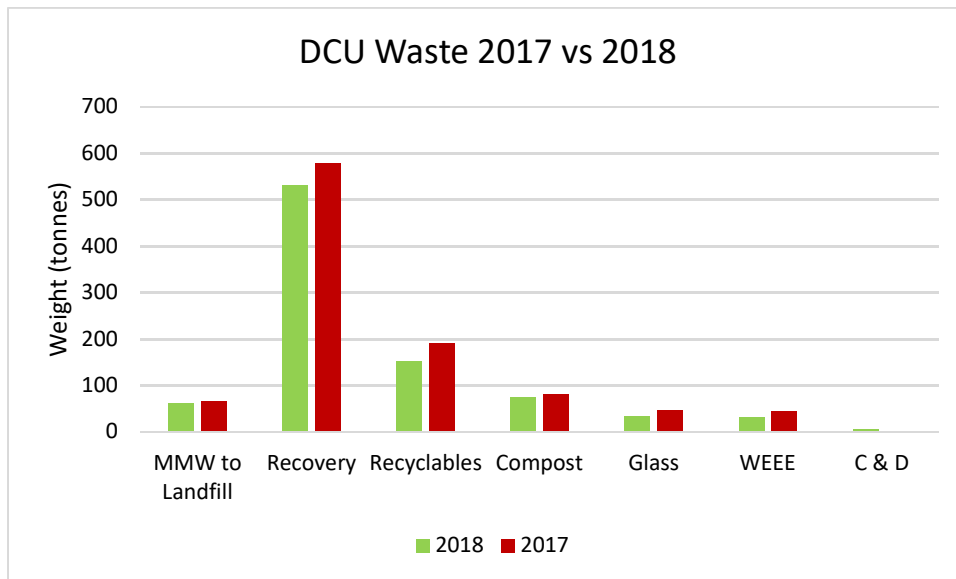


Figure 18. Comparison of DCU waste by weight 2017 vs 2018

Single Use Plastic Ban

On March 2018 DCU went green and banned single use plastics across the university. All single use cups/forks etc were phased out by December 2018 and plastic bottles are to be phased out by 2020. This initiative is progressing albeit much work is still needed.



Figure 19. DCU bans single use plastics in 2018

Fast Fashion

To mitigate the impact of the fashion industry DCU Sustainable Living Society established a weekly swap shop with Nu Wardrobe in the DCU SU which ran very successfully in 2018/2019 and plans to return in the new academic year.



Figure 20: DCU Sustainable Living Society with support from DCU SU in delivering a weekly Fashion swap shop

DCU Segregated Bin Education

During the 2018/19 academic year DCU ran a number of initiatives increase education about what waste goes in to each bin. DCU and the Green Committee ran mandatory workshops for on campus residences on how to correctly separate waste. DCU also installed many three bins with very clear pictures to inform students and staff exactly what goes in to each bin.



Figure 21. DCU waste workshops and segregated bins with signage.

Recyclable Coffee Cups

DCU is working with An Taisce and our other partner Green Campuses to target the use of non-recyclable coffee cups. This is a project that DCU Green Committee members have been working on for many year. Over the past year Mariane Galpo has undertaken to do a business case analysis on non-recyclable coffee cups. (See Appendix 3 for full report)

The table below indicated how many coffee cups DCU consumes across all our campuses.

2,697 PER DAY
13,485 PER WEEK
701,200 PER YEAR

Taking the Environmental Footprint Calculator Considerations from Keep Cup [www.keepcup.com/userfiles/files/KeepCup%20Calculator%20Considerations.pdf]

Table 9: The impact and cost of non-recyclable coffee cups

Non-Recyclable Cup Waste		
Average disposable cup	0.011	kg
Plastic lid	0.003	kg
Paper sleeve	0.005	kg
Total weight	0.019	kg
Total Annual cups at DCU	701,200	
DCU annual non-recyclable cups waste	13,323	kg
	13.3228	tonnes
Total DCU waste 2016	912.008	
% of DCU total waste	1.5%	
Average price of cups/lids/sleeves	0.12	€
Total Cost	84,144	€

To try and combat this wanton waste DCU has again made their reusable cup available to all staff and students at an introductory rate of €5.50 from the DCU Students Union. The university is also currently developing a deposit and return scheme for coffee cups in partnership with Trinity College Dublin. The Co Cup scheme would mean students could pay a monetary deposit which they receive back upon returning the cup. This would eliminate the need for any “convenience” disposable cups needed as back up on campus. The Co Cup will hopefully be launched in April 2019.



Figure 22: The Co Cup scheme

Food Waste

Several efforts were made by the DCU Green Committee in 2018/2019 to improve the more sustainable food options on campus and reduce food waste. There was a lot of support from DCU Trispace. A small grant has been awarded to DCU to establish a zero waste sustainability kitchen which is planned for the DCU All Hallow Campus. Other initiatives will continue across other campuses in 2019/2020.



Figure 23: One of the sustainable food initiatives at DCU in 2018/2019

Paper Waste at DCU

In 2018/2019 the arts team at DCU SPC continue to reuse and upcycle materials as part of their course work.



Figure 24: Art from re/up cycled materials at SPC

Litter surveys

This action has not been completed in 2018/2019.

Pack it up Pass it on

This activity continues each year and is now being managed by the DCU Residences themselves. They also now incl food etc which are donated to charities.



Biodiversity

The Green Committee at DCU has from its inception been very engaged in biodiversity both on and off campus – below is a list of some of the projects and initiatives that DCU and its Green Committee have recently been involved in.

DCU Biodiversity and Community Gardens Spaces

A major recent achievement has been the identification and cross campus agreement on designated biodiversity and community garden spaces across all DCU Academic campuses (see Environmental Review Section pg 24).

In addition to this DCU continues to run a vibrant and active community garden on the Glasnevin Campus. The Community Garden at the Dublin City University Glasnevin Campus aims to

- Be a welcoming space for the whole community where organic fruit and vegetables are sown, harvested and consumed by members of the community garden,
- Provide an opportunity for intergenerational and cross community education and training through active working/volunteering in the garden and tutor lead on site training courses,
- provide an space on a university campus for joint and shared learning across all garden members from academia, under and postgraduate students, local community members, enterprises, community employments schemes, Men's Shed Associations etc
- Be a living lab garden for the demonstration of new and innovation solutions to local and global issues, social, cultural, economic and environmental.

With the support of the Garden Gnomes DCU community garden provides a weekly organic fruit and veg stall for staff, student and general public.



Figure 25: Martin, Jason and Paddy - our very own Garden Gnomes !

Community Supported Agriculture

Activities in the garden include the cultivation and planting of fruit and veg, training and development of Community Employment placements. DCU has signed a formal Memorandum of

Understanding with the Eco Village in Cloughjordan. As part of this new partnership we aim to further develop the community support agriculture aspect of the community garden and potentially expand to all campuses.

Transport

A significant focus has been placed on sustainable transport theme by the DCU Green Committee over the past number of years. DCU is an active partner in the NTA Smarter Travel Campus Programme. The DCU Mobility Management Plan aims to have 90% of commuters to DCU avail of a sustainable form of transport. Major efforts toward this target were :

- Cycling on Campus initiatives
- Public Transport connectivity

Cycling on Campus

Bicycle Clinics

Bicycle clinics on a weekly basis on the Glasnevin campus and monthly on the St Patricks Campus where staff and students can get their bikes serviced for free. Initiative supported by the Sustainability Office/OCOO and the DCU Students Union. There are approx 18-20 bikes services on a first come first served basis each week on the Glasnevin Campus and approx the same at the monthly clinics at SPC.

Shower Facilities

With support from the NTA new shower facilities have been installed on the All Hallows Campus to support those walking and cycling to work.

DCU becomes Chapter of the Cycling Without Age movement

DCU signs up as the first Irish University to establish a Chapter of the Cycling Without Age movement. This is a liaison between School of Nursing and the Age Friendly University with the intension of establishing and providing an engagement with local nursing homes in the north Dublin region. (<http://cyclingwithoutage.org/>) In early 2019 DCU got its first Cycling without age bike and will shortly commence engagement with local nursing homes.

Cycling Parking

Additional cycling parking is being provided on both the Glasnevin and St Patricks campuses to meet demand. Sheffield stands are replacing the very poor bike stands in the undercroft at SPC. The NTA provided €50,000 to support these initiatives including the installation of a secure bike park on the Glasnevin campus.

DCU Bleeper Bikes

DCU continues to work with Bleeper Bikes and promotes them as a positive intercampus options. It is hoped that an electric version will also be included in summer 2019.

Public Transport Smarter Travel Campus

DCU continues to work with the NTA under the Smarter travel programme and in 2018 DCU were the over all winners of the commuter challenge



Figure 26: DCU Commuter Challenge - Smarter Travel Winners

Cycle right Pilot

In 2018/2019 DCU participated in a cycle right pilot with three staff members were trained to provide courses for those wishing to start cycling to DCU or build their confidence. This training is now complete and for orientation week 2019/2020 students and staff will be offered the opportunity to participate in a support cycle ride between campuses as a start to the initiative. There are some concerns that the infrastructure around some roads leading to DCU are not appropriate for new cyclists.

6. Link to Learning on Campus

Over the past year the linkages to education programmes on campus have grown. We are still not at the point where sustainability is embedded into all modules so that all graduates of DCU understand the meaning of sustainability and the interrelationship between the social, cultural economic and environmental factors that need to be balanced to ensure a sustainable future for all BUT we are making progress! In particular the new DCU Strategic Plan for 2017-2022 will seek to among other things seek to integrate Sustainability Principles, Literacy and Awareness into the student curriculum. This will involve working closely with Faculties and the Education Committee to establish the optimal approaches to achieving this objective. There will be a particular emphasis on awareness of the UN Sustainable Development Goals (SDGs).

Other linkages include over the past year several projects,

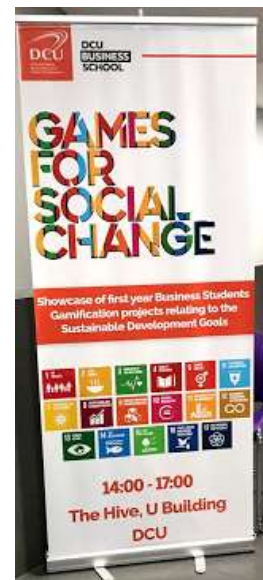
Project title	Student	Project	Year	Programme
Reducing the Quantity and increasing the recycling of waste in DCU campus Residences	Sean Daly	Final year thesis	2014/15	Environmental Science and Health
The Viability of DCU's community garden	Alan Rigney	Final year thesis	2014/15	Environmental Science and Health
Water usage and reduction in DCU's Sports Complex	Clionadh Williams	Final year thesis	2014/15	Environmental Science and Health
Feasibility Study of Rainwater Harvesting on the DCU Campus	Mohammed Alotaibi	Master's Thesis	2015	MM544 Sustainable Energy
Biodiversity at DCU	Joe Cornish	Final year thesis	2014/15	Horticulture
The use of potable water in DCU	Ellen Kelly	Final year thesis	2015/16	Environmental Science and Health
Paper consumption at DCU	Bernadette Leng lan Lo	Final year thesis	2015/16	Environmental Science and Health
Soil analysis in the DCU Community Garden	James Platt	Final year thesis	2015/16	Environmental Science and Health
Food Waste	Margaret Cronin	Master's Thesis	2015/16	Open Education
DCU Carbon Footprint	Sean Walpole	Intern	2015/16	Environmental Science and Health
Transport and Behavioural Change	Stephen Dowling	Intern	2015/16	Psychology
INSULATION PRODUCTS, FOCUSING ON GLOBAL WARMING	Natalie Farrell	Master's Thesis	2015/16	Open Education
Carbon Neutral Interfaiths	Brendan Deehan	Final year lit review	2016/17	Environmental Science and Health
Coffee Cups and Beh Change	Cody Byrne	Intern	2015/16	Psychology
Horticulture Histories	Ann Christin Aaras	Intern	2015/2016	Sustainability DCU
Renewable energy in Community Garden	Tadhg Meaney	Final year thesis	2016/17	Environmental Science and Health
Hot Water in public Sanitary Facilities	Oisin Foley	Intern	2016/17	Psychology
Flying Less	Conal Ó Dubhir	Intern	2017	Sustainability DCU
Decoupling environmental impacts from economic activity, what it means and how it relates to the concrete sector in Ireland.	Andrew McGrane	Master's Thesis	2016/17	Open Education - MASTER OF SCIENCE IN MANAGEMENT FOR SUSTAINABLE DEVELOPMENT
A study on the adoption of clean technologies within the Irish seafood processing industry	Tomas Cooper	Master's Thesis	2016/17	Open Education - MASTER OF SCIENCE IN MANAGEMENT FOR SUSTAINABLE DEVELOPMENT
University Transport management	Ann Whyte	Master's Thesis	2017/18	Open Education - MSc IN MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

Food Waste and our legal requirements	Anorai Rooney	Final year thesis	2017/18	Environmental Science and Health
Impact and potential alternatives to hot water supply in public buildings.	Colin Cleary	Final year thesis	2017/18	Environmental Science and Health
DCU Exemplar Carbon Neutral Campus	Safa Al Mashaikhi	Final year thesis	2017/18	Environmental Science and Health
DCU's Carbon Footprint for the 2018 Calendar Year	Gráinne Mclvor	Final year thesis	2018/19	Environmental Science and Health

DCU Business School

in the academic year 2018/2019 Dr. Roisin Lyons ran a module that focused on the UN Sustainable Development Goals and over 450 students were involved in developing a game to promote an understanding and awareness of the goals. Each group of students were required to develop an app and presentation which were all presented and judged at an event in the DCU U.

In addition Dr. Marta Rocchi also took her class with support from the QUID programme to visit the Rediscovery centre in Ballymun to understand more about the Circular economy.



Linkages to MG334 Business and Society : This module addresses the key environmental and sustainable development issues facing organisations today. It focuses on the links between corporate social responsibilities, management of the organisation and the environment and on how these may be integrated through strategy and operations. The module assignment require student to research and write a report on one of the following :

- How to make the New Hub sustainable
- Reduce waste production on DCU Campus
- National No Smoking Day on Campus
- Car Sharing Initiative
- Energy Awareness Campaign for Students
- DCU in the Community
- Education – integrating sustainability
- Social Enterprise Model for the DCU Community Garden
- Intercampus bike scheme for students

Space to Grow Module

This module run in St Patricks focused on provide student teachers with an understand of biodiversity and the development and implementation of outdoor teaching tools and methodologies. The module has undertaken several interesting project including establishing and maintaining its own growing space on the SPD campus and well and bring primary school children together to design and build a plastic bottle green house – this project is half way thru



construction and will be finished in 2016/2017.



Within this project trainee teachers also went to work in a preschool in Drumcondra to establish a growing space for the preschool children.

Also as part of this project the student not only created new habitats for birds they recycled old microscope boxes in the process. The group also participated in an bioblitz of the Royal Canal and posted their results on this website

<http://www.ispotnature.org/projects/spdroyalcanal>.

New International Project on Sustainability Education that is being funded by the Global Consortium for Sustainability Outcomes (GCSO) (Cliona Murphy/Greg Smith) 2017-18 and 2018-19

The GCSO Education Project recognizes that for the world to become more sustainable, people of all ages need to learn certain principles of sustainability and attain relevant competencies. The GCSO Education project is therefore aimed at supporting primary school teachers from Ireland, Germany, USA and Mexico to effectively teach about sustainability as an integral component of their respective curricula.

The project will involve 80 primary school teachers from the four countries participating in a Continuing Professional Development (CPD) programme that is aimed at developing teachers' conceptual and pedagogical knowledge of Sustainability. The CPD programme will support teachers in helping children to develop essential sustainability competencies while engaging with different subject areas in the different National Curricula.

In Ireland staff from the Institute of Education (IOE) in DCU will develop and implement a CPD programme on Sustainability that will be tailored to suit the Irish primary school context. The content of this tailored CPD programme will in particular integrate with the SESE, English and Mathematics curricula (DES, 1999).

The IOE research team will work closely with the participating teachers to ensure that the content of the workshops is also relevant to each school's environment. The IOE team will work closely with the teachers and their schools to support them in implementing the CPD activities and methodologies in their classrooms and within whole school settings.

Master in Climate Change

DCU's MSc in Climate Change: Policy, Media and Society interrogates how societies are responding to climate change, and how that response can be strengthened. It examines the roles played by politics, regulation, law, education and the media in creating the broad societal response demanded by climate change.

This pioneering programme will equip students with critical insights and analytical skills to enable them to play a part in shaping the transition to a decarbonised and climate resilient future. Most postgraduate courses focused on climate change are concerned with the science of climate change. DCU's new MSc. in Climate Change: Policy, Media & Society is unique in Ireland in its focus on the social sciences and humanities, on media, policy, law, governance, regulation and politics.

In addition the leader of this programme ran a conference in Climate Change in 2018/2019.



Figure 27: Prof. Brian MacCraith opening the DCU Conference on Climate change

7. Informing and Involving the Campus and Wider Community

Encompassing such issues as equal access to social resources, corporate governance, community, diversity, culture and quality of life, social sustainability is one aspect of sustainability but one that is often the weakest in terms of representation. DCU has long recognised the merits and responsibilities of engaging with the wider community and contributing to the social and economic contexts of the community in which we are based. The development of a specific 'Civic Engagement' mission and the

establishment of the DCU in the Community Outreach Centre in Ballymun is a solid expression of the commitment which DCU has made to community outreach projects.

The DCU Green Committee/Sustainability Programme has leveraged several of these existing link to enhance our engagement with the local community. We have worked closely with several local organisations and intend to continue and build on these mutually beneficial linkages.

The Community Garden is now open to all of our community internal and external to DCU. We are working closely with the Age Friendly University Initiative at DCU to support intergenerational learning.

DCU and the SGDs

In April 2019 Dr Roisin Lyons and Dr Rob Gillanders from the DCU Business School, with support under the QUID programme, hosted a fantastic event in May on the Sustainable Development Goals showcasing just some of the work that DCU academics from right across the institutions. The Sustainability Office is planning to continue a series of these showcase events.



DCU and Cloughjordan ecovillage

This collaboration continues to work together, the MSc in Climate Change spent a weekend at Cloughjordan in early 2019 working together on several projects including the redevelopment of DCU's Sustainability Policy.

Fairtrade at DCU

In early 2019, DCU became one of the only Universities in Ireland to hold the Fairtrade status for the campus. The launch and event was marked by a presentation for an amazing coffee farmer from Columbia.



Figure 28: DCU Fairtrade Campus

UI Green Metrics

In March 2019, DCU was visited by Prof. Riri and presented with an award to signify its achievement of reaching 12th position out of 719 institution who have participated in the UI Green Metrics in 2018.



Figure 29: DCU achieves 12th position in International Green Metrics

DCU Community Garden and Social Enterprises

DCU community garden is delighted to have signed an agreement with Grow Dome (<http://www.thegrowdomeproject.com/>) . Grow Dome are in the process of building an 11 mtr aquaponics grow dome in the DCU Community Garden. Lots more to come on this!!



DCU Community Garden and Community Employment

DCU Community Garden now host 2.5 community employment placements who are building their experience and skills to help them progress to further education or employment over the next year. Jason and Marty are both registered with the Royal Horticulture Society and over this last summer have been working on the development of their own enterprise in urban gardening/farming. They are being supported by the DCU Community Garden and have had a garden stall each Friday on the Glasnevin Campus over the summers. Significant effort was needed to ensure that there was fruit and veg for each week with planning and planting schedules. Volunteers from the campus also help out in the garden.

8. DCU's Green Committees Green Charter

The Green Committee at Dublin City University, made up of volunteer staff and students, believes in a sustainable future that provides the fair and equitable balance that is needed to share the earth's resources between all its inhabitants. It believes that as an educational institution DCU must tackle this existential challenge through our teaching and learning, research and innovation and by operationally working toward reducing our carbon emissions. It is an enormous task that we must all tackle together.

Our Green Committee is committed to

- embedding sustainable practices across our University
- informing and educating other within the DCU Community about importance of sustainability and why we need to create a more sustainable future
- informing and educating other within DCU on what they can do to have a positive impact both on and off campus
- informing and educating our wider community, including family and friends about importance of sustainability and why we need to create a more sustainable future
- informing and educating our wider community, including family and friends about what they can do to have a positive impact the sustainability of our planet

Specifically in 2019/2020 we are focusing on

Energy

- Maintaining ISO 50001:2011 standard
- Develop and communicate an energy/carbon management plan
- Continue raising awareness of energy consumption by Students, Staff and Visitors
- Energy consumption awareness & behavioural change programme in DCU Residences with SAVES Prog
- Seek larger portion of renewable technology (Solar/wind)

Water

- Water consumption awareness & behavioural change programme in DCU Residences with SAVES Prog
- Continue to identify leaks and fix
- Communicate water consumption data to all staff and students
- Treat as a valuable resource
- Continue 'Adopt a Street' campaign around your campus
- Drinking water fountains on all campus

Waste

- Continue efforts for the removal of all NON Recyclable Cups on ALL CAMPUSES
- Communicate waste information to all staff and students

- Ensuring University keeps its commitment to remove single use plastics by end 2020 (all cups, glasses etc by Dec 2018 – plastic bottles by 2020)
- Bin-less office pilot using desktop sorter

Biodiversity

- DCU Community Garden – Programme of works and engagements
- Pollinator plan for DCU
- Increase awareness of the importance of biodiversity
- Update biodiversity database
- Increase biodiversity on campus through tree planting events

Transport

- Mobility management plan support active commuting
- Continue Smarter Travel Campus' Walking and Cycling Challenges
- Support for 'Like Bike' in Week 11

Communications

- MOU with Dublin Metropolitan Climate Action Regional Office
- Redevelopment of the DCU Sustainability Webpage
- Create a Green Guide for DCU Students
- Whole day event/fair – to highlight sustainability, recycling, SDG etc.
- Develop leadership skills – possible talk from Youth lab
- Campaign for Meat free Mondays
- Promoting awareness of Sustainable Development Goals (the Sustainability Living Society with support for several clubs/societies etc have launched a 17 week campaign to promote the UN SDG)

Here is a link to the Charter: <https://www4.dcu.ie/ocoo/sustainability.shtml>