



Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

An Taisce Green Campus Annual Report 2020/2021



Sept 2022



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DCU's commitment to sustainability is clearly articulated in our Strategic Plan. Over the past years DCU has worked to develop and implement the DCU Climate Action Plan¹, created by a cross-institutional Sustainability Council (Fig 2). This council plays a key role in monitoring the implementation of the plan. The DCU Sustainability Council –established in late 2018 - chaired by the DCU Chief Operations Officer (COO) with representation from all faculties, the SU and professional support units.



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

DCU continues to embed best practice across the broad range of DCU multi-campus operations. We have established ecological and carbon footprint metrics and set ambitious targets to reduce our environmental impacts.

2. The COVID Impact and the consolidated 2020 / 2021 report

In March 2020, DCU activities were transformed to address the challenges of COVID 19, with all taught programmes going online and very minimal activity on campus. The Green committee for 2019/2020 sought to focus on the gaining of Green Campus status for the DCU All Hallows campus. Engagement post March 2020 was held practically entirely remotely with much emphasis focused on actions that could be undertaken remotely. The virtual site visit for All Hallows was successfully completed in May 2020. While there was some onsite activity into 2020/2021 this was much curtailed due to limited onsite activities and again there was a continued focus on remote engagement. This is a consolidated report following the All Hallows submission in May 2020.

¹ <https://www.dcu.ie/sites/default/files/inline-files/dcu-climate-action-plan-2021-2026.pdf>

3. Green Campus Committee

The DCU Green Committee is open to all staff and students in the university. The figure below shows the change in numbers and breakdown of the committee 6 years.

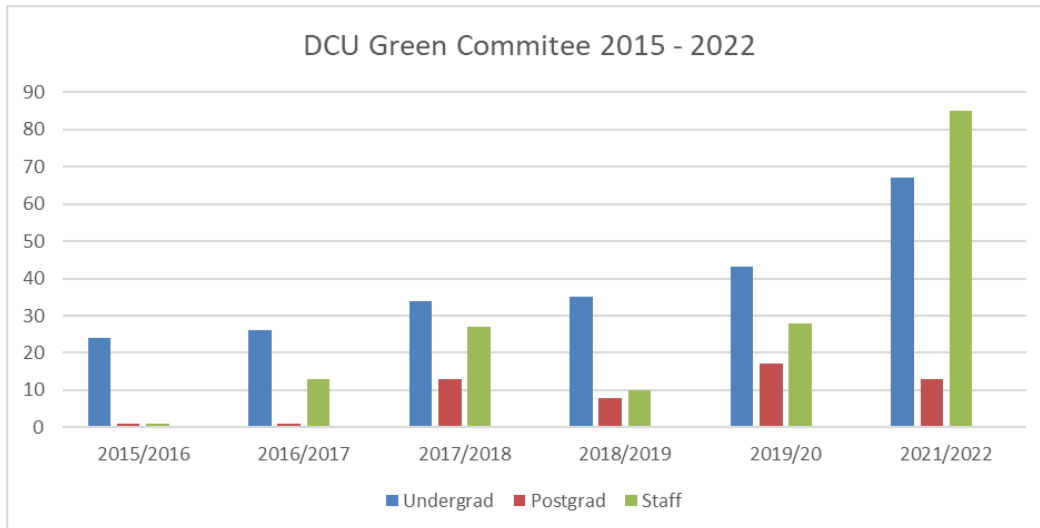


Figure 3: DCU Green Committee Membership 2015-2022

Review of 2020/2021 Committees

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, where possible 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 coming year were discussed. There were several meetings throughout the year. Meetings were monthly and rotated on each campus.

2020/2021 Survey response

This section will summarise the responses to the 2020/2021 survey and outline the proposed focus for year. There were 249 responses to the survey from right across the university (figure 4 and 5). A point to note is that for the first year there were more staff responses than students. This may be a direct impact of COVID measure and remote participation – but it should also be noted that the overall number of members increased (figure 3).

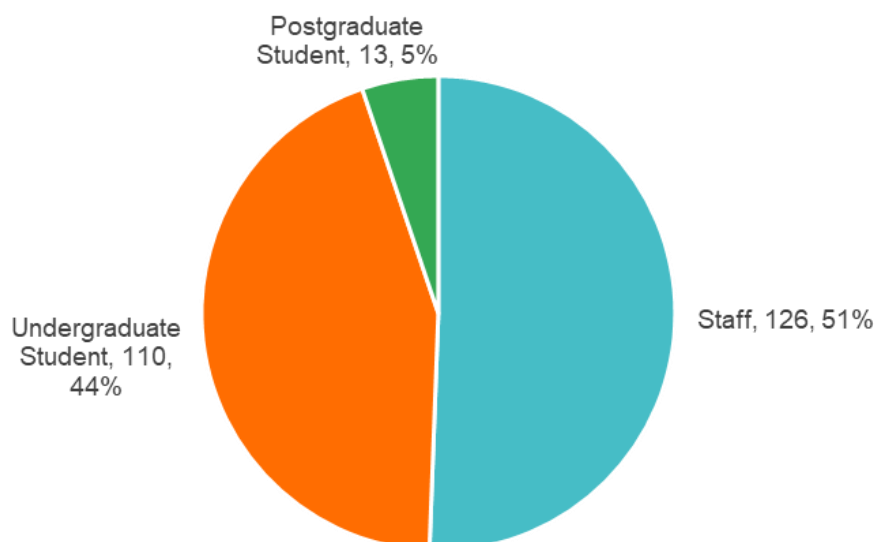


Figure 4: Breakdown of total response to Green Campus Survey (tot 249)

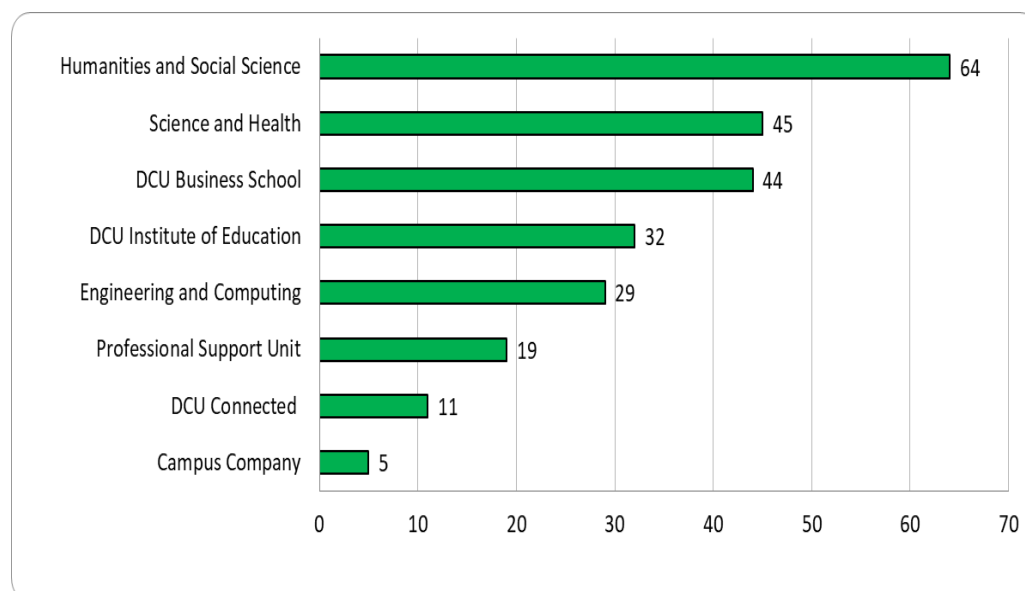


Figure 5: Breakdown across faculties

Survey participants were given the choice of whether they wanted to join the committee or not – figure 6 gives a breakdown of those who wished to be involved – also interesting to note the level of staff participation.

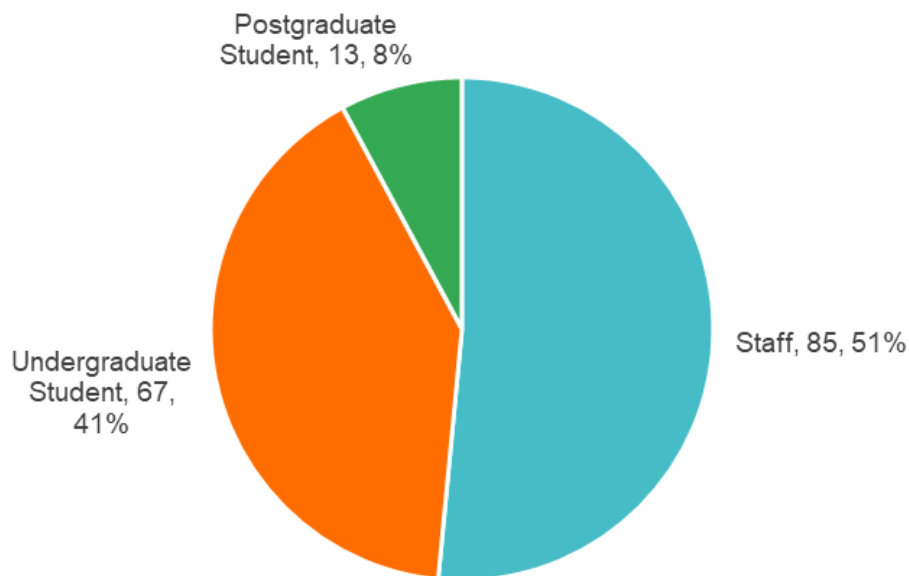


Figure 6: 2020/2021 Green Committee

Figures 7 and 8 below identify the proposed focus for 2020/2021 – Figure 7 is a summary of total responses (249) and Figure 8 a summary of the preference by those who indicated a willingness to join the DCU Green Committee.

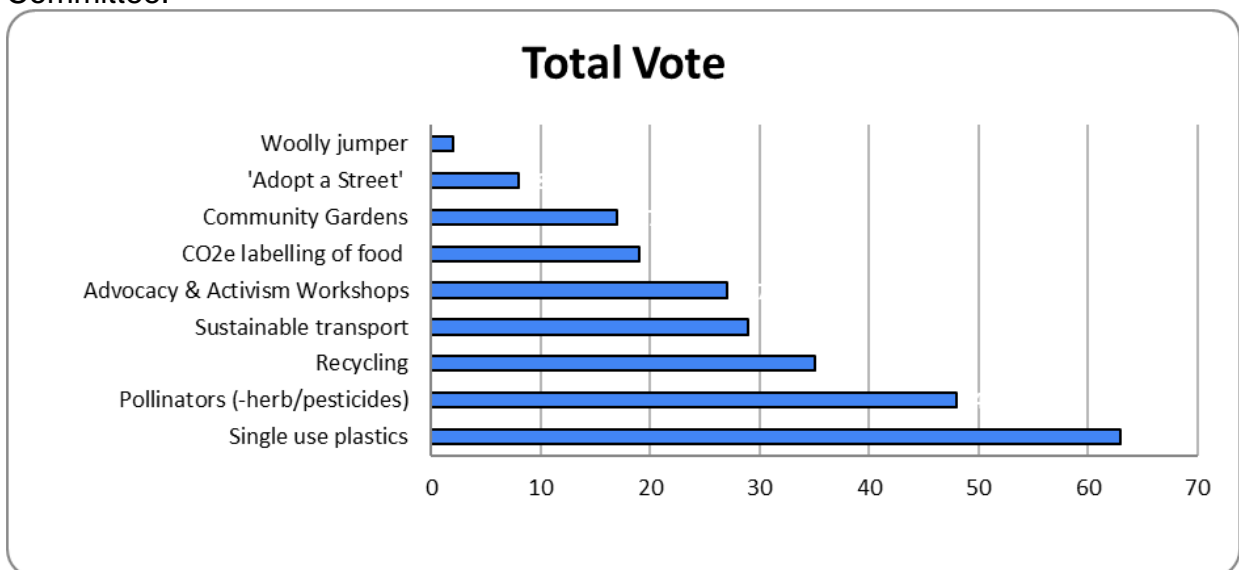


Figure 7: Overall response to proposed projects (249)

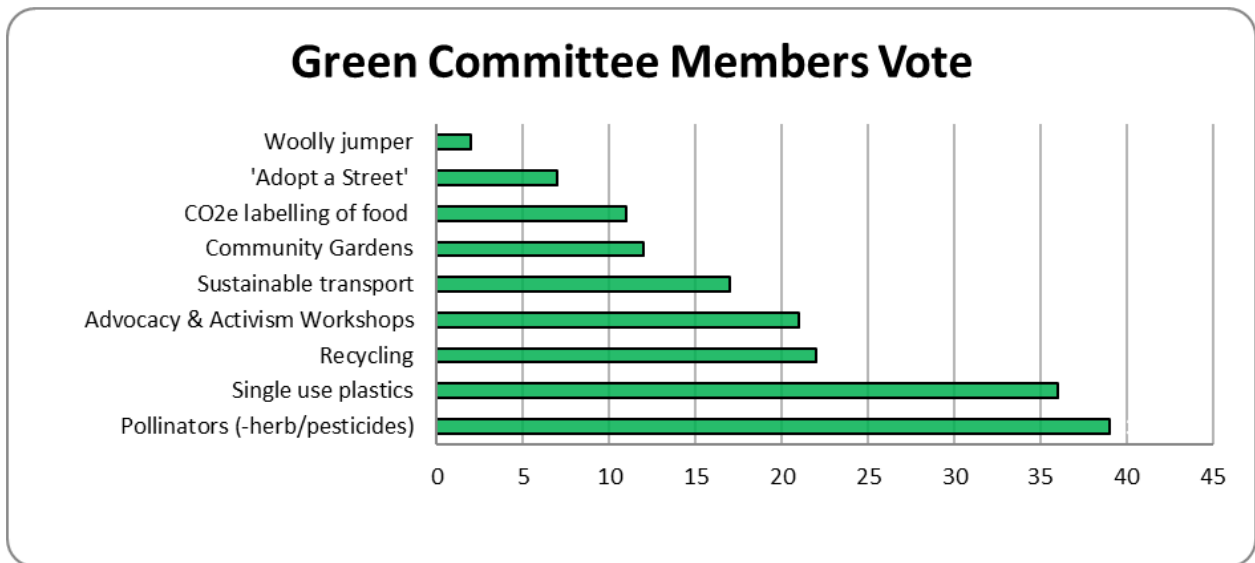


Figure 8: Response from the DCU Green Committee

Interesting to note that the removal of single use plastics is still very high on everyone’s agenda and probably exaggerated or exacerbated by the reintroduction of many single use items due to COVID.

Green Committee Associations

DCU Green committee has several links and associations

Organisation	Activity
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.
Cloughjordan Eco Village	Memo of Understanding, Working together on shared learning journey.
DCU Cycling Club	To promote cycling facilities on campus and intercampus
DCU Office of Student Life	Several linkages including sustainable bottle/cups, community employment and engagement
DCU Students Union	Work together with Sustainability and Green Committee to communicate message and organize and support events
DCU Sustainable Living Society	Strongly linked to green committee and activities to promote sustainability to student body

Organisation	Activity
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
Dublin City Council	DCU Sustainability/Green Committee have several engagements with DCC including the removal of hot water from public sanitary facilities, refurbishment of sheds on the DCU Glasnevin Community Garden and the Adopt a Street programme
Eastern and Midlands Regional Authority	Memorandum of Understanding; DCU as a HEI has forged valuable links within the region with industry, local government, other public bodies and community. DCU can therefore contribute to the development and implementation of the Regional Economic and Spatial Strategy for the Eastern and Midlands region a number of ways.
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.
IBikeDCU Society	To promote biking, basic skills incl rules of road etc.
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.
National Transport Authority	Smarter Travel Campuses programme and several support awards to improve transport related initiatives at DCU
North Dublin Chamber of Commerce (NorDubCo)	Working on sustainable project implementation including hot water and policy recommendations
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 IUA Sustainability WG

Organisation	Activity
Phibsboro Tidy Towns Association	DCU Sustainability/Green Committee are working with the Phibsboro TT Ass to raise awareness on waste and water issues
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).
Rediscovery Centre	Several linkages including weekly bike clinics, fashion workshop and education and awareness raising programmes.
Smarter Travel Campus Group	Working to achieve a 90% of campus users using a sustainable form of transport.
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
The DCU Vegan Society	To support positive choices in the DCU restaurants
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.

4. Environmental Review

This section will give an overview of Energy, Water, Waste, Biodiversity and Transport at DCU in 2020/2021.

Energy

DCU achieved the national public sector 33% energy efficiency target by 2020. The university has undertaken several infrastructural projects include LED retrofit, insulation upgrades, building fabric and glazing upgrades with several more in the pipeline many supported with SEAI Communities funding.

Energy Performance Indicators – 2020

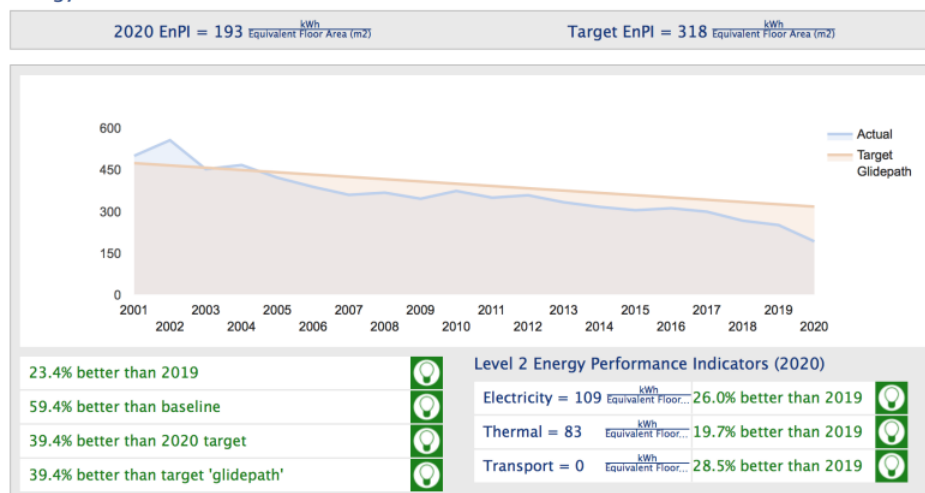


Figure 9: DCU SEAI M&R for 2020

With the introduction of the new *Climate Action and Low Carbon Dev. (Amendment) Bill 2021* and the National Climate Action Plan 2021 new targets are being set for 2025 and 2030. Legislation calls on the Climate Advisory Council to establish carbon budgets that will reduce by 51% the total amt of GHG emissions from Ireland by 2030. These budgets, agreed by government, are then divided into sectoral carbon budgets (Table 1)

Table 1: National Sectoral Budgets (July 2022)

Sector	Reduction	2018 MtCO ₂ eq *	2030 ceiling MtCO ₂ eq *
Electricity	75%	10.5	3
Transport	50%	12	6
Buildings (Commercial and Public)	45%	2	1
Buildings (Residential)	40%	7	4
Industry	35%	7	4
Agriculture	25%	23	17.25
Other**	50%	2	1

While discussions are underway on the devolvement of these targets to departments across government and thence to institutions such as universities. Universities have been working with the Sustainable Energy Authority of Ireland (SEAI) to establish interim targets and therefore get works underway to meet these targets. These targets have been set at an absolute 51% reduction in energy related GHG emissions by 2030 – see extract from the SEAI 'Gap to Target' tool for DCU. However, it should be noted that DCU, as a statutory body, is obliged to meet the carbon budgets

as set down in legislation and not just this 51% energy emission reduction targets.

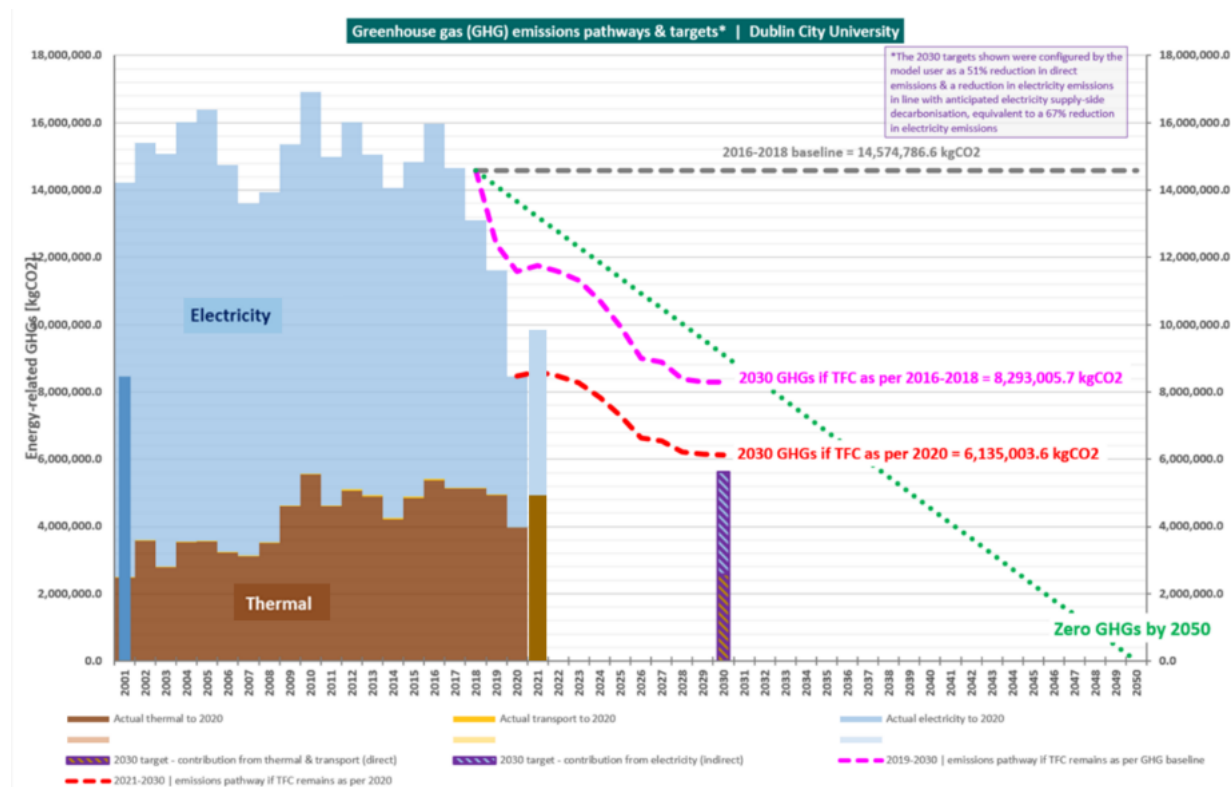


Figure 10 : SEAI 'Gap to Target' projections for DCU

It is interesting to note in Figure 10 the red line indicated a trajectory to 2030 assuming the full greening of the grid but based on a baseline year of 2020 – there was very limited activity on campus in 2020. The chart projects the if the same level of activity was maintained on campus for the next 10 years to 2030 we would still not meet our 2030 target.

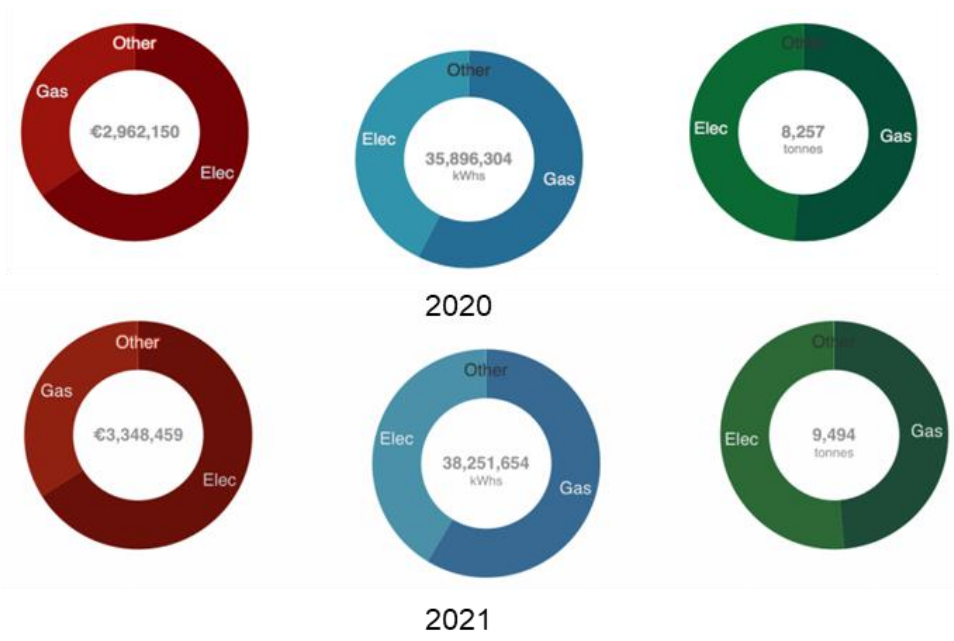


Figure 11: Energy costs, consumption and carbon for 2020 & 2021

Any reported reduction or increases over the past couple of years is mostly due to COVID. Figure 12 below tracks the transition across COVID. The green bar for 2020 (12 mts) is an estimate based on a simple doubling the first 6 mts of consumption. It can be seen that 2022 consumption will exceed 2019 in both gas and electricity.

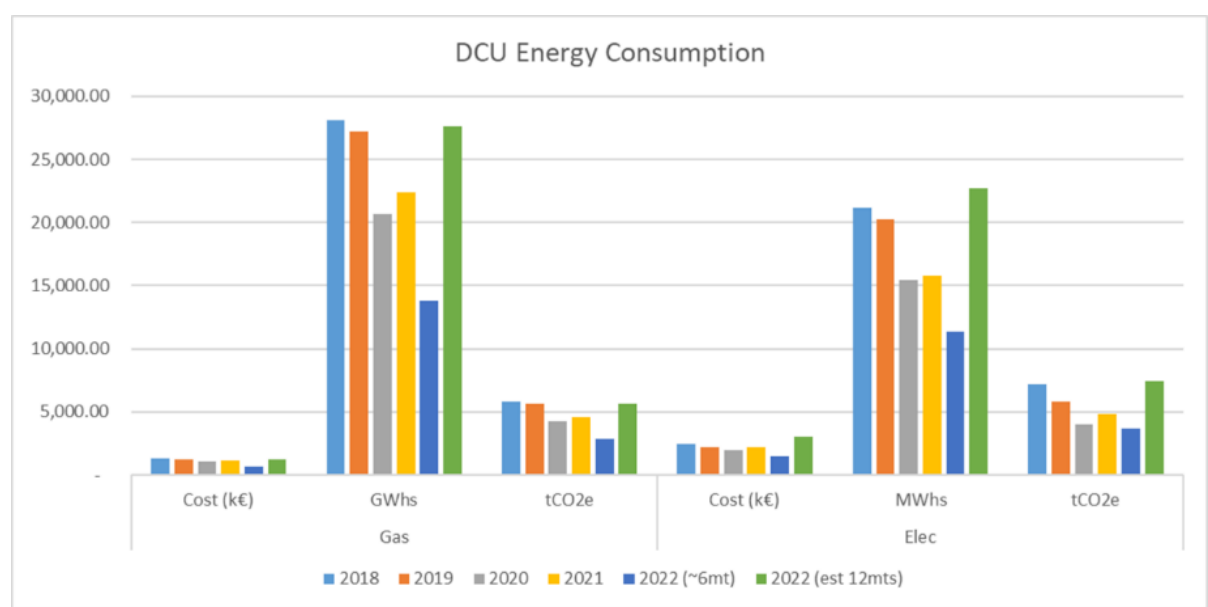


Figure 12: Energy consumption at DCU 2018- 2022 (estimated)

Water

Over the past number of years DCU has addressed some significant leaks within our water systems- such leak detection surveys are ongoing. Figure 11 below shows water consumption levels across all campuses from 2018 to 2022 (half yr). The impact of COVID is again evident.

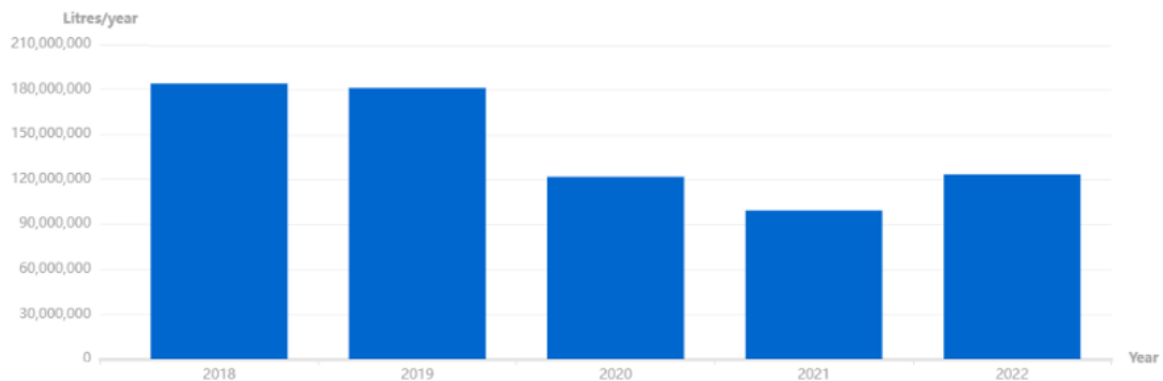


Figure 13: Water consumption on DCU campuses 2018 - 2022

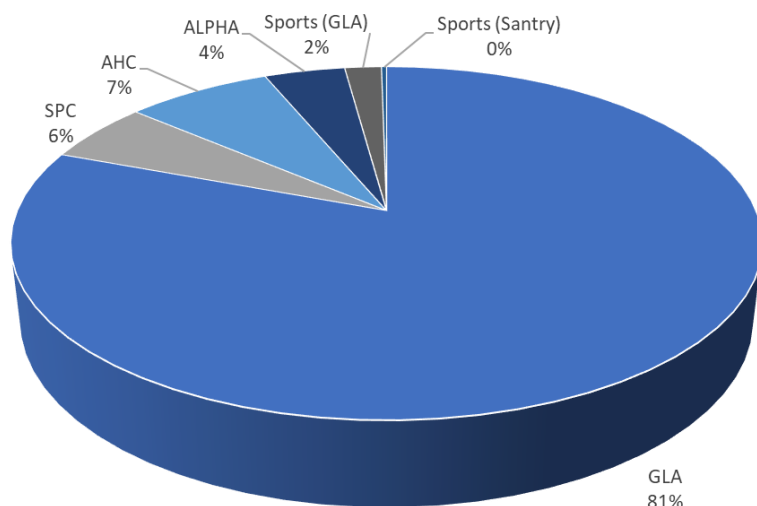


Figure 14: Water consumption in 2021 by DCU campus

Waste

DCU continues to closely monitor its waste and is working towards reducing total waste. The figure below identified the waste levels from 2018 – 2021 – COVID impacts are still apparent.

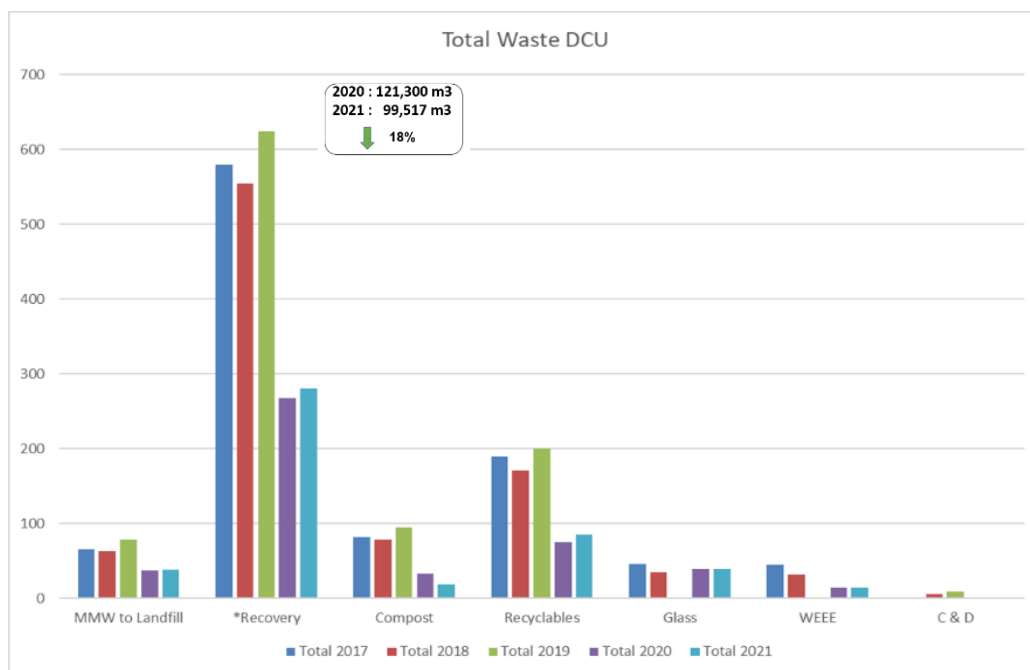


Figure 15: Waste segregation at DCU 2017 - 2021

Biodiversity

DCU commissioned a Biodiversity plan for the university and has joined at a partner the national All Ireland Pollinator Plan².

In summary this plan covers DCUs 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.

² <https://pollinators.ie/partners/>

Transport

Dublin City University is a multi-campus university and the second largest commuting hub in the north Dublin region after the airport. DCU works closely with the National Transport Authority and undertakes regular travel surveys of all staff and students to assess current transport choices vs previous surveys.

Year	Number of Staff & Students	Number of Respondents	Response Rate	Month	Foot	Bike	Bus	Rail	Car	Carpooling	Remote Working
2022	16194	1243	8%	May	15%	9%	32%	6%	28%	6%	2%
2019	17865	2050	11%	Dec 18/Jan 19	20%	10%	35%	7%	25%	3%	
2018	17865	2284	13%	February	18%	10%	34%	7%	26%	3%	
2017	17865	1136	6%	April	14%	10%	27%	6%	38%	4%	
2016	17865	2494	14%	Jan/Feb	21%	9%	33%	5%	27%	4%	

Figure 16: DCU Modal Choices 2016 – 2022

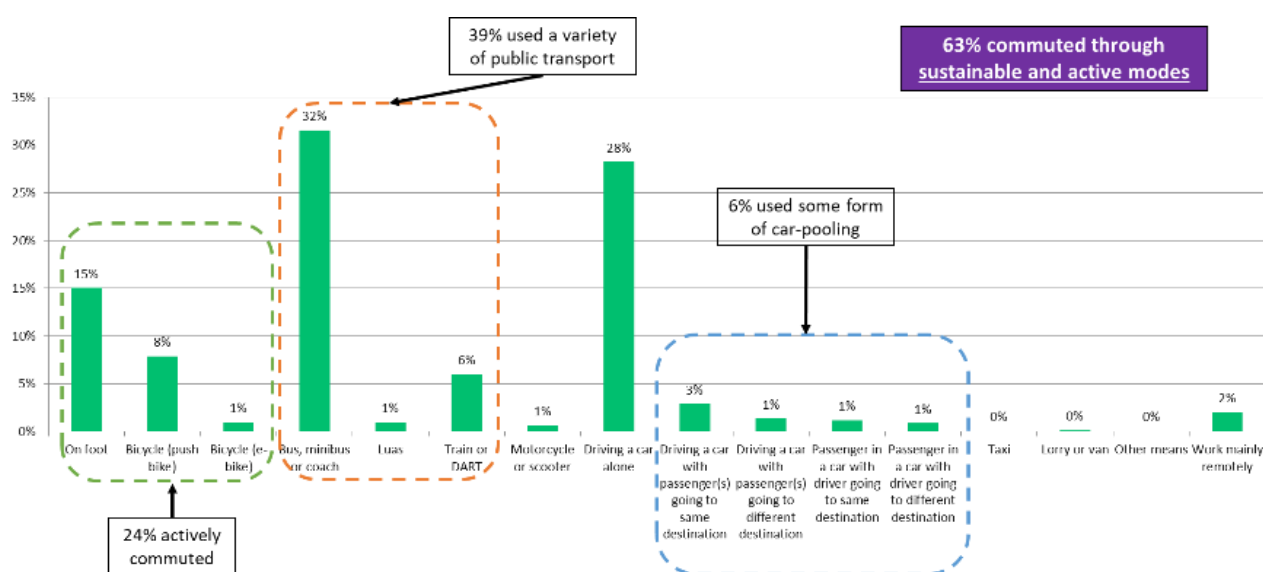


Figure 17: Some key findings of 2022 Survey

The main reasons given for modal choice was quickest (31%), lack of alternative (27%) and cheapest (12%). It is difficult to know if the lack of an alternative is actually known or perceived. When occasionally modal choices were examined it was found that the % who could assess the University by sustainable transports went up from 63% to 80% which might imply that there are alternatives that commuters can take but they choose not to most of the time.

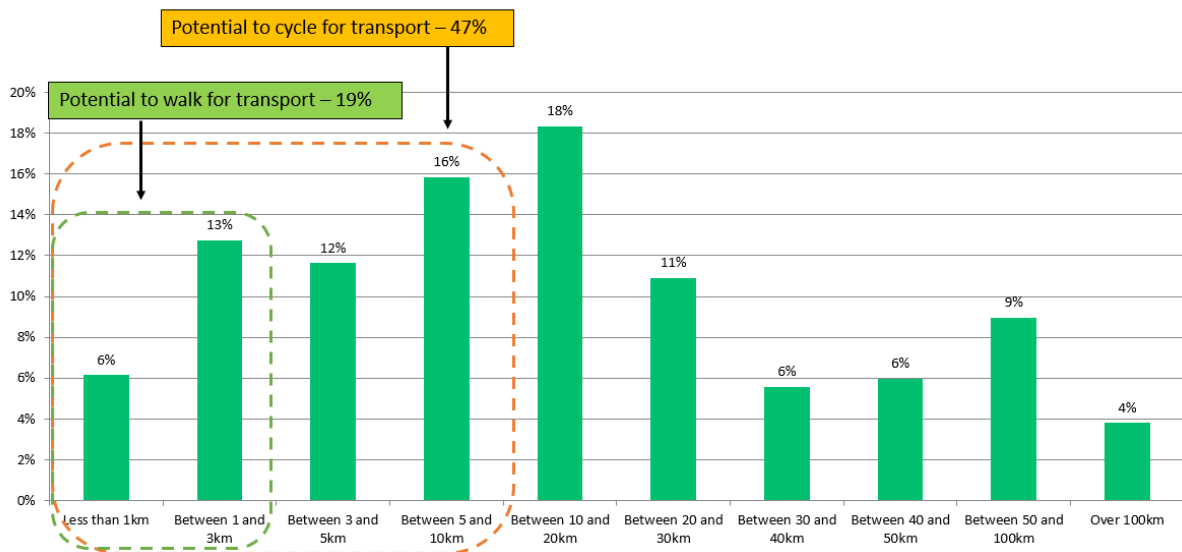


Figure 18: Distance travelled to campus

The distance travelled by commuter to campus is shown in Figure 18 – it is thought that distance travelled in general is increasing potentially due to accommodation issues but the frequency of attendance on campus is reducing (Fig 16).

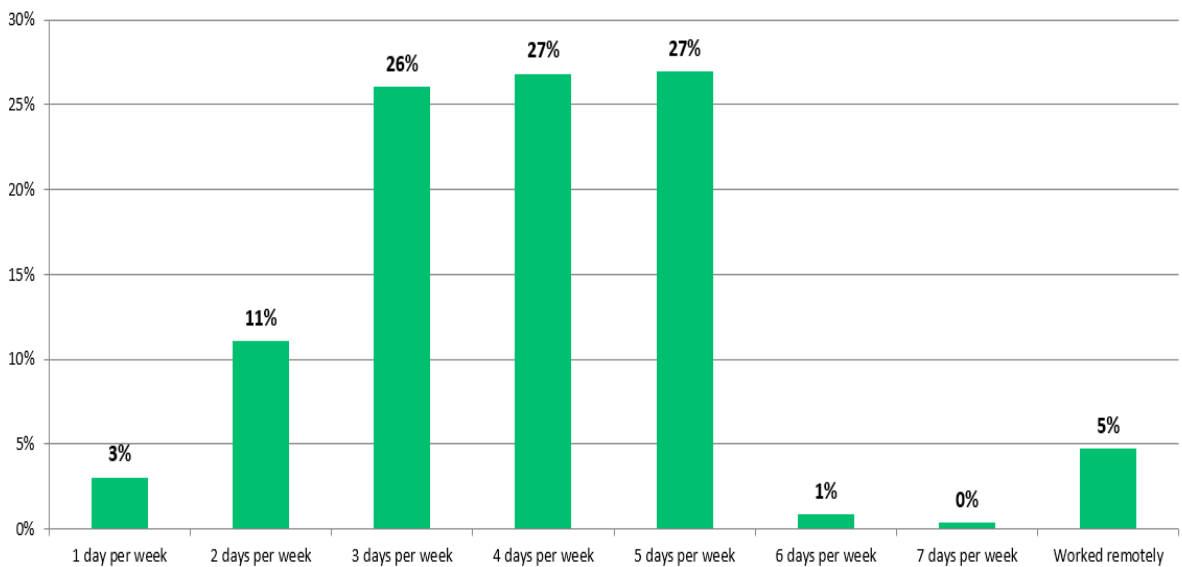


Figure 19: Average number days on campus in last semester (Oct - Dec 2021)

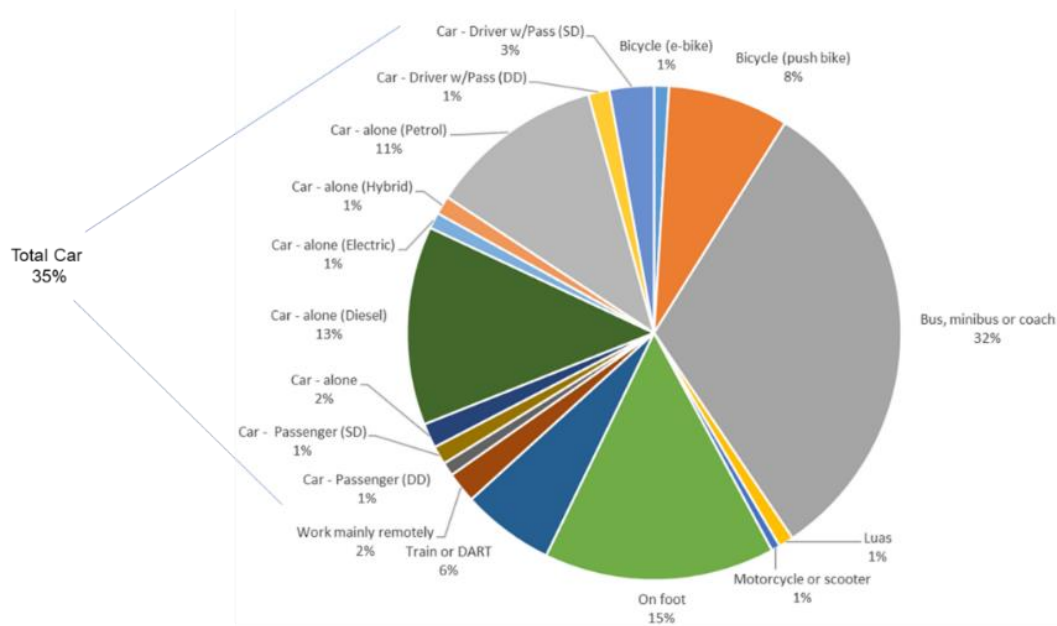


Figure 20: Percentage breakdown of each mode of transport for DCU commuter in 2021

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 carries out a comprehensive carbon footprint each calendar year since 2018. The university includes Scope 1, 2 and 3 emissions – see figure 21.

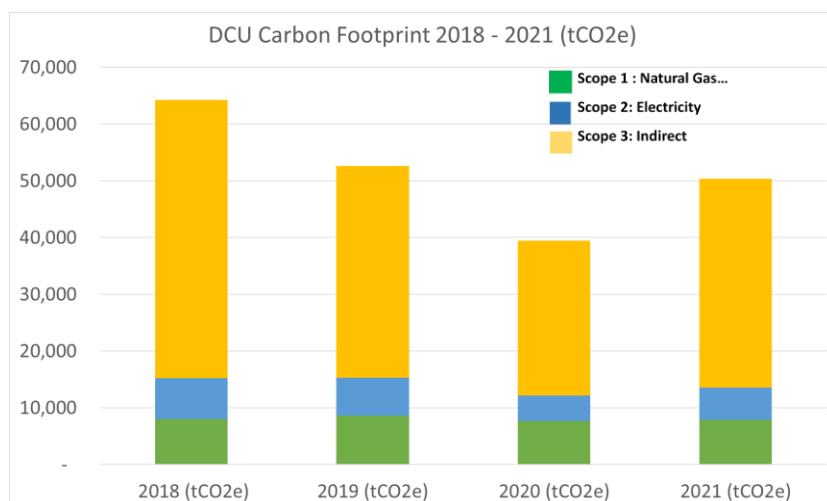


Figure 21: DCU Carbon footprint 2018 – 2021

Figure 22 below give a breakdown of DCU Carbon footprint for 2021 – it should be noted that the error bars are significant in these calculations but that it is understood that it is in the right ballpark and comparable with other similar institutions.

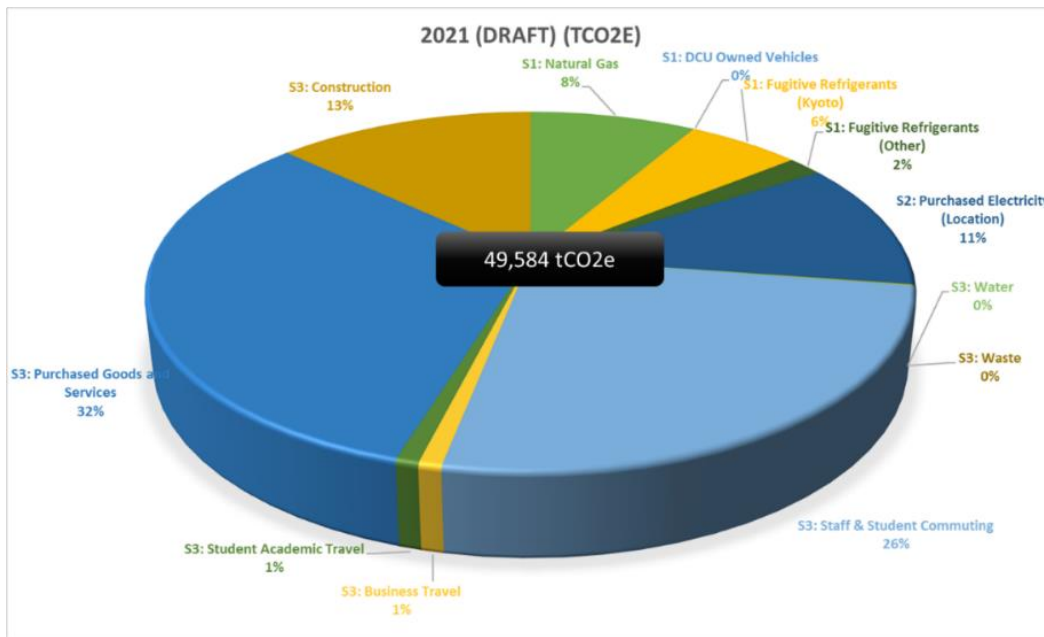


Figure 22: Total breakdown of DCU CO₂e emissions in 2021 (Note some data is still draft but will be updated asap)

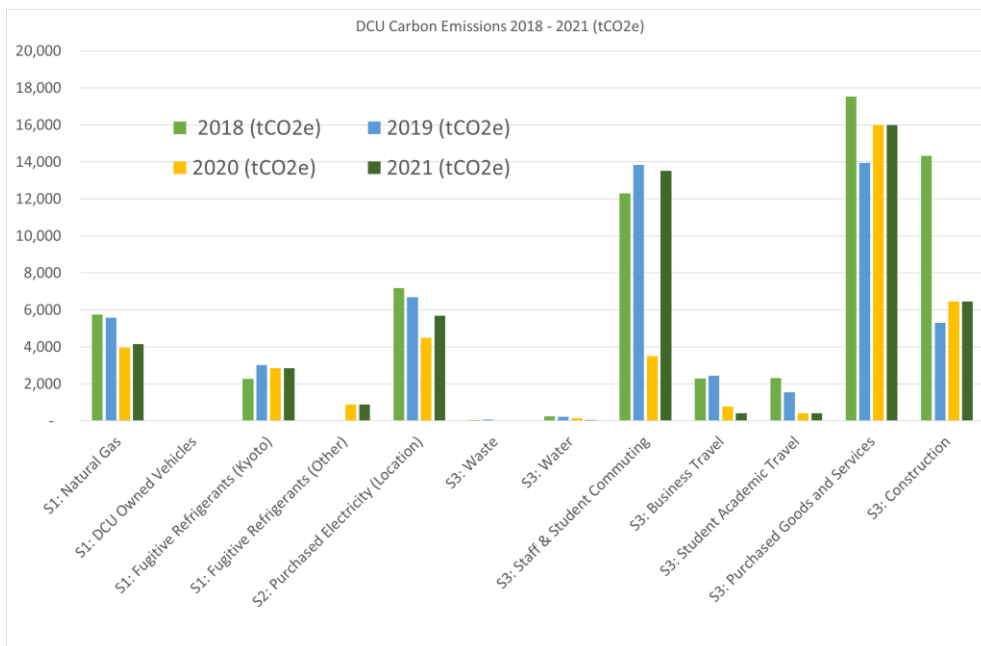


Figure 23: Breakdown of emissions 2018 - 2021

Both fig 22 and 23 convey the impacts of different activities across the university. For example in 2021 DCU built environment energy consumption (electricity and gas included) account for 19% of total campus ghg emissions compared to 26% from staff and student commuting.

5. Action Plan for 2020/2021

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 Office 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 that 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. The green committee survey helps to capture everyone's input.

“This year we have a small budget to give some projects a kick start - please vote for your preferred project - we understand that we need to do all the projects and hopefully we will get them all done but your vote will prioritise which get done first.”

The proposed project are :

- Improve campus for pollinators by reducing/removing artificial herbicides and pesticides
- Climate Change and Biodiversity Emergency Advocacy & Activism Workshop(s) for staff and students
- COMMUNITY: Implement 'Adopt a Street' campaign around your campus
- Investigate carbon footprint labelling of food in DCU restaurants/canteens
- DCU Community Gardens – Programme of works and engagements
- Wear a woolly jumper campaign to reduce energy needs
- Support sustainable transport
- Continue efforts to remove single use plastics - not just replacing them with compostables
- Increase recycling on campus through better signage and infrastructure

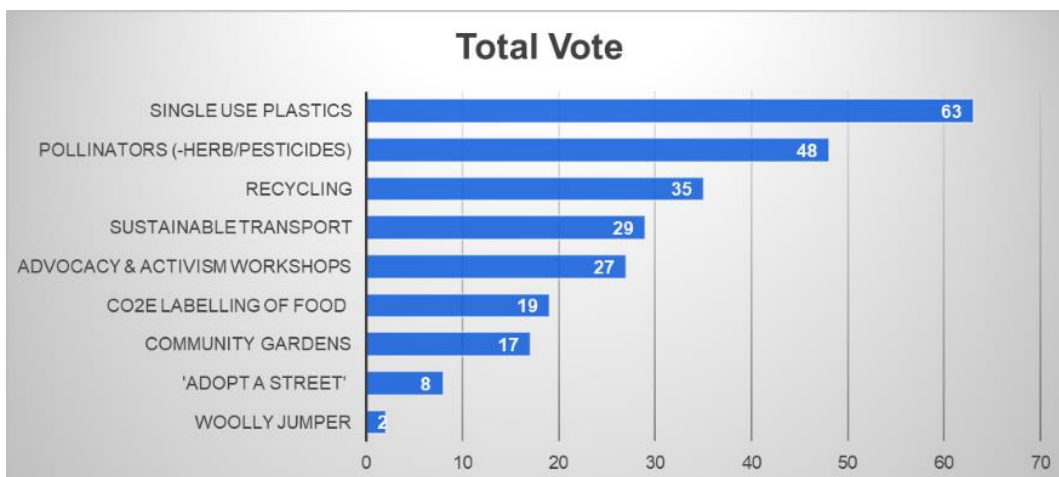


Figure 24: Vote from all respondents

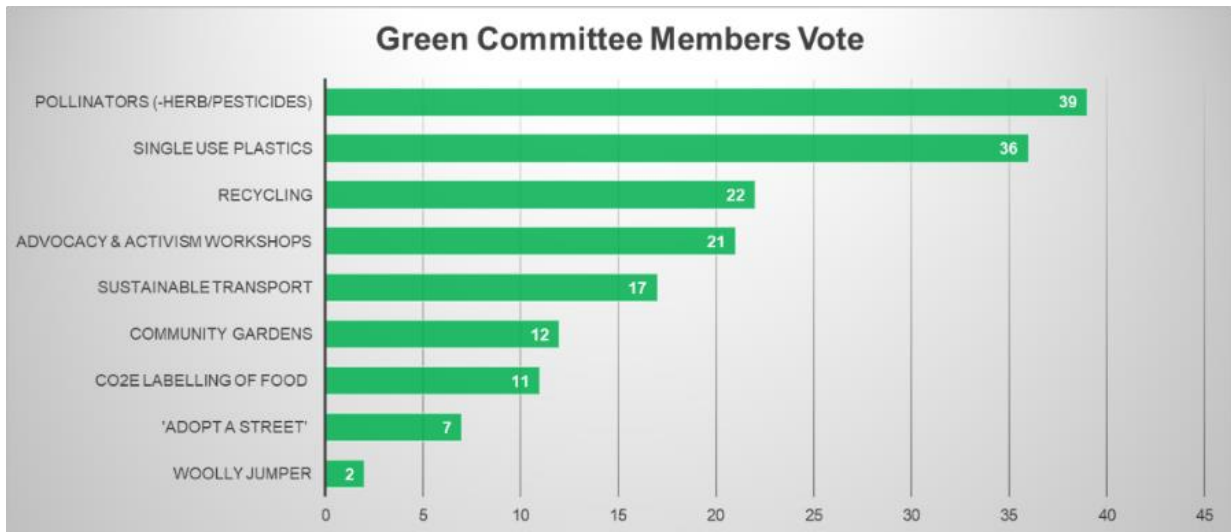


Figure 25: Vote from those who also agreed to participate in green committee

When asked what people are willing to work on the majority of respondents indicated they will work on recycling more, cutting out single-use plastics and joining a team/project.

Finally, when asked what project people would like to see that were not listed included:

- More water fountains and refill drink services
- Improving the bin infrastructure, adding compost bins and more signage around campus
- Reducing the transport carbon footprint of staff/students
- Improving cycle lane infrastructure in and around campus
- Bikes/scooters available to hire
- Raising awareness of fast fashion and its environmental impacts
- Set up a swap-shop event working with DCU Fashion Soc
- Use DCU roof space for green areas and increasing biodiversity

Summary of Action Plans 2020/2021

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
- Move to renewable energy supplier and install more renewable energy generation on campus.

Water

- Water consumption awareness
- Continue to identify leaks and fix
- Communicate water consumption data to all staff and students
- Treat as a valuable resource
- Enhance and improve 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
- Work with procurement on waste prevention at source
- Need to reassess University commitment to remove single use plastics by end 2020 (all cups, glasses etc by Dec 2018 – plastic bottles by 2020) – in light of COVID impacts
- Continue 'Adopt a Street' campaign around all campuses
- 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
- Enhance intercampus mobility
- Trial potential MaaS solution on living lab environment

Communications

- Communications screen for sustainability
- Circulate SLS Green Guide for DCU Students
- Develop leadership/Advocacy and activism skills.
- Carbon guide for meals /Campaign to reduce impact in restaurants.

- 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)

6. Monitoring and Evaluation

This section covers the monitoring and evaluation of actions undertaken in 2020/2021.

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 inform and promote the actions that are being undertaken, i.e. LED projects, light sensors etc DCU Estates issue a regular newsletter. Energy is always included in induction talks with tips for staff and students to reduce their on campus and at home energy usage. Examples of projects undertaken within the reporting period are highlighted below.

A new solar powered Smart Bench (Strawberry Energy Bench) has been installed as part of the Public Realm project along the main mall on the Glasnevin Campus opposite the McNulty building.

The Smart Bench provides many features accessible by the DCU community including, mobile device charging points and real time local environmental data. There is a mobile app to view real time environmental data such as Temperature, Humidity, Air quality, Air pressure and Noise levels.

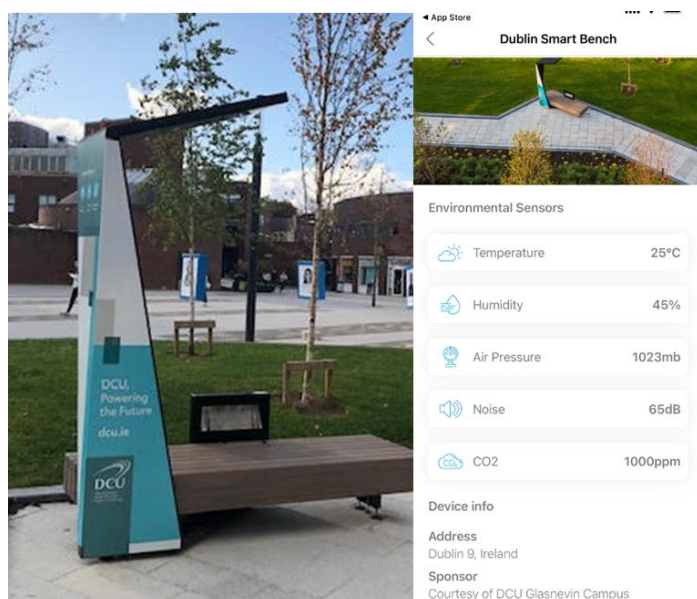


Figure 26: Smart Bench at DCU Glasnevin with environmental data available on app

DCU Sustainable Energy Community



DCU Sustainability have established a Sustainability Energy Community at DCU and over the past couple of years have run several workshops both f2f pre pandemic and virtually during the pandemic to engage and inform DCU homeowners of the grants available from SEAI to reduce home energy consumption. A survey of all DCU homeowners was undertaken and an energy master plan along with a register of opportunities was developed. Survey results indicated that the majority of respondents were very interested in home energy measure to improve the energy efficiency of their homes. Figure 27 shows the response for what energy measure are currently in people’s homes (green bars) and what measure they would be interested in – it is apparent from the chart that there is lots of opportunity and willingness to make changes.

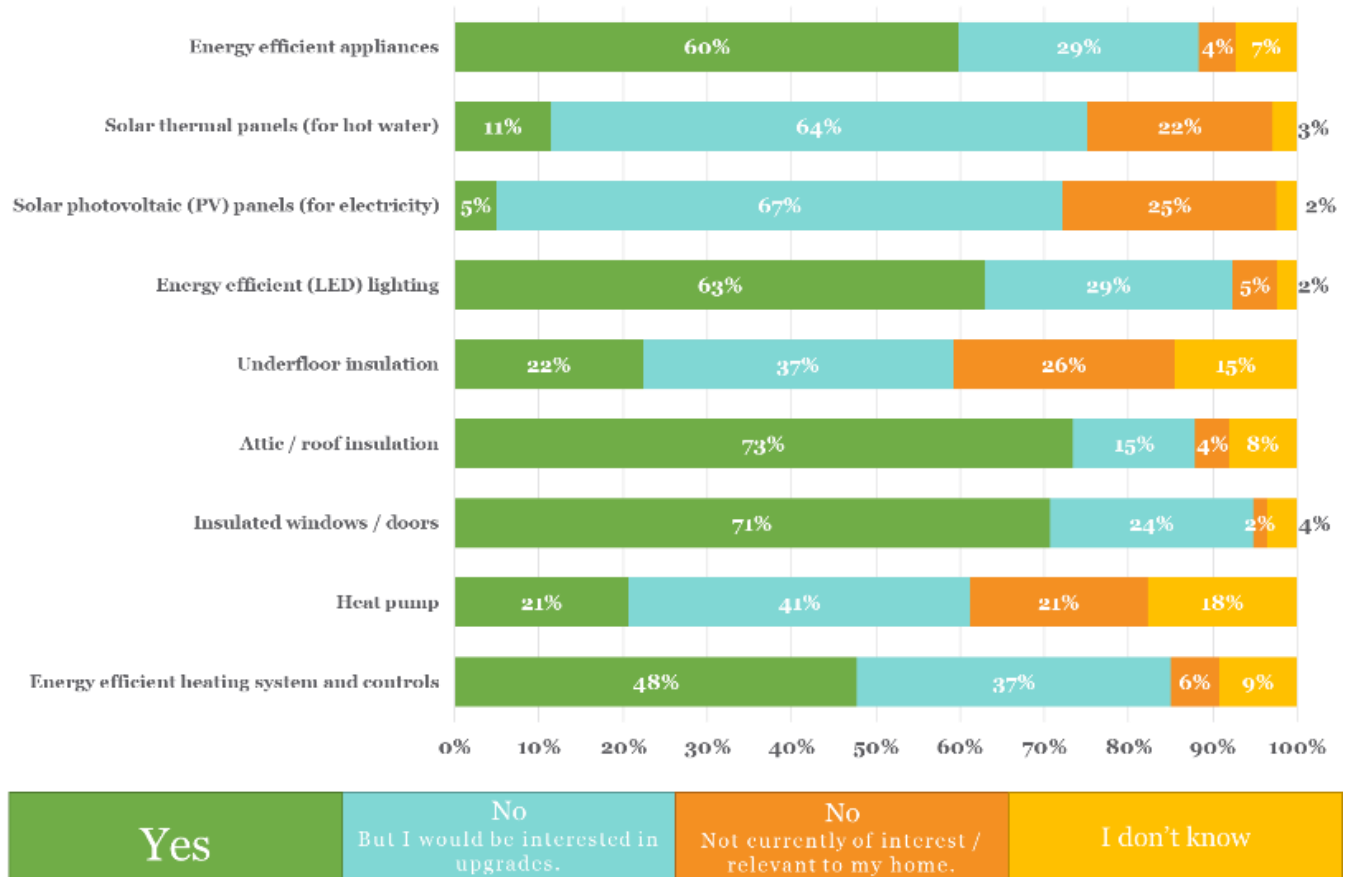


Figure 27: Response to what energy measure are currently in homes.

Energy audits were undertaken on several different models of homes (example shown in figure 28 below) and the report shared. The reports identify the steps needed to improve building energy ratings (BER) and the SEC provides advice on which grant schemes were most appropriate.

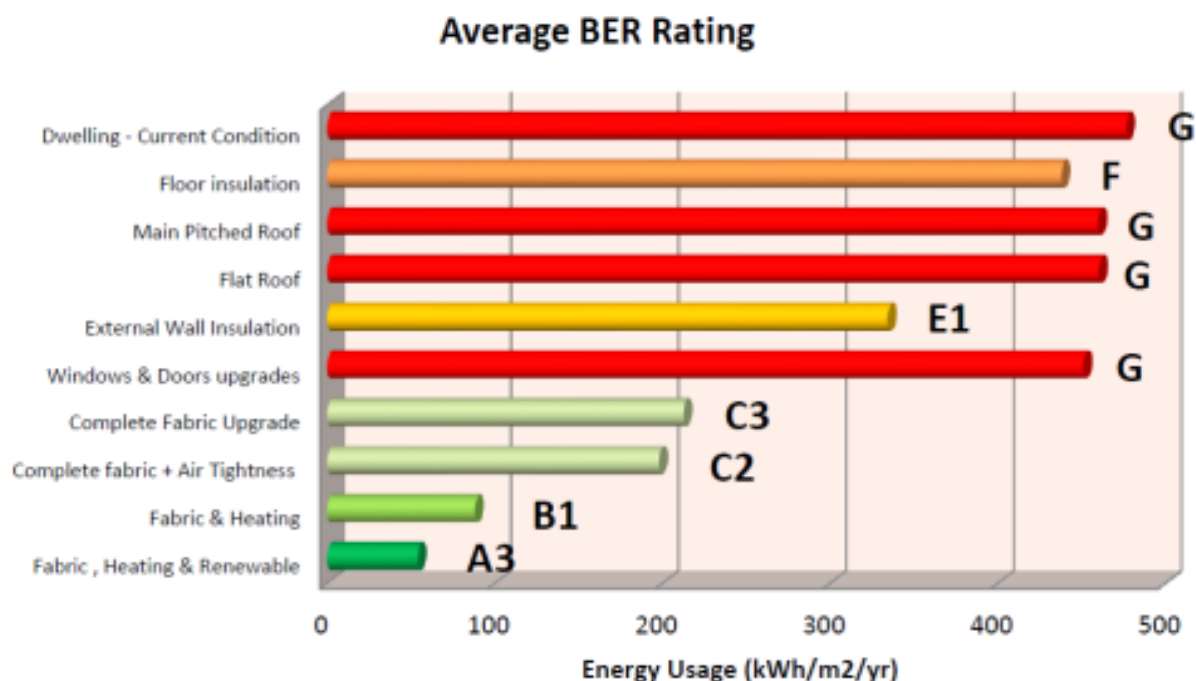


Figure 28: Building energy rating report on a 1950s detached house - the impact of interventions is identified and approx costs give in reports.

A home energy kit continues to be available from the DCU Sustainability office for anyone to assess their home. The Sustainability office is also working to expand this scheme to our local community around the universities campuses.

Energy management

DCU senior management and in particular the DCU Estates Energy team are committed and focused on reducing consumption and improving energy efficiency across the DCU campuses. In conjunction with SEAI several projects have been implemented to deliver on these targets. Figure 29 below shows two certificates – our ISO50001 and our Renewable Electricity Cert from Electric Ireland.



Figure 29: DCU ISO 15001:2018 Certification – Valid to 2023 and the Renewable Electricity Cert for DCU

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 is reflected in the consumption data. In 2019 a water balance exercise was undertaken to provide a baseline for required reductions by 2030 (figure 30).

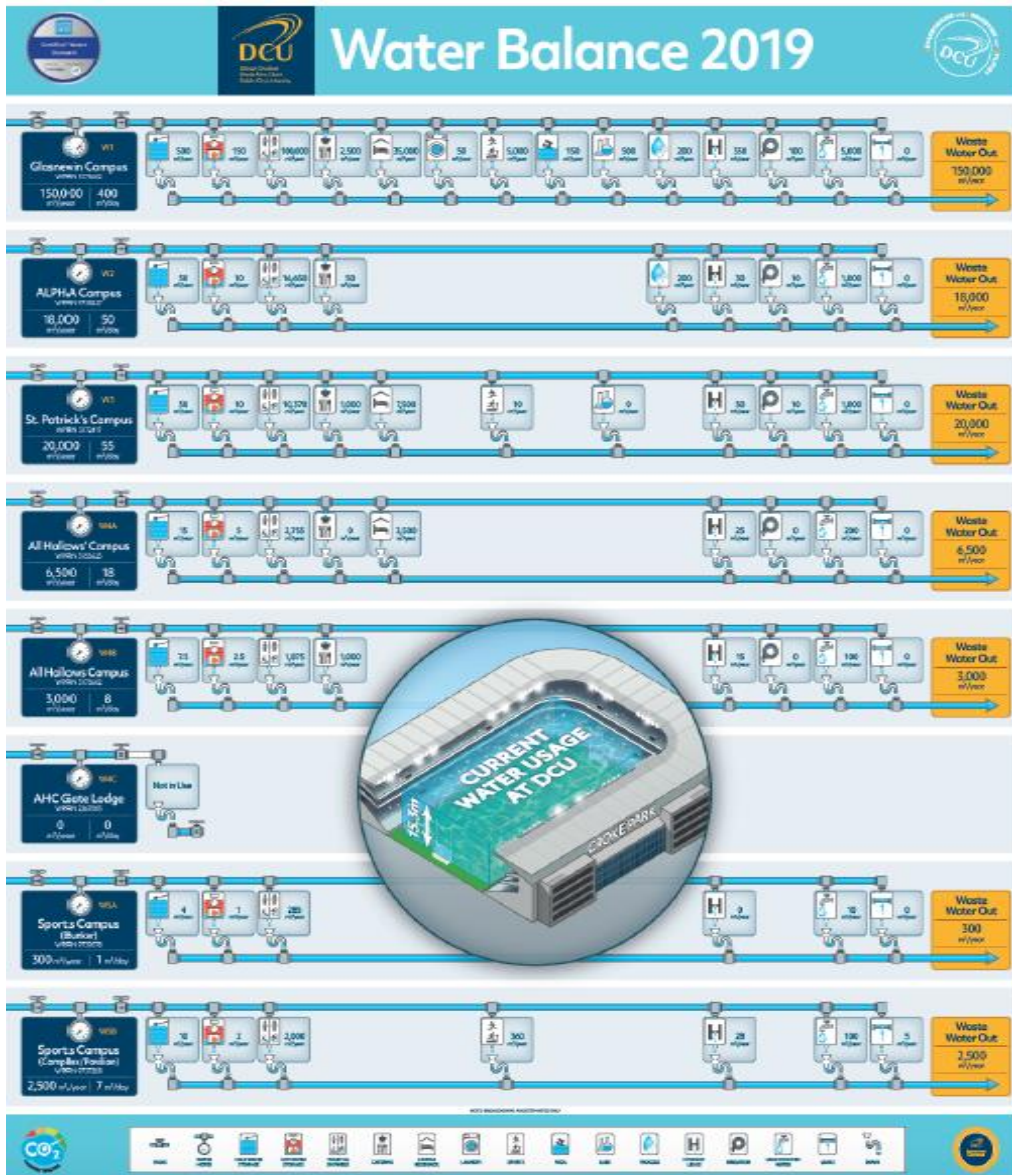


Figure 30: DCU Water Balance 2019 (Baseline Year for 2030 Targeting)

An analysis of this baseline data shown in figure 31 below, it is interesting to note that 67% of the potable water coming into DCU is used in toilets and showers and this could be even bigger if we consider that a large portion of the campus residences is also toilets and showers.

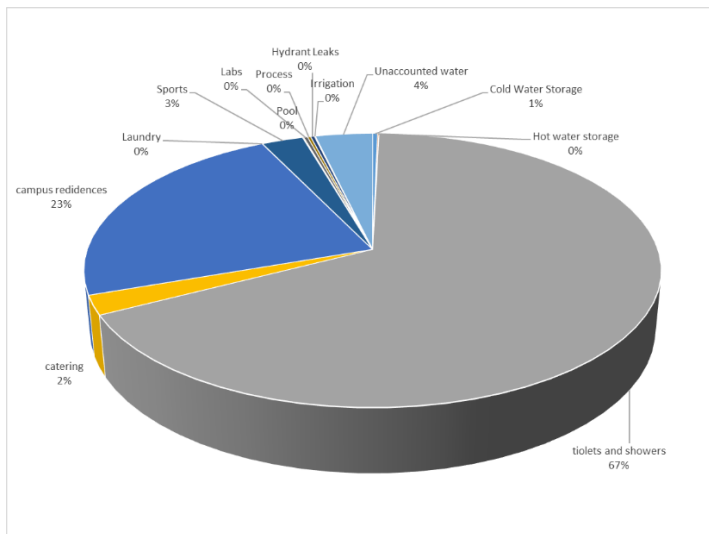


Figure 31: Breakdown of water consumption at DCU (2019)

Several measures are being taken to address this both from the estates side and the student engagement side.

Water Management

DCU manages and reduces water consumption through the university's ISO 50001 certification. An important part of our water conservation planning for 2030 was for DCU to complete the Irish Water and Central Solutions led Stewardship programme. It is a fully accredited system and DCU achieved certification in March 2019 with the added bonus of winning the Conservation Planning Award.



Figure 32: DCU certified Water Steward Badge from Irish Water.

Sanitary Ware

As can be seen from figure 31 the majority of potable water coming onto the DCU campuses is used in toilets and showers. As part of our Water Steward programme DCU Estates is committed not only to the identification and fixing of leaks but also to the installation and trialling of efficient sanitary

ware fittings and controls including retrofitting aerator taps, toilet tank bag as water saving devices and shower time controls.

Citizens Science Water Project

DCU Water Institute run citizen science projects in collaboration with EarthWatch that aim to incorporate the entire community into monitoring and safeguarding our freshwater bodies like canals, lakes, rivers, streams and ponds. They run an annual event in Autumn called the WaterBlitz. This is where free water testing kits are provided in an attempt to get a broad snapshot of all the freshwater bodies in Dublin and its surrounding counties. The Water Institute also has citizen scientists who live by or regularly use the river Liffey. These people help provide data for consistent monitoring of the water quality for the water they live by and use.

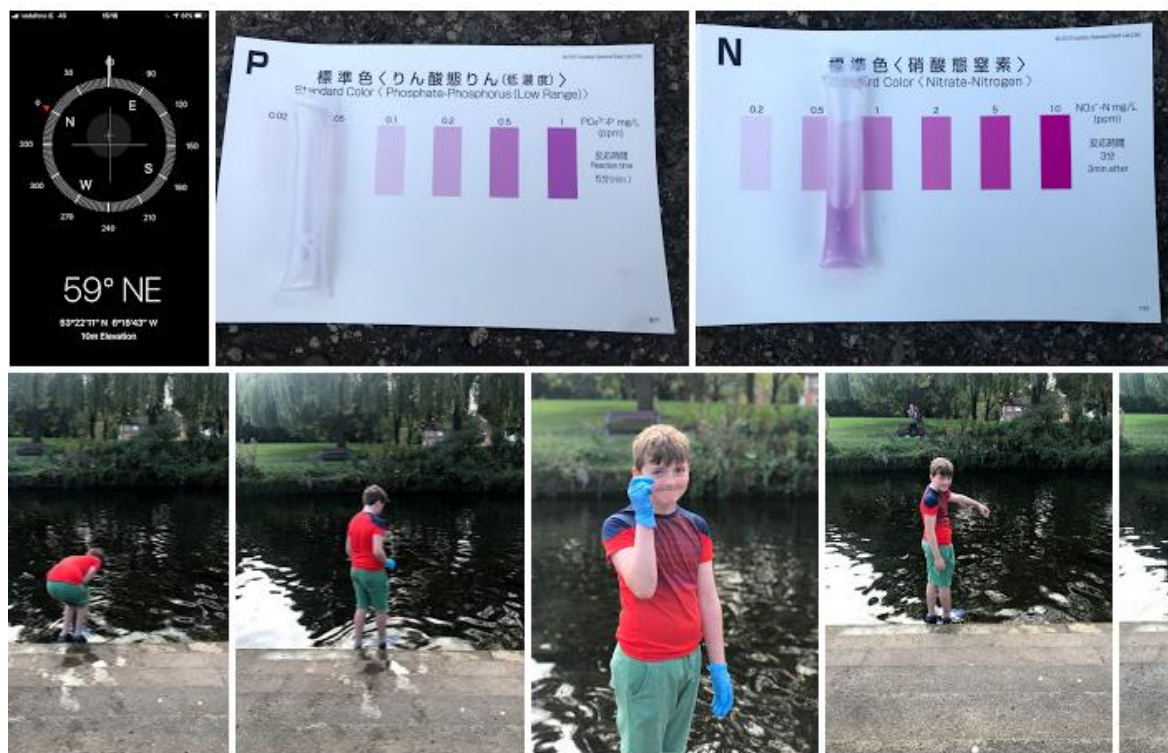


Figure 33: Local participating in WaterBlitz

Bottled water (in polyethylene terephthalate PET) vs Tetra Rex

As part of the initiative to remove single use plastic water bottles from campus and continue to promote the healthy activity of drinking water, DCU Trispace investigated alternative packaging for water on campus including tetrapac. The DCU Green Committee undertook an assessment of the impact compared with plastics bottles.

DCU's Single Use Plastic Initiative is focused on moving from a single use culture to a reusable culture, i.e. where single use products such as disposal coffee cups and water bottles are replaced by reusable solutions. As DCU transitions alternatives are sought to aid in this transition – one such alternative for bottled water could be Tetra Rex. On a quick evaluation of

materials available on the web the comparative impact of this alternative was compared to a PET bottle. As can be seen from the table below on a carbon footprint comparison the Tetra Rex is significantly better than the PET bottle. No comparison is available for the water footprint at this time.

Table 2: Comparison of Plastics water bottle with Tetra Pak

Type	Recyclable	Carbon Footprint (CO ₂ eq) ESTIMATE	Water Footprint ESTIMATE
Plastic Water Bottle (polyethylene terephthalate PET) 500ml	YES	111 g	1 – 2 litres to manufacture
Tetra Pak Prisma bottle 500ml	YES	50g	0.2 litres
Tetra Rex [®] Bio-based (1000ml)*	YES	39g	Not specified

Calculating CO₂e / Tetra-Rex / Base / 1000 / Bio-based-TwistCap-OSO-34



Tetra Rex[®] 1000 Base
Volume: 1000 ml
Opening: Bio-based TwistCap™ OSO 34

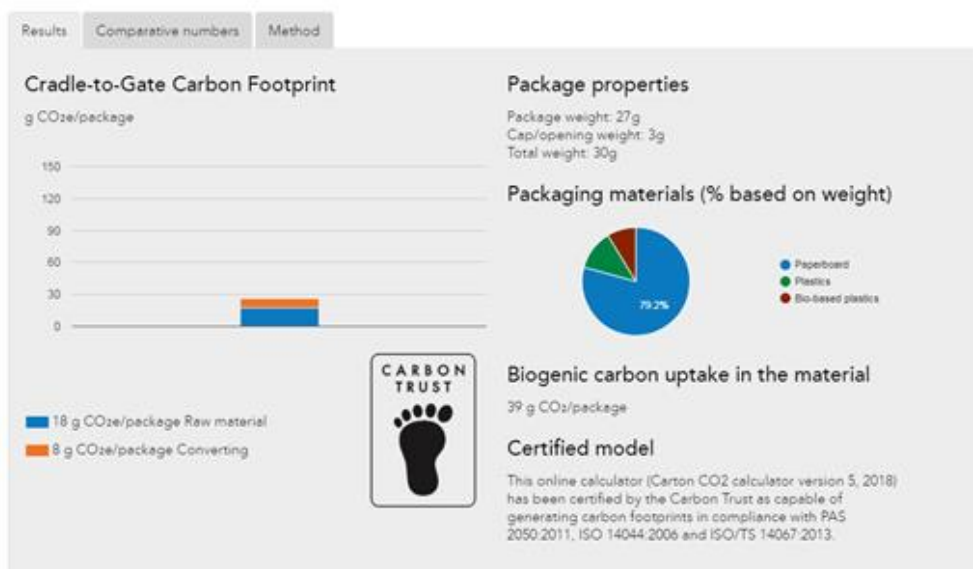


Figure 34: Cradle to Gate Footprint of TetraPak

Following this assessment DCU Trispace worked with an Irish company to create a suitable model – the results see in figure below with the name of

the water reflecting the historic buildings in Albert College Park just to the south of the DCU Glasnevin Campus.

Waste

The breakdown of DCU waste for 2017 – 2021 across all categories is shown in figure 36 below. As with energy and water the impact of COVID is evident. In an attempt to specifically tackle our landfill waste several discussions were undertaken with our waste contractors, unfortunately this concluded that we are unable to get a full breakdown of what DCU waste is going to landfill as this data is prepared on a waste site average basis. It is proposed that future tenders for waste providers will require a full breakdown of DCU waste in order for us to manage it better. It is also apparent that there is some confusion as the definition of recycling with some waste contractors insisting that waste for combustion or heat recovery is recycling – this would not be our understanding of recycling.

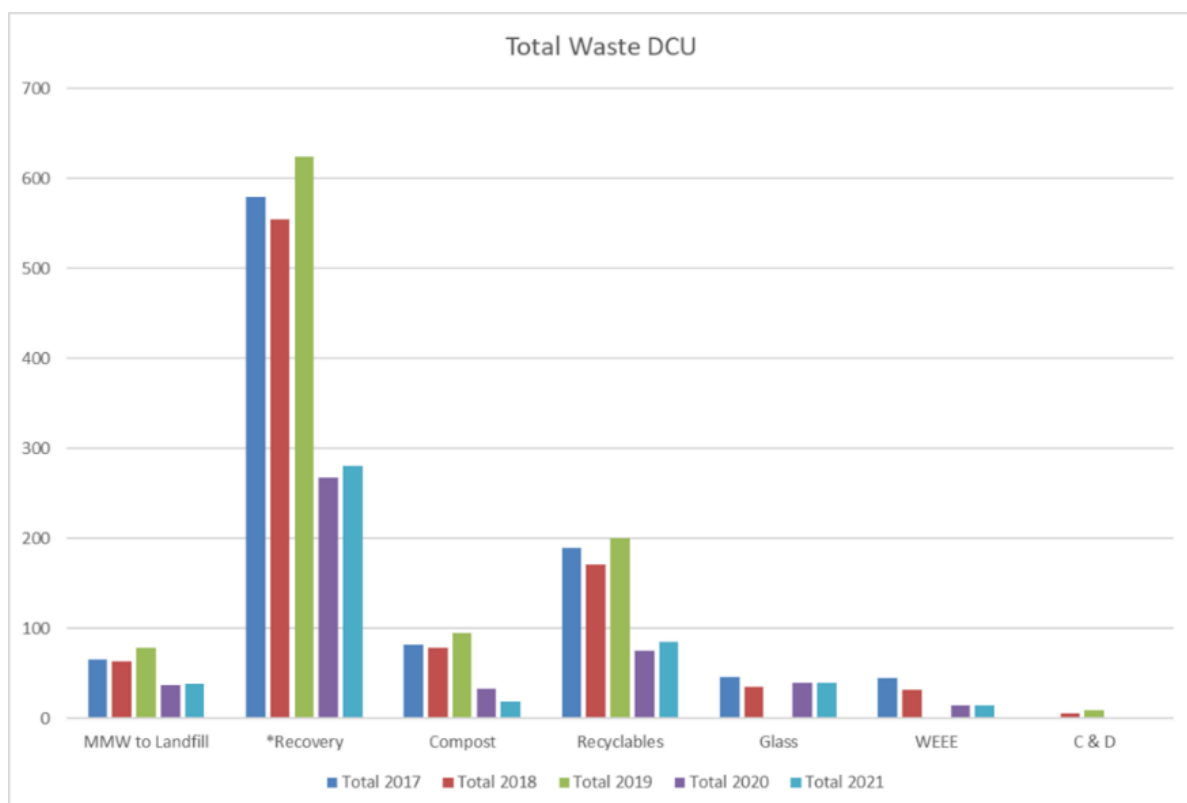


Figure 36: Total waste at DCU 2017 - 2021

Reviewing total waste volumes, it can be seen that there is no significant breakthroughs in the general reduction of waste at DCU – apart for the COVID years at least – 2017, 2018 and 2019 were all approx. 1,000m³ of waste for all campuses and all streams. However of course the number of staff and students on campus has increased – as can be seen from the graph below in figure 37 there are slight improvements but it is difficult to confirm given the overwhelming impact of COVID.



Figure 35: DCU Water Cartons

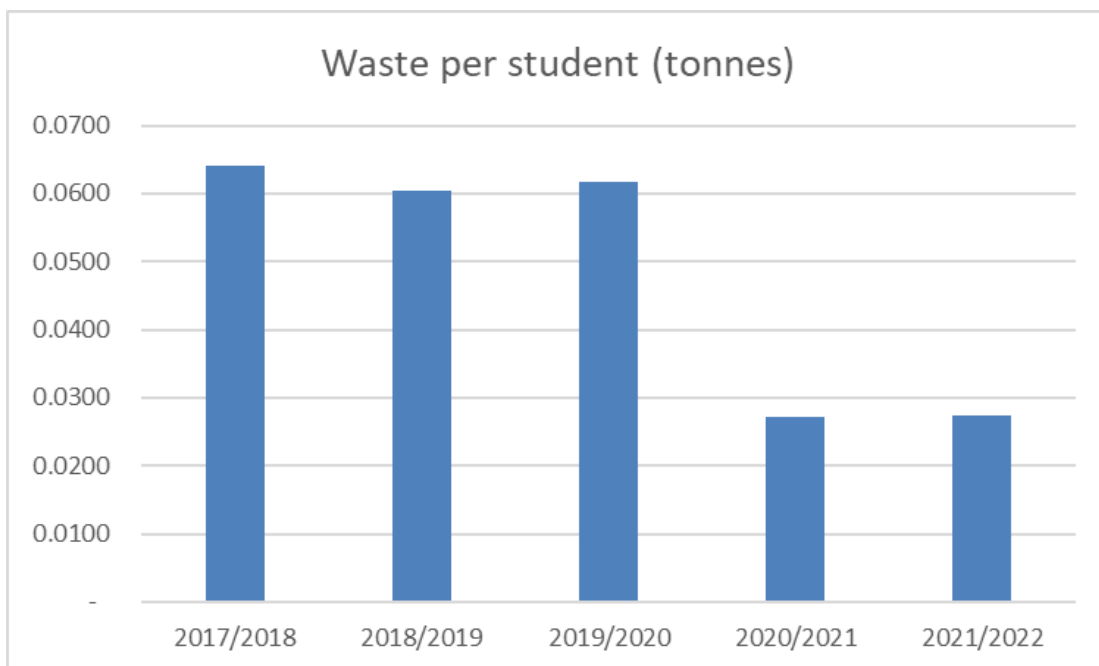


Figure 37: DCU total waste per student

Further work is required to work on the prevention of waste in the first instance and as can be seen from figure 38 below the GHG emission impact from waste (based on the DEFRA emission factors) is less than 1% of the total DCU Carbon Footprint for 2021. Of course, the impact of the waste should be directly linked to the procurement slice of the pie as it is here where the major impact is – i.e. the energy consumed in the growing/manufacture/processing of what we buy along with the energy of its packaging and transport to DCU. It is in procurement that we can make significant not only in the reduction of our waste but also in the reduction of our total ghg emissions.

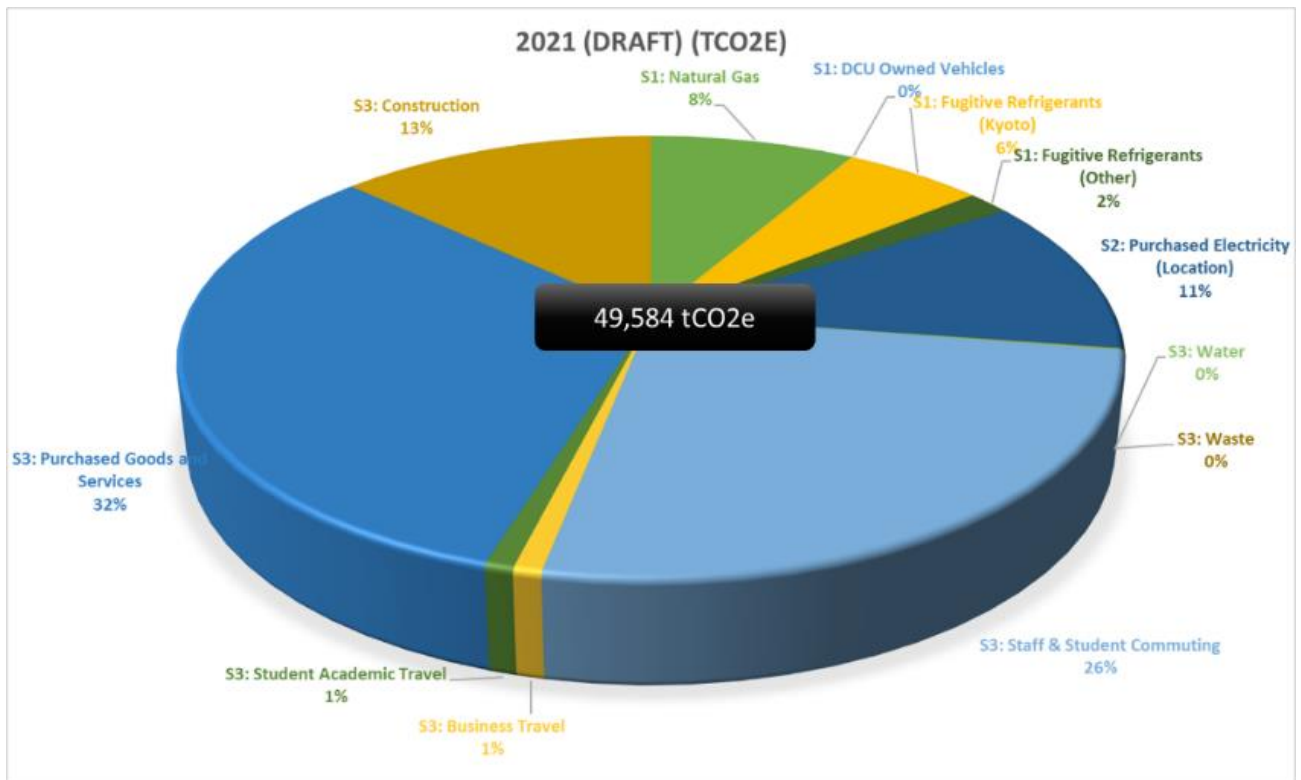


Figure 38: DCU Draft carbon footprint for 2021

Single Use Plastic Ban

In early 2018 DCU committed to the removal of all single use plastics across the university following a student referendum on the issue. By early 2020 all catering facilities had a reusable option for staff and students, along with a compostable option. And then along came COVID and everything reverted to single use for health and safety reasons. As we come out of the COVID period there has been some resistance to removing single use materials as they were deemed to be extremely convenient and the dish washer broke and the dog ate my homework Following much discussion progress is again being made. DCU catering has committed to removing all single use cups and moving to a deposit and return cups scheme supported by 2GoCup. The roll out of these cups will be in late 2022 early 2023.

Fast Fashion

To mitigate the impact of the fashion industry DCU Sustainable Living Society established fashion swap shop in the DCU SU which run on a weekly basis during term time. It is planned supplement this initiative with a fashion workshop to allow students to learn how to fix or alter their fashion pieces. This will be supported by the Rediscovery Centre.



Figure 39: DCU Sustainable Living Society with support from DCU SU in delivering a weekly Fashion swap shop.

Also in Sem II 2021/2022 the DCU SU ran a vintage clothes sale during the national Green Week. It was really well attended given the limited number of students on campus.



Figure 40: Vintage fair during Green Week 2021/2022

DCU Segregated Bins

Working with the Irish Universities Association, the Environmental Protection Agency, and several other universities under the Campus Living Lab project - DCU has gathered information on current bin systems to identify interventions to help prevent waste and improve recycling rates. DCU has many different types of bins across the campus both internally and externally (see figure 41 below).



Figure 41: Various types of bins across DCU campuses

Given that we do not want to waste many of these perfectly good bins and replace all with new (even if we had the resources to do this!) we have agreed to use the Regional Waste Authority’s agreed bin signage (figure 42 below) and to replicate these as bilingual (meeting the National Language Act requirements).



Figure 42: Waste labels

The implementation of these signs across all bins on campus will support a consistent message and hopefully lead to better segregation levels. It is also planned to roll out a virtual waste game as part of this project in Sem 1 2022/2023.

Litter survey

In 2022 the DCU Green Committee (with particular thanks to Malene Lyngso Larsen) undertook an in-depth litter survey across our three academic campuses (See figure 43 below).

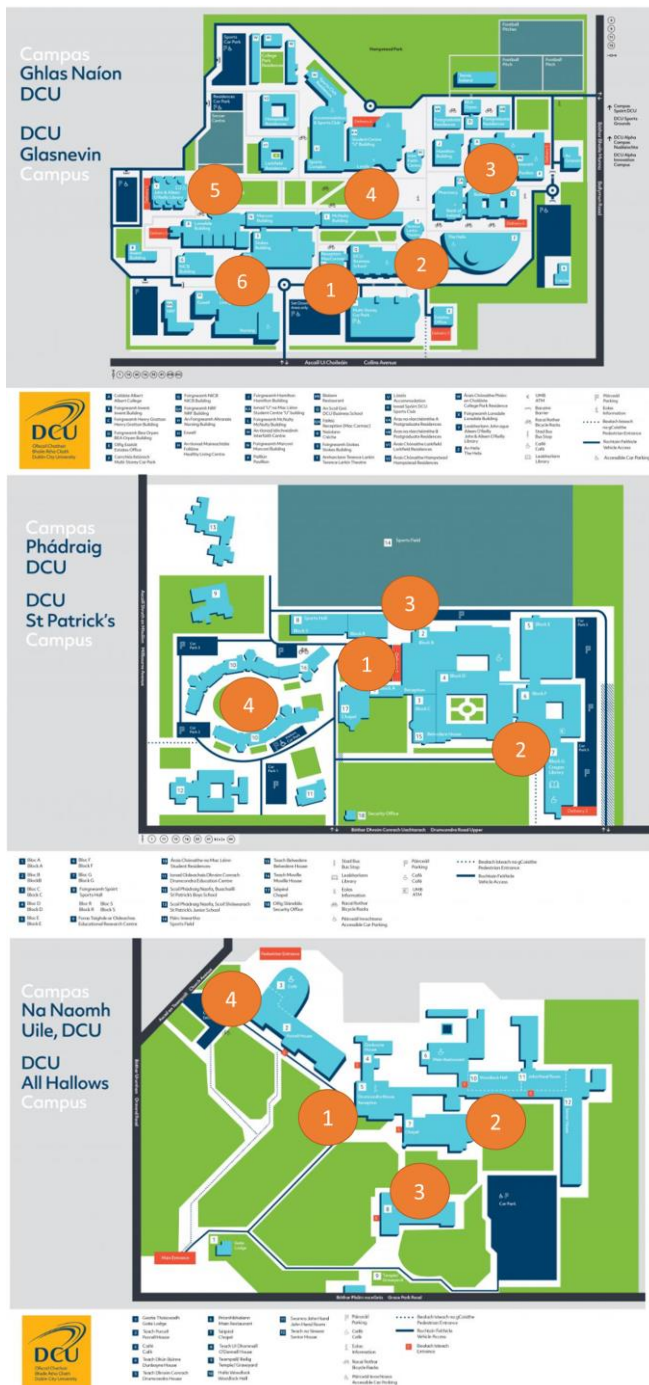



Figure 43: DCU Campuses and the litter data collection points identified on each campus

As can be seen from the campus maps above (figure 43) several locations were identified on each campus and over May and June 2022 data was collected on a weekly basis for these locations. To aid report a template of common waste items was created (see table 3).

Table 3: A single sample audit sheet for DCU SPC campus

Date & Time : 26.05.22
 Auditor: Malene

Waste Category	SPC1. Main Reception/Inner car park			SPC2. Outside Library			SPC3. Pitchside			SPC4. Campus Residences		
	No.	Scale	Comment	No.	Scale	Comment	No.	Scale	Comment	No.	Scale	Comment
Number of bins												
Plastic Bottle	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Paper coffee cups	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Paper food wrappings	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Plastic food wrappings	2	2	N/A	1	1	N/A	0	0	N/A	1	1	North path
Newspaper	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Metal cans	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Food waste	0	0	N/A	0	0	N/A	0	0	N/A	0	0	N/A
Cigarette butts	10+	10	By bin by the grass	10+	10	Edge between stairs & doors	10+	10	Edge by windows	10+	10	Far left
Piece of paper	0	0	N/A	0	0		0	0	N/A	1	1	North path
piece of plastic	5	5	Right end of car park	0	0		0	0	N/A	0	0	N/A
Piece of metal	2	2	Right end of car park	0	0		0	0	N/A	0	0	N/A
Number of bins	4		1 double	2		Hidden behind entrance walls	0		N/A	2		N/A
Type of bins (pics if possible)												
Comments												
General Comments												

Scale 1-10 (1 : no litter 10 : more than 10 samples)



Figure 44 below provides a summary breakdown of the identified litter across all the campuses. As can be seen cigarette butts are by far the greatest in quantity with small bits of plastic being the second largest. The volume of cigarette butts while not surprising is disappointing given that DCU has declared that it is a smoke free campus and has install smoking shelters away for campus buildings. Further work is needed to address the general awareness the cigarette butts are litter and should be disposed of appropriately.

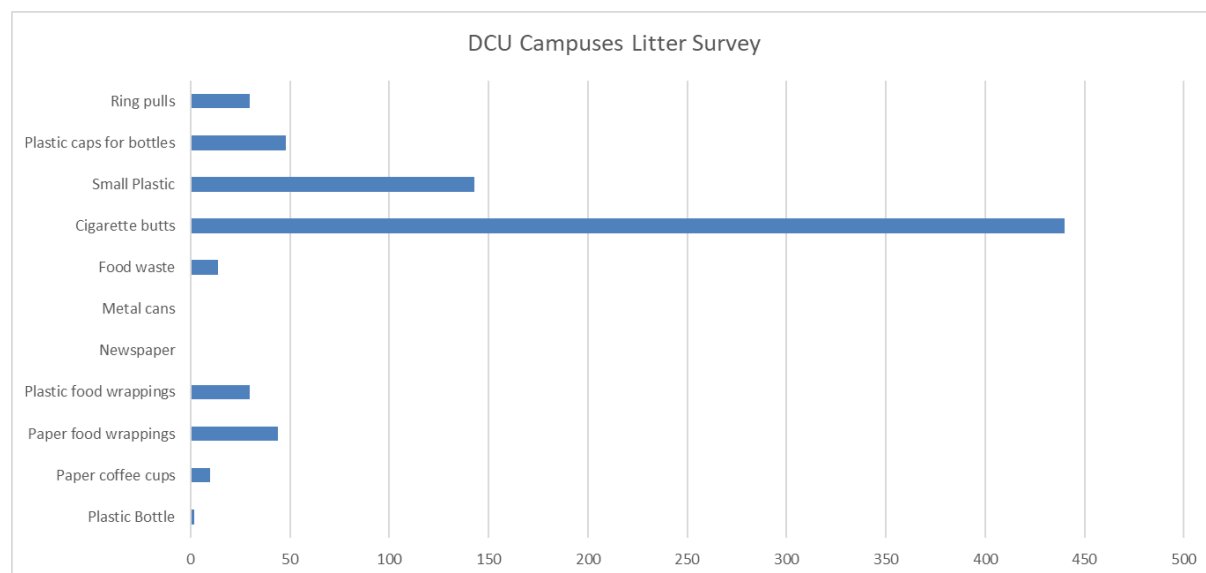


Figure 44: Summation of DCU campus litter survey

Considering locations, cigarette butts were identified at all locations. On the Glasnevin campus outside the Campus shop (#4 on map) was the most littered followed by outside the Helix (#2 on map) – both of these locations also has the most bins. On SPC the main reception area (#1 on map) was

the most littered and outside O'Donnell house (#3 on map) on the AHC campus. Overall, the AHC campus came out the least littered and while it probably has the least number of staff and students, there are a lot of visitors to this beautiful campus. Perhaps the beautiful lawns and buildings encourage people not to litter. It is proposed that further audits are undertaken throughout 2022/2023.

Upcycling/Recycling

The DCU All Hallows campus has had several buildings refurbished since DCU took over the site and in these refurbishments several pieces of redundant furniture etc were identified. These were stored on the campus and over the last while some of the members of staff including members of the DCU Community Employment scheme have undertaken the restoration or upcycling of some of these pieces. Training has been provided by the Rediscovery Centre and it is hoped to continue this work into 2020/2023 and potentially provide students with an opportunity to learn new skills.



Figure 45: Examples of refurbishments and upcycling (A) Some floorboards upcycled into shelves (B) Refurbished grandfather clock (C) door upcycles into a coat rack and shoe/boot store.

Recyclable Coffee Cups

DCU continues to work on the removal of single use cups – unfortunately COVID has had a negative impact on this challenge with the reintroduction of many single use plastics for health and safety reasons.



Figure 46: The CoCup Scheme (2019)

However we are again making progress and have committed to removing all single use cups and replacing them with a deposit and return scheme to be implemented in 2022/2023 academic year. This builds on a Co Cup pilot project run in 2019 with Dublin City Council and Trinity College Dublin. DCU now also has branded reusable DCU cups available for anyone to purchase. The reusable water bottles and cups are often used as prizes for initiatives and events across the university.



Figure 47: DCU branded cups and bottles available on campus.

Carbon Food labelling

Carbon rating labels have been created to be displayed on menus, which were piloted in DCU during Green Week. These ratings give customers perspective on the carbon footprint of each meal on the menu, in turn raising awareness and potentially influencing more eco-conscious meal decisions. If this were to be proven to influence customer decisions, it would reduce the demand on high emission food items and consequently reduce the kitchens' procurement carbon footprint. Therefore this intervention may have great potential and there are plans to implement the labels as a permanent feature on the restaurant menus.

Biodiversity

The overall aim of DCU's Biodiversity Action Plan³ is to enhance and protect biodiversity, and to ensure that every member of the DCU community understands its importance in our lives.

The Convention on Biological Diversity state that biodiversity is the critical foundation of the Earth's life support system on which the welfare of current and future generations depends. Humans depend on biodiversity and the ecosystem services that stem from it for many basic needs. Biodiversity is important for sustainable development and relates to all 17 Sustainable Development Goals but there are two proposed goals that explicitly refer to it; Goals 14 (Life below Water) and Goal 15 (Life on Land).

DCU is committed 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 use values associated with biodiversity are immense and can be categorised as economic, socio-cultural and health values, with each category having a number of benefits associated with it.

- **Habitats for pollinators:** to provide habitats where pollinators can survive and thrive, DCU will reduce the frequency of mowing and collecting clippings, introduce artificial solitary bee nests and bird boxes and introduce and maintain a wildflower meadow.
- **Invasive alien species:** DCU aims to identify and monitor all medium and high impact invasive plant species and remove where feasible. This measure will align with the DCC Climate Actions Plan.
- **Landscape management:** to maintain and enhance biodiversity DCU will prioritise native plants in new planting schemes (at least 75% of plants to be pollinator friendly), reduce hedge cutting and cut between November and January and keep fertilisers, pesticides and herbicides well away from trees, hedges and verges, identify locations on each campus that are mown under a pollinator friendly regime (5 cut and lifts per year after 15th April), and identify areas on each campus that can be converted to perennial planted border.
- **Dublin City Council's Climate Action Plan:** DCU will work with DCC and other local stakeholders such as Drumcondra Tidy Towns, local residence associations etc. and will assess the feasibility of further green walls, potential for wetland and seek to create and promote a DCU Tree Trail.

Biodiversity Team: DCU will seek to build a biodiversity team with representatives from the student body, expert academic and professional staff. This team would continue to log existing and new 'Actions for Pollinators' on the mapping system (pollinators.ie) and promote these across all campuses, provide or facilitate training on biodiversity and how to take action to protect it.

³ <https://www.dcu.ie/sustainability/biodiversity-plan>

Biodiversity and Pollinator Plan

As part of our commitment to climate action DCU has drafted a biodiversity plan for the University. In addition, some years ago DCU joined the national pollinator plan. Some initial measures that have been implemented are shown in the figures below. DCU have identified green areas across all campuses that are allowed to grow during the growing season. While we have in the past participated in seed bombing such areas following discussion with the National Biodiversity Centre we have agreed to allow nature to restore itself and are moving to a 'No Mow No Sow' approach.



Figure 48: No Mow areas and designated pollinator plan signage on the DCU campuses

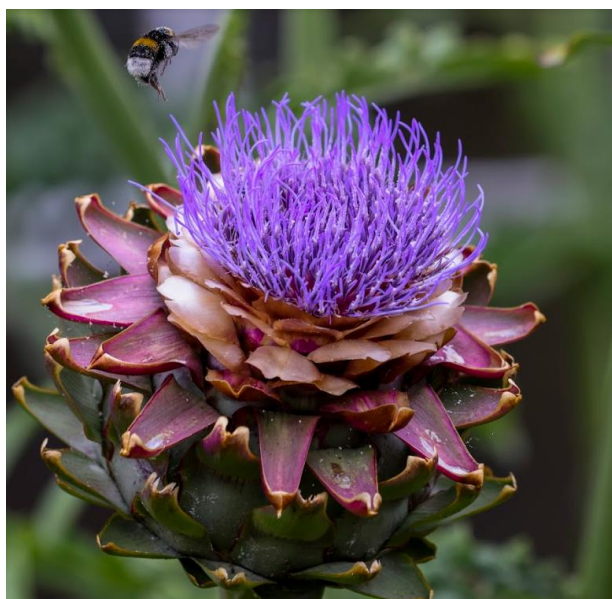


Figure 49: Bee just about to enjoy some pollen outside the DCU Albert College (pic Kyran O'Brien)

We have also drawn on the expertise available within the university and Dr. Thomas McCloughlin and colleagues has been very active in working with the Sustainability Office and his class groups in the planting of ecosystem enhancing plants and trees (figure 50).



Figure 50: Enhancing the ecosystem with Dr. Tom McCloughlin and his ecology class.

DCU Community Garden Glasnevin

The Community Garden on the Glasnevin campus continues to flourish. There are two social enterprises based on the campus – the Garden Gnomes and The Grow Dome. The Garden Gnomes cultivate a large variety of fruit and vegetables and sell the produce at farmers markets and through a subscription box scheme. DCU catering also avail of some of the produce in particular for inclusion in targeted event, for example a Climate Ambassadors meeting was held on the DCU campus and the food provided was from the DCU community garden.



Figure 51: Images from the DCU community garden - basil plants in the Grow Dome that is powered by solar panels and a Garden Gnomes celery bed.

Pocket Park



Figure 52: Children playing in the All Hallows pocket park

As part of the DCU Arts and Culture programme, the artist and landscape architect, Sophie von Maltzan worked with the DCU Sustainability office and the pupils from Grace Park Educate Together and St. Patrick's NS to design a "micro pocket park" for the All Hallows campus. The children were asked as part of the design process to think about their grandparent and how they might also use the space. During the process the children built temporary installations on the site, to help them explore nature and play. Later they built models of their own version of a "fun space". An exhibition of the children's work was displayed at proposed site. Inspired by their models,

Sophie designed the micro park which was installed in June 2021, with the help of the DCU Estates team at All Hallows.

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 and as seen from transport in the Environmental Review section we undertake regular surveys to understand the modal choices of staff and students commuting to DCU. The DCU Mobility Management Plan aims to have 90% of commuters to DCU avail of a sustainable form of transport. We have worked with the NTA with the development and roll-out of the Bus Connects Programme and we delighted to launch the N4 and N6 Orbital routes with the NTA in 2022.



Figure 53. Launch of the N4 and N6 Bus Connects orbital routes. Prof Daire Keogh with Anne Graham, CEO NTA with DCU student unions officers.

Smarter travel initiatives

Examples of some of the initiatives to support staff and students to make a more sustainable modal choice include:

- free shower facilities on all campuses
- secure cycle parking on all campus
- cage cycle parking on GLA
- free bike clinics on all campuses
- access to shared car scheme on all campuses both GoCar and pilot scheme for shared ecar with Renault (figure 55)
- public transport realtime information on campuses
- access to shared bike schemes – both e bikes and push bikes on all campus
- promotion and participation in Smarter Travel Challenges

Smarter Travel Challenges

The DCU Sustainability office regularly participates and promotes in the NTA Smarter Travel Challenges. As can be seen from figure 54 below there has been growing engagement in these challenges across the university from staff and students. During COVID we had a significant push to engage staff and students who were working remotely, and we teamed up the DCU Healthy Office to run a joint programme of engagement. We had many internal challenges including best photo, best memes and best promotional videos – the impact of the effort is evident for the number of DCU participant that reached over 600 for the Marchathon 2021 event. The event concluded with an online prize giving ceremony with awards presented by the DCU President Prof. Daire Keogh.

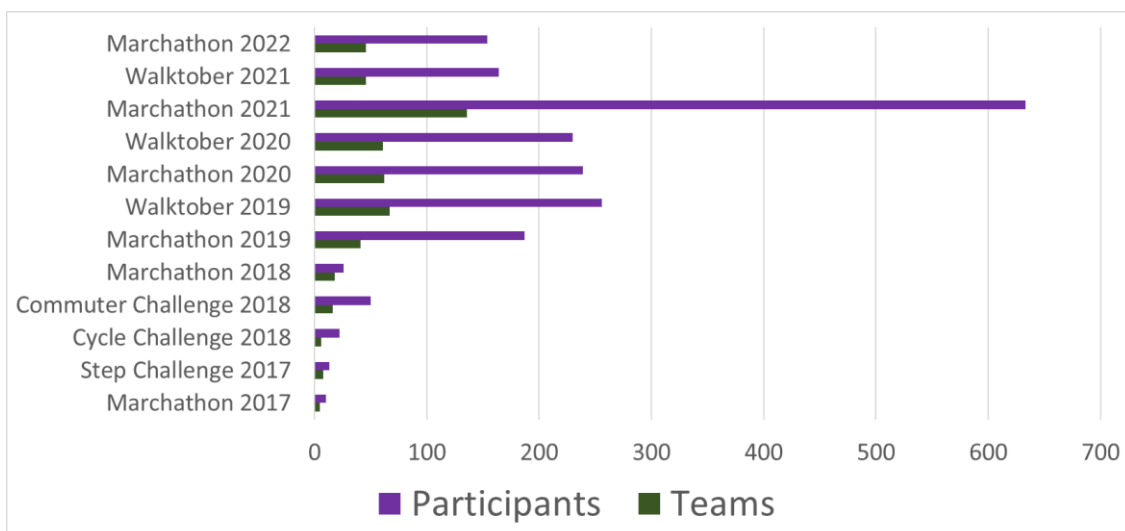


Figure 54: Smarter Travel engagement 2017 – 2022



Innovative solutions



Figure 55: Ecar sharing pilot with Renault

We also seek to innovate and have in the past number of years by working with several partners in the piloting and demonstration of novel new technologies such as the first hydrogen public bus in Ireland (figure 56).



Figure 56: Campus Living Lab initiatives to promote sustainable transport modal choices including piloting with CIE and Dublin Bus the first hydrogen fuelled public bus in Ireland.

We are also currently working with Tier on an scooter pilot. We recognise that scooters are not currently legally permitted on public roads and so DCU has been working with partners in our Innovation campus to demonstrate new centimetre precision GPS tracking technology. This tech will enable scooter providers to ensure that when users have finished their trip that they appropriately park the scooter and do not leave it as an obstruction.



Figure 57: DCU Campus living lab demonstrating new technologies

Carbon Footprint

DCU continues to monitor its carbon footprint. We follow the Greenhouse Gas Protocol Corporate Standard setting our organisational boundaries as our financial boundaries. We then work to capture as accurately as possible our Scope 1, 2 and 3 emissions (figure 58).

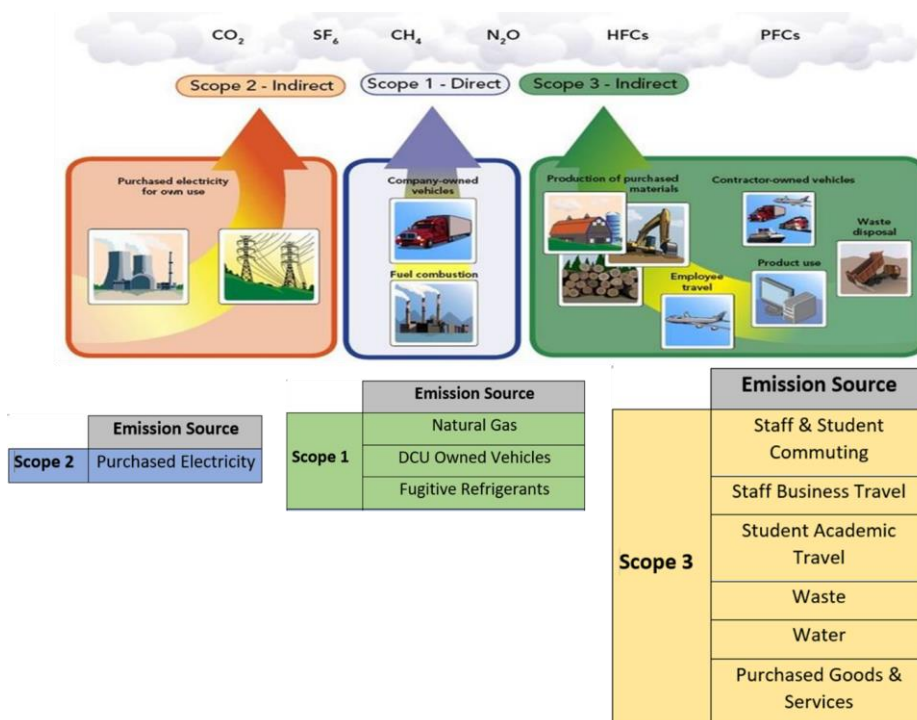


Figure 58: GHG Protocol model for DCU Carbon Footprint (image source : <https://www.eauc.org.uk/>)

Our carbon footprint allows us to understand where all our GHG emissions are coming from and forms the basis of our Climate Action Plan 2021-2026. Figure 59 below should our footprint from 2018 – 2021. There are several points to note

- the impact of COVID is evident in 2020 but we can see emission levels rebounding in 2021,
- the scale of our Scope 3 emission significantly outweigh Scope 1 and 2 emissions,
- while we have nominally direct control on the consumption of energy that produce our scope 1 and 2 emissions (i.e. gas and electricity mainly) we do have significant influence on our other activities that contribution to our scope 3 emissions.

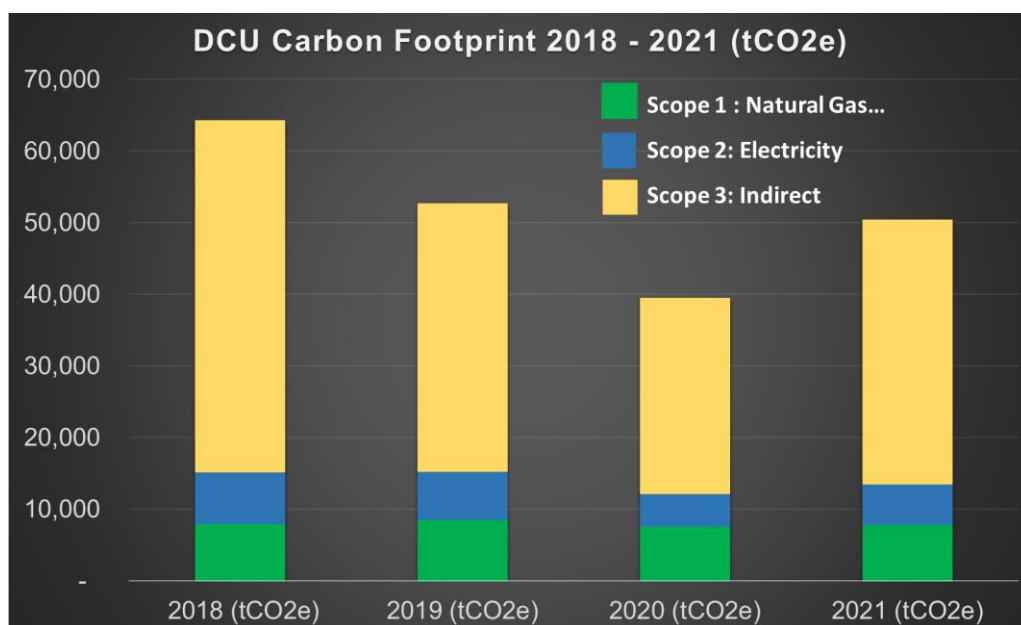


Figure 59: DCU Carbon Footprint 2018- 2022 (graph in black to represent carbon !!!)

A breakdown of the 2021 emissions are shown in figure 60 from which it is clear that ‘purchased good and services’ and ‘staff and student commuting’ have a significant impact on our emissions.

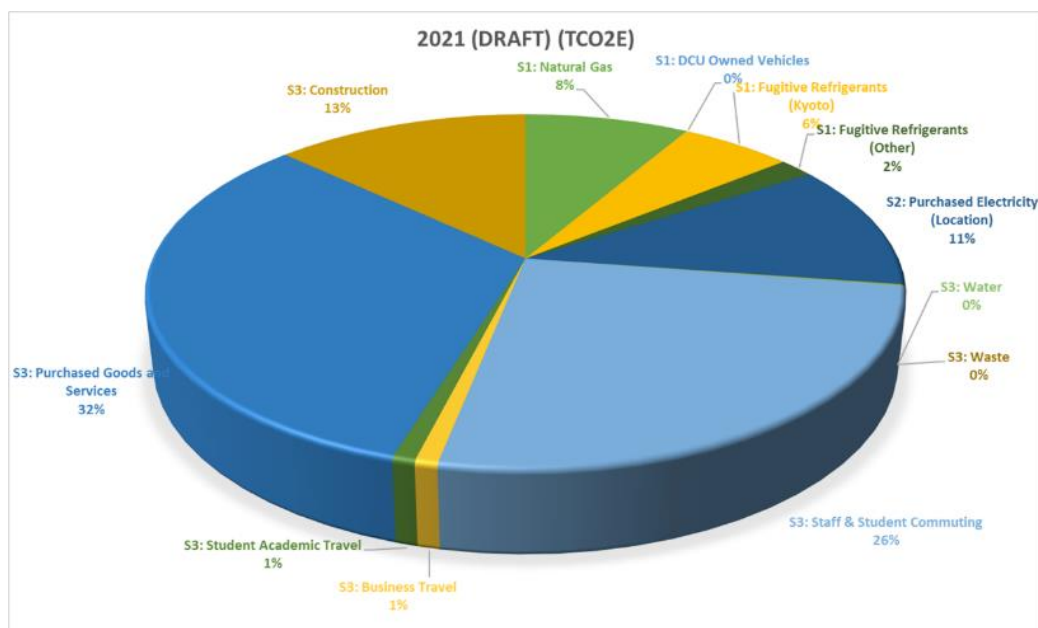


Figure 60: Total breakdown of DCU CO₂e emissions in 2021 (DRAFT)

The DCU Climate Action Plan identified many of the actions DCU is undertaking to meet our science-based targets for emission reductions. Following the enactment of the *Climate Action and Low Carbon Dev. (Amendment) Bill 2021* and the *National Climate Action Plan 2021* DCU is working on the next iteration of our own Climate Action Plan that will reflect these new targets.

7. Link to Learning on Campus

Over the past year the linkages to education programmes on campus have continued to grow with the ever increasing in sustainability. 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 2021 DCU undertook a radical restructuring of the DCU undergraduate curriculum to future-proof and enhance capacity. The ‘DCU Futures’⁴ programme is transforming the learning experience of undergraduate students at DCU, reconceptualising learning opportunities, creating authentic connections between the classroom and enterprise, and embedding the digital literacies, disciplinary competencies and transversal skills (including sustainability competencies) required to truly future-proof our graduates for the rapidly changing workplace.

A key element of the DCU Futures plan will, in the first instance, be to pilot a radically redesigned undergraduate curriculum across a suite of new and redesigned programmes including the following new programmes

- BEng in Sustainable Systems and Energy (started in 2021/2022)

⁴ https://www.dcu.ie/sites/default/files/inline-files/15698_dcu_futures_singles.pdf

- BA in Climate and Environmental Sustainability (started in 2021/2022)
- BSc in Global Challenges (started in 2022/2023)

Each of these will have a strong sustainability theme throughout the curricula but in addition, a sustainability competency has been co-created with input from DCU experts from all faculties and units including the Sustainability Office. In addition to these new specific undergrad programme there are also specific post grad programme with a specific emphasis on the future sustainability challenges including the *MSc in Climate Change: Policy, Media and Society* which has been growing in popularity since it commenced 2019/2020.

Sustainability Office Projects

The DCU Sustainability office works closely with several academic programme across the university to provide students with an opportunity to undertake a project that can directly influence and impact the sustainability efforts within DCU, below is a list of several of these projects:

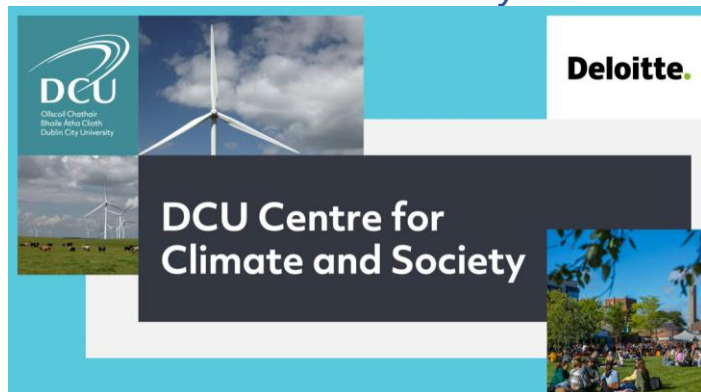
Project title	Student	Project	Year	Programme
Reducing the Quantity and increasing the recycling of waste in DCU campus Residences	Sean Daly	Final year thesis	2014/15	Environmental Science and Health
The Viability of DCU's community garden	Alan Rigney	Final year thesis	2014/15	Environmental Science and 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

Project title	Student	Project	Year	Programme
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	Andrew McGrane	Master's Thesis	2016/17	Open Education - MASTER OF SCIENCE IN MANAGEMENT FOR SUSTAINABLE DEVELOPMENT

Project title	Student	Project	Year	Programme
sector in Ireland.				
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
Getting DCU Campus Residents to Use Less Energy	Dominic Ó Gallachóir,	Psychology INTRA Placement	2017/2018	Psychology
DCU's Carbon Footprint for the 2018 Calendar Year	Gráinne McIvor	Final year thesis	2018/19	Environmental Science and Health
DCU Smoke Free Campus	Ciaran Ramsbottom	Psychology INTRA Placement	2018/2019	Psychology

Project title	Student	Project	Year	Programme
Flyless Initiative	Alison Young	Psychology INTRA Placement	2019/2020	Psychology
Digital vs Face-to-Face Studying	Enia Simac	Final Year Thesis	2019/2020	Environmental Science and Health
Waste to Energy Using Biofuels at DCU	Cormac Hughes	Final Year Thesis	2019/2020	Environmental Science and Health
Green Toolkits for GAA	Mark Plunkett	Final Year Thesis	2019/2020	Environmental Science and Health
Green Toolkits for GAA	Michael Burke	Final Year Project	2019/2020	Mechanical Engineering
Carbon Management Strategy for HEIs	Anna Doyle	Final Year Thesis	2020/2021	Environmental Science and Health
Carbon Emission Offsetting – Genuine Solution or Green Washing?	Daisy Earle	Final Year Thesis	2020/2021	Environmental Science and Health
Paper to Digital, Wins & Challenges	Francis Flynn	Final Year Thesis	2020/2021	Environmental Science and Health
Flyless Initiative	Joshua Mallin	Psychology INTRA Placement	2020/2021	Psychology

Centre for Climate and Society



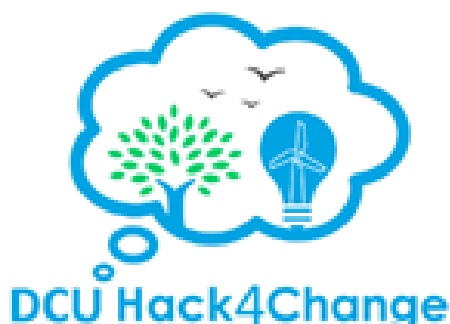
DCU Centre for Climate & Society focuses on research insights, analysis, and solutions from policy, media, politics, communications, education, business, and other social science and humanities disciplines. Established in 2021, the Centre is Ireland's first academic research centre to bring perspectives and analysis from the social sciences and humanities to bear on the climate crisis.

The work of the Centre reflects DCU's own commitment to sustainability in its research, teaching, and operations. The Centre was formally launched in May 2022 by the President of Ireland, Michael D. Higgins.

DCU Business School

Over the past number of years the DCU Business School has continued its 'Hack4Change' initiative which in 2022 involved over 700 first year business school students in addressing societal challenges. For the past couple of years the initiative has been run on the Gather Town platform where student can meet and chat with external experts to give lighting talk on the challenges and students groups work to identify novel sustainable solutions.

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 ran in St Patricks and focused on providing student teachers with an understanding of biodiversity and the development and implementation of outdoor teaching tools and methodologies. The module has undertaken several interesting projects including establishing and maintaining its own growing space on the SPC campus.

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

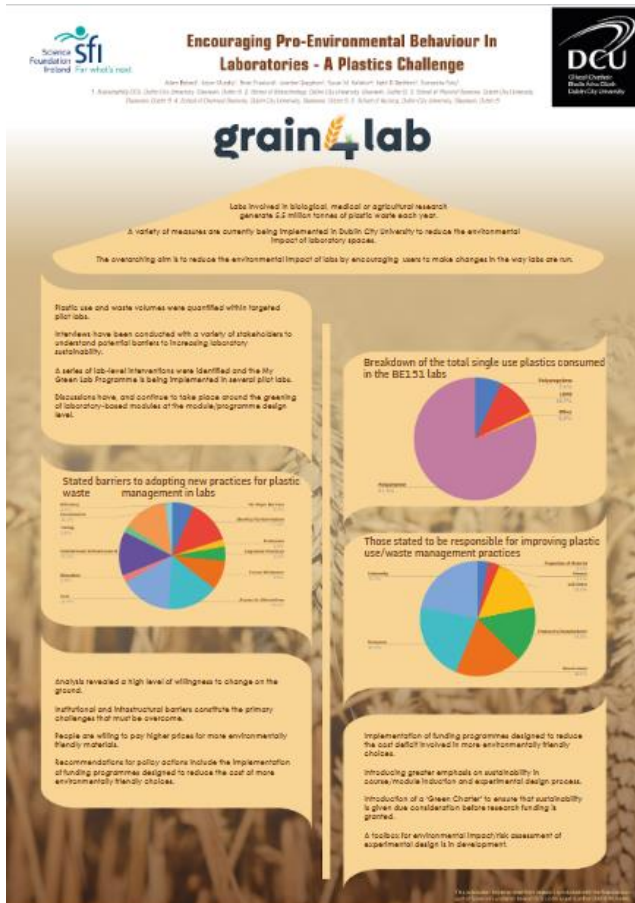


Figure 61: Grow space on the SPC campus

Grain4Lab

The DCU Sustainability Office is working closely with several academic across DCU to reduce single use plastic waste from laboratories by providing an effective and sustainable alternative. A poster was presented at the 2022 Environs conference on the societal challenge element of this project.

More info at : <https://grain4lab.ie/>



My Green Lab

With significant early promotion of green labs from the Biotech students eventually two DCU labs have gained MyGreenLab Certification. The [MyGreenLab](#) certification is a short engagement programme for all lab users that support practice and behaviour change to reduce the environmental impacts of labs as well as in most cases saving resources. The Sustainability Office has given several presentations on MyGreenLab across DCU and while there is significant enthusiasm at these presentations, the challenge comes with getting labs to sign up. These programmes can have significant impacts on our labs from the Freezer challenge of moving from -80 to -70 and saving up to 30% energy costs where a low temp freezer can consume as much energy as an average home per day (see attached) to better practice with fume hoods that can

have similar energy consumption levels to 3.5 average homes per day. More efforts are needed going forward to get labs to sign up.



ECIU Climate Neutral Campus

DCU is a member of the European Consortium for Innovative Universities (ECIU). DCU is committed to placing sustainability at the core of all the University's activities - and this ECIU challenge-based project aligns with other college-wide sustainability actions.

As part of an academic year long project, students for partner universities including Shannen from the DCU Masters in Climate Change programme joined a workshop in Hamburg to focus on the climate neutral campus challenge. Other students came from the University of Trento (Italy), University of Aveiro (Portugal), Linköping University (Sweden), Kaunas University of Technology (Lithuania), University of Stavanger (Norway) and Hamburg University of Technology (Germany).

While most of the engagement over the year was by remote participation the face to face meeting of the international group helped to develop ideas to reduce CO2 emissions, increase behavioural awareness among students and staff and develop proposals to avoid "greenwashing".

8. 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 links 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.

Green Flag for All Hallows

DCU All Hallows campus underwent its virtual assessment in May 2020 but with COVID there had been limited opportunity to celebrate and raise the flag with the DCU All Hallows community. Eventually in early 2022 we managed to get the flag raised on the campus.



Figure 62: Raising the Green Flag on the All Hallows Campus

DCU and the CARO Offices

DCU is focused on transforming lives and societies and in doing so locally is working with the Climate Action Regional office to support our city's and our local society's need for change. DCU has signed an MOU with the CARO office to support this engagement. Below is a short summary of some of the project.



Figure 63: Socially distanced pic at the outdoor signing of the MOU between DCU and CARO (L-R C. Reily (DCC), D. Keogh (DCU), D. Torney (DCU), L. Gilroy (DCU), S Decker (DCC), D. O’Brion (DCU), D. Dodd (DCC/CARO), C. Moran (DCU), D. Clarke(DCU), S.Fahy (DCU))

Green Week 2021/2022

During the lockdown there was some difficulty in getting engagement from the student body. To support and capture the students voice a virtual jamboard was created – see image below. Over the course of Green Week students has access to this board as well as physical board on each of the DCU academic campuses where students were encouraged to identify their concerns and proposed actions to address the Climate and Biodiversity emergency.

Local Government Climate Action - Key Performance Indicators, Literature Review.

Full document available [here](#).

Dr. Darren Clarke



Capstone Dissertations

Dr. Diarmuid Torney – DCU

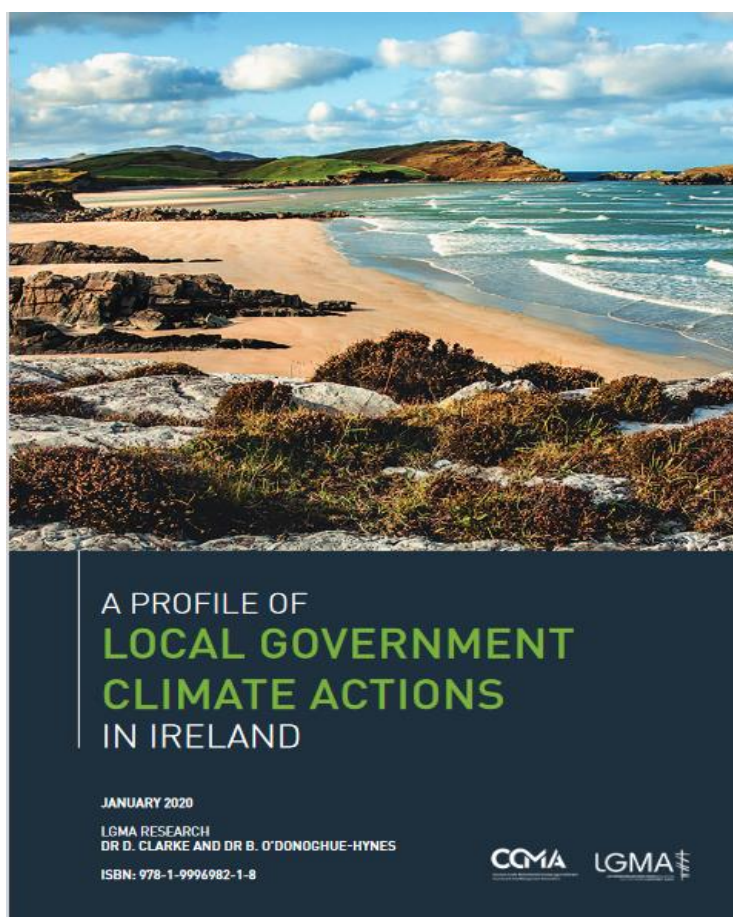
Dr. Sabrina Dekker – DCC

As part of DCU's MSc in Climate Change: Policy, Media and Society students have completed their final dissertations on themes that were relevant to Dublin City Council's climate actions. Topics were jointly agreed upon by students and DCC. Topics include: *Developing a climate action awareness programme with Junior Achievement Ireland, Fast Fashion and Textile Recycling and Re-Municipalisation of Waste Services.*

A Profile of Local Government Climate Actions in Ireland

Full document available [here](#).

Dr. D. Clarke and Dr. B. O'Donoghue-Hynes



Eat the streets

At Eat the Streets! we are bringing together schools, farmers, urban growers and neighbourhoods to celebrate Dublin's food in all its glory. We are going to grow, cook, create and discover together, helping to dig up the city's rich food heritage. What we began in March will culminate in a 10-day festival from the 11th to 20th June.



DCU and Cloughjordan ecovillage

This collaboration continues to work together, the MSc in Climate Change have undertaken several field trips to Cloughjordan working together on several projects including the redevelopment of DCU's Sustainability Policy.

Fairtrade at DCU

DCU continue to be one of the only Universities in Ireland to hold the Fairtrade status for the campus.

Metrics

DCU continues to report under the UI Green Metrics and has the past 5 years been ranking in the top 20 universities in the world in these rankings. As can be seen from the figure below it is very interesting to see the significant growth in the number of universities reporting under these rankings

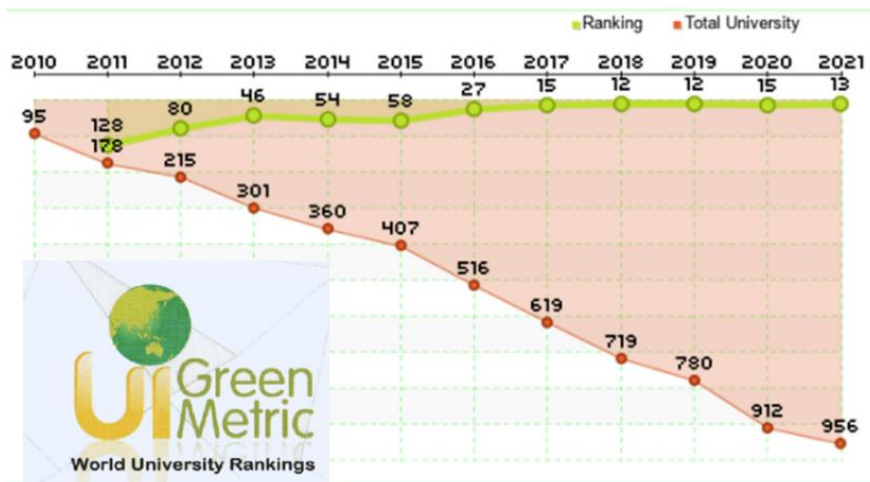


Figure 65: DCU top 20 in International Green Metrics

DCU also continues to be one of only universities in the world to report its carbon footprint under the CDP mechanism. We have progressed from a D in 2019 to a B grade in 2021 (see Figure 65 & 67 below)



Figure 65: Launch of CDP Ireland Report where DCU were called out as only university in world to report.



Figure 67: DCU CDP Score in 2021

Sustainable Kitchens

During September 2021, DCU commenced the Sustainable Kitchens project which involved assessing the environmental impacts of commercial kitchens and devising and implementing interventions to reduce the magnitude of those impacts. The aim is to reduce the environmental impacts of operating commercial kitchen and to develop a ‘sustainability best-practice’ for any enterprise operating within the foodservice industry. This work was undertaken with several partners including Intel Ireland and Carbon Positive. The results of the work were presented at Environs 2022 in Belfast.



DCU Community Garden and Social Enterprises

DCU Community Garden hosts two social enterprises

- the Grow Dome (<http://www.thegrowdomeproject.com/>)



Grow Dome are in the process are building an 11 meter aquaponics grow dome in the DCU Community Garden.

- the Garden Gnomes



(<https://marketgnomes.com/>) who grow a wide variety of fruit and veg with no artificial herbicides, pesticides or fertilizers. Produce is available at select farmers markets and online.

Welsh Delegation visit DCU



Figure 68: Welsh delegation visits DCU

In March 2020, just before the COVID shutdown, a delegation from the Welsh governments visited DCU and discussed shared learning and potential joint approaches to delivering on the UN Sustainable Development Goals. A further delegation visited in early 2022 continuing the conversations and including the new DCU Climate and Society Centre.

Raheny Rotary & the Peace Pole

Linking with our local community the Rotary Club in Raheny very kindly donated to DCU a Peace Pole as part of the international Peace Pole Project⁵. At a time of international turmoil with the war in Ukraine it was a very poignant donation and it was noted at the unveiling that not meeting our sustainability challenges may have a major impact of future peace.

⁵ <https://www.worldpeace.org/history/>



Figure 69 The DCU and Raheny Rotary community at the unveiling of the Peace Pole on the DCU All Hallows Campus.

Climate Ambassadors Meeting

Working with An Taisce, DCU sustainability organised a Climate Ambassadors meeting at DCU where presentations were made on sustainability activities at DCU include Green Committee activities, an activism presentation by XR. It was planned to take a tour of the DCU Community Garden however the weather was very foul and so we had to settle for the food for the event being supplied from the community garden – with thanks to DCU catering for making this possible.



Figure 70: staff and student participants from across DCU at the Climate Ambassadors event (May 2022)



Figure 71: Vegan food from the DCU community garden

9. 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


DCU has also committed to a new Sustainability Charter:

Sustainability Charter

DCU is a young, dynamic and ambitious university with a distinctive mission to transform lives and societies through education, research and innovation. Since admitting its first students in 1980, DCU has grown in both student numbers and size and is now a multi-campus university located just north of Dublin city centre.

This charter includes the following principles and commitments:

- We will **embed sustainability at the core of our university**, in its teaching and learning, research, development and innovation, its operations and promoting it through its national and international engagements,
- We will communicate and promote the **United Nations Sustainable Development Goals** and will encourage all staff and students to engage in the delivery of these goals,
- We will **actively advocate for climate action through all our circles of power and influence**, encouraging and supporting our staff and students in their actions,
- We will **demonstrate our commitment** through our own actions,
- We will measure our **environmental impact** and publish an **annual carbon footprint**,
- We will establish and work to achieve them **science-based targets** to meet the 1.5 degree scenario requirements as per the Paris Climate Change Agreement,
- We will identify and implement, in so far as possible, all measures to **reduce our carbon footprint**,
- We will **share knowledge and best practice** with national and international partners and communities and work together to reduce all our impacts,
- We will encourage and **promote progressive actions** undertaken elsewhere and where possible emulate these,
- We will identify the **carbon footprint of goods and services** consumed by our university and work with our suppliers to reduce these,
- We will assess the institutional risk associated with climate change/sustainability and include where deemed necessary said risk on the DCU **risk register** and examine all our **policies, practices and major decisions** on a systematic basis to ensure that they do **not lock us into future high carbon pathways** but identify a pathway to a zero-carbon organisation,

- 
- We will support our **staff and students** in the identification of their personal carbon footprints and identify and support appropriate measures to reduce our impacts,
 - We will actively **communicate, both internally and externally**, about climate change and our actions to mitigate our impact and adaptation measures needed for a sustainable future for all.

With the return of students to campus is it proposed to run a workshop with the DCU Green Committee to review the existing Green Committee Charter along with the DCU Charter to co-create a joint charter to ensure an holistic approach.