Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Sustainability Report

2020/2021

tcd.ie/provost/sustainability/

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This report covers the 2020/21 academic year (Sep 2020 – Aug 2021), except for energy, waste and water which are reported for the 2021 calendar year. It is based on the most accurate and applicable data available at the time of writing. All feedback is welcome and actively encouraged by contacting us on sustainability@tcd.ie.

Executive Summary

The 2020-21 academic year was one characterised by change and uncertainty. After the Covid-19 outbreak in early 2020, there were restrictions in movement, closure of the Trinity campus to staff, students and visitors, a move to online learning and assessment, and many members of the college community worked from home. In addition, in April 2021, a new Provost, Dr Linda Doyle, was elected, meaning a change in leadership at the end of the academic year (August 2021) when the then Provost Dr Patrick Prendergast's term ended. Despite the challenges posed by the pandemic, progress was made in terms of our ambitions towards a more sustainable and low-carbon campus, as outlined in this report.

This report summarises achievements towards the 2021 Sustainability Targets. Data from nine focus areas, which reflect the key areas identified in the Green Campus strategy, and relate to the Sustainability Targets, are presented. Whilst substantial progress has been made in meeting these targets, challenges still remain. Increased energy efficiency has been achieved, but progress on emissions reduction has not been as planned, with an increase in energy-related carbon emissions during the reporting period. Most waste and water targets have been met, but some areas still need attention. Whilst there are still some supports needed to encourage bike use, sustainable transport targets for the reporting period have been achieved. Although progress had been made on reducing single use items, the Covid-19 pandemic did result in a lapse in some areas, e.g. where it was not possible to eliminate disposables. Biodiversity targets were all achieved for the reporting period, and a pilot biodiversity audit project was completed, which made recommendations to build on in the future. Good progress has been made in terms of Green Procurement and most targets were achieved in Research, Education and Entrepreneurship. Most targets were also met in Communications, Student Involvement & Transparency.

Going forward, new targets will be set, in line with national and international guidance and expectations.

2021 HIGHLIGHTS

ENERGY & CLIMATE

Versus 2006-08 baseline: **35.9%** Improvement in Energy Efficiency, **21.0%** Decrease in energy-related CO_2 emissions, **16.8%** Renewable Energy (mainly grid electricity)

Versus 2019: **6.3%** Disimprovement in Energy Efficiency, **12.0%** Increase in energy-related CO_2 emissions, **3%** Increase in Renewable Energy

WASTE & RECYCLING

48.4% Recycling rate

35% decrease in total waste generated vs 2012

46.5% decrease in waste/person

0.1% increase in hazardous waste vs 2012

WATER & WASTEWATER

49.4% reduction in water use versus 2006-08 FY Baseline (18.3% increase vs 2020/21)

62.7% Reduction in water/person versus Baseline

SUSTAINABLE TRANSPORT

99% of Staff and Students Use Sustainable Transport for Commuting

but most recent survey during indicated that only **81.8%** would return to the more sustainable modes of transport

RESOURCE USE & FOOD

66.0% Reduction in Paper Use vs 2011 (10% increase on previous year)

82% decrease in bottled water cooler use for 2020 vs 2011 (65% decrease vs last year)

TREES & BIODIVERSITY

2,200+ Total Trees Across University Grounds with 97 ha of tree cover

Campus Pollinator Plan supported

GREEN PROCUREMENT

72% of tenders request environmental information and have green award criteria

EDUCATION & RESEARCH

All new staff and 80%+ of freshers, postgraduates and visiting students inducted on sustainability

Growing research on SDGs and Civicly Engaged works and projects

Green pages highlight sustainability courses on offer

COMMUNICATION & STUDENT INVOLVEMENT

231 posts across LinkedIn, Facebook, Twitter and Instagram

1.67million impressions and 26,280 video views for the 20/21 academic OneStepCloser social engagement platform

Sustainability Fund and Climate Action Group established

For Further Details Please Visit the Trinity Sustainability Webpages (https://www.tcd.ie/provost/sustainability/).

Introduction

Trinity College Dublin, the University of Dublin, is Ireland's highest ranked university with an international reputation for research and scholarship, and for the success of its graduates in many fields. Trinity's major activities are carried out on a beautiful historic campus located in the heart of Dublin, with health sciences also located at St James's Hospital and Tallaght Hospital. The university has 168 buildings across 17 locations including a 5 acre technology campus located at Grand Canal Dock, student residences at Darty, a 33 acre sports facility at Santry and the Iveagh Sports Grounds, a 16.5 acre site acquired in 2017. Trinity has a community of 18,284 students, approximately 3,500 staff and over 120,000 alumni. With a tradition of scholarship spanning more than four centuries, Trinity is home to talented and inquiring minds, a liberal education, and research conducted at the frontiers of disciplines.

Sustainability has been at the heart of Trinity for a very long time. The late Professor Simon Perry originally founded the University's green campus committee in 1993 as a means for staff and students to raise campus environmental issues and to propose innovative solutions. Building on this initiative the University published its first Sustainable Development policy in 2008 and in 2013 Trinity was awarded its first Green Flag award for campus sustainability. Trinity's 2020-2025 strategic plan articulates 3 priorities and 9 cross-cutting goals with the following specifically relating to sustainability:

- ✓ Priority 2: Research for impact and sustainability
  - We will align ourselves to the UN Sustainable Development Goals, significantly increasing the extent to which our research and teaching aligns with the aim of achieving a healthy and sustainable planet
- ✓ Goal 5: We will shape our organisation and focus research around the challenge of achieving a sustainable and healthy planet.
- ✓ Goal 7: We will develop and inhabit our space responsibly.

The University renewed the internationally recognised 'Green Flag' award by An Taisce's Green-Campus programme for the second time in 2019. The Provost's Advisory Committee on Sustainability and Low Carbon Living has been meeting since 2017 with membership including Student Union and Graduate Student Union representatives, as well as general student activists.

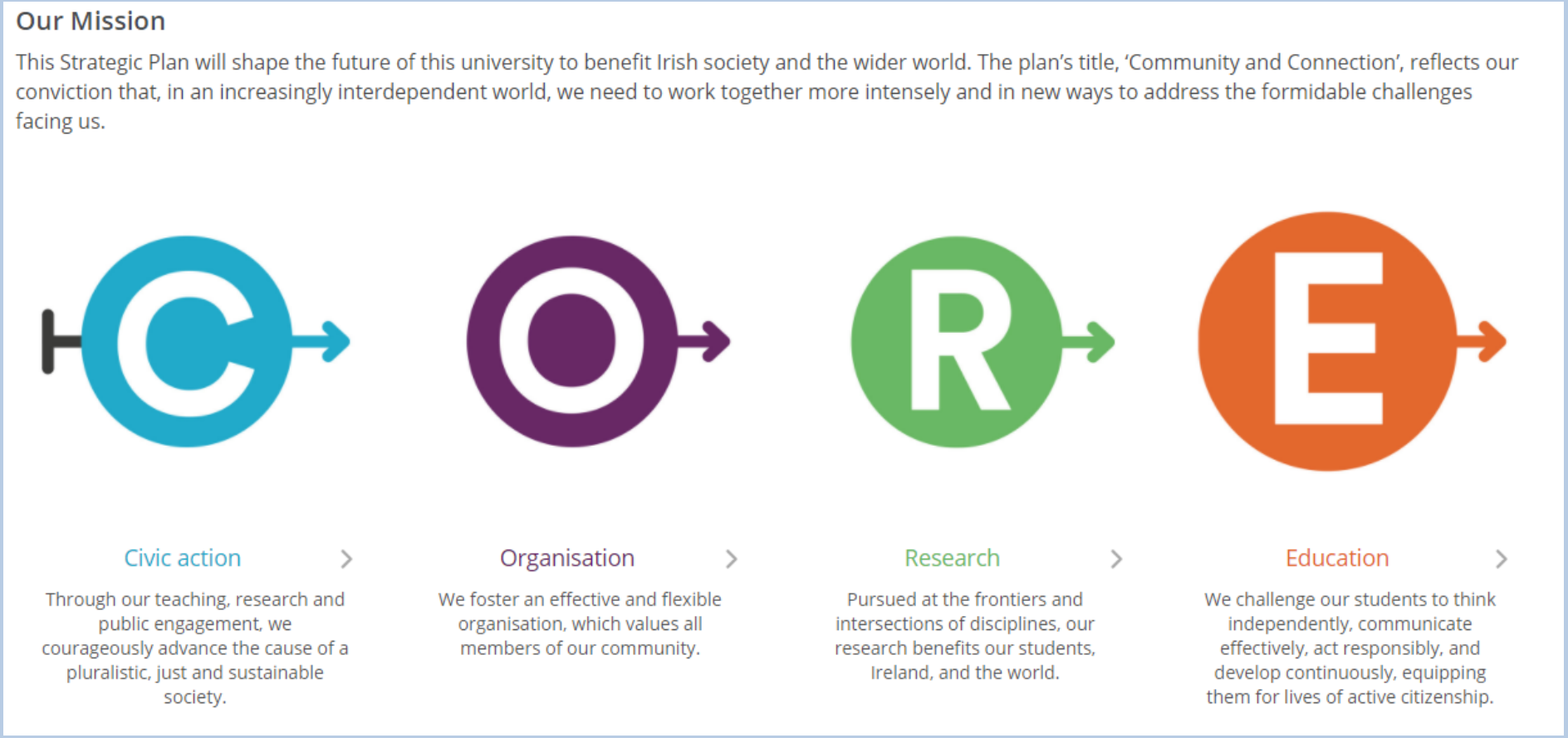
This is our fifth annual Sustainability Report and we hope it inspires all our Trinity community including our students, staff, alumni, surrounding communities and the over one million visitors we welcome to our campus each year. We also aim to inspire and collaborate with our academic peers, city neighbours and the global academic community to which we belong.

This report covers the nine key sustainability areas we identified as part of our Green Flag campus award in 2013 and reaffirmed as part of the Green Flag renewal in 2016 and again in 2019. These aspects include energy, carbon, waste, water, transport, resource use, green procurement, sustainability education, research, and entrepreneurship, and student/community involvement. The sign convention adopted is that positive % progress is better and negative % progress is worse, with percentages annotated on graphs measured against the target baseline. The first year in each graph is the baseline or the average of 2006 and 2008 in the case of energy and water.

Policy, Strategy & Progress

Our key sustainability drivers are the University's Sustainability Policy (https://www.tcd.ie/about/policies/assets/pdf/sustainability-policy-15112017.pdf last updated in 2017) and the University's 5 year strategic plan (2020-2025: https://www.tcd.ie/strategy/ particularly Priority and Cross Cutting Goals 5 and 7). The following are the key sustainability extracts from the strategic plan, which follow the definition of Sustainable Development established by the UN Brundtland Commission, which states "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Our baselines and targets are based on our maintenance of Green Flag status. Baseline years vary based on available data and national targets, and we will envisage future targets to be adjusted to coincide with the University's 5-year strategic plan. As we have reached the end of 2020, new targets are being devised to 2025 and 2030

The 2020-2025 strategic plan is based on a CORE Mission



Priority 2: Research for impact and sustainability

As Ireland's leading research organisation, we position "research at the heart of the university" and will "stand up for research", as articulated in our recent Living Research Excellence Strategy

> *Underlying all of this activity is a deeply-felt sense that, as members of a university community, we have a unique privilege in being able to shape the future for the better. In order to give this ethical core a point of focus over the next five years**, we have set ourselves a grand challenge: we will align ourselves to the UN Sustainable Development Goals, significantly increasing the extent to which our research and teaching aligns with the aim of achieving a healthy and sustainable planet.** The E3 initiative, in both its teaching and research phases, addresses these challenges directly; tackling the UN Sustainable Development Goals will, however, require sustained collaborative research across all disciplines that involves the Sciences, Health Sciences, Social Sciences, and Arts and Humanities together. Beyond research and teaching, however, we are deeply committed to sustainability in terms of how we live as a community, and we will continue to find new and creative ways to make our world fairer, healthier and more sustainable, whether it is in our adoption of sustainable commuting and working practices, or how we invest.*

Cross cutting goal #5: We will shape our organisation and focus research around the challenge of achieving a sustainable and healthy planet.

- ✓ 5.1 Commit to strong ethical leadership in all we do, from research to staff development and throughout the activities of our entire university community. [DR; RG]
- ✓ 5.2 Create a UN Sustainable Development Goal Hub using our research data to monitor research in all fields linked to the UN SDGs. [LRES; SST]
- ✓ 5.3 By July 2021, have set targets for the significant reduction of our carbon footprint. [DR; RG]
- ✓ 5.4 Provide leadership in sustainability through improvements in energy use, reduction in waste including single use plastics, promoting areas such as sustainable transport and biodiversity, and ensuring all new buildings are based on sustainability principles. [SST]
- ✓ 5.5 Support and conduct civically-engaged research thereby increasing the number of research outputs connected to UN SDGs by 20% by 2025. [LRES; SST]
- ✓ 5.6 Promote civically-engaged research across the university and host public engagement events relating to the UN SDGs in our schools and research institutes, highlighting to the wider public and policy makers the impact of our work. [LRES]
- ✓ 5.7 Introduce new funded Ph.D. scholarships in line with UN SDGs. [LRES, PC]
- ✓ 5.8 Build the teaching programmes and research projects of the CHARM-EU alliance around the grand challenge of "Reconciling Humanity with the Planet". [LRES; GRS3]
- ✓ 5.9 Achieve an Athena SWAN Silver award by 2025. [AS]
- ✓ 5.10 Integrate the SAGE Charter for gender equality into our policies and practices by 2021. [AS]
- ✓ 5.11 Contribute, as part of the Global Brain Health Institute, to the goal of having 125 Atlantic Fellows for Equity in Brain Health working globally by 2022 to create a zealous, creative community of leaders combining to reduce inequities in the field of brain health. [GBHI]

Cross cutting goal #7: We will develop and inhabit our space responsibly.

- ✓ 7.1 Launch, by 2022, the masterplan for Trinity @ Grand Canal Quay, part of the Grand Canal Innovation District initiative, providing infrastructure for new research linking Engineering, Environment and Emerging Technologies. [E3; T@GCQ]
- ✓ 7.2 Complete work on a new generation teaching space enabled by philanthropy, the Martin Naughton E3 Learning Foundry, in 2023, providing a home for the E3 project, uniting the Schools of Computer Science and Statistics, Engineering, and Natural Sciences. This building will achieve Well Building standards and BREEAM excellence. [E3; ES]
- ✓ 7.3 Develop plans for a new Law School with new and enhanced learning and research facilities. [LSDP]
- ✓ 7.4 Complete architectural plans for and begin the conservation and redevelopment of the Old Library, including a new Research Collections Study Centre and new Exhibition Visitor Centre. [ES; LS]
- ✓ 7.5 Develop plans for the new collaborative off-site Collections Resource Centre, thereby improving the environment for our collections and enabling the re-imagination/re-configuration of our contemporary library spaces. [ES; LS]
- ✓ 7.6 Refurbish, by early 2023, the campus's oldest building, the Rubrics, and Chief Stewards House, providing new student and staff accommodation and a research space for Fellows Emeriti. [ES]
- ✓ 7.7 Begin developing the new Trinity St. James's Cancer Institute. [TSJCI]
- ✓ 7.8 Redevelop our sports facilities and infrastructure at Iveagh Grounds. [ES; TCDSU]
- ✓ 7.9 Commit to a programme of continual improvement and uniformity of standards of our learning and teaching spaces, facilitated by improved data around the use and condition of the spaces ensuring more effective management for a better student experience. [TEP; CSD]
- ✓ 7.10 Encourage sustainable transport and biodiverse rich areas on campus. [SST]
- ✓ 7.11 Ensure that our built structures accommodate staff and students in an inclusive manner. [D&I; ES]

1. Energy, Climate Change & Greenhouse Gas Emissions (GHG)

Objectives	Targets	Status
1.1 Use Energy Efficiently	1.1. 50% Increase in Energy Efficiency by 2030 vs 2006-2008	↑ On Track
1.2. Increase Renewable Energy Use (Onsite & Grid)	1.2. 14% Increase in Renewable Energy Use Until 2020 vs 2006-2008	☺ Achieved 2017
1.3. Reduce GHG Emissions (Direct, Indirect & Embodied)	1.3. 80% Reduction in Greenhouse Gas Emissions by 2050 with 2% Year-on-Year Decrease in Greenhouse Gas Emissions Until 2020	↓ Off Track
1.4. Prepare for Climate Change (Mitigation & Adaptation)	1.4. To Create a Climate Change Action Plan	↓ Off Track (WIP, not published)

Our Progress:

- ✓ Energy efficiency improved by 35.9% in 2021. Verified & published by SEAI here.
- ✓ There was some rebound in energy use following easing of Covid-19 restrictions. Trinity's buildings consumed 32 million kWh of electricity (a 3.4% increase against the previous year) and just over 43 million kWh of natural gas (a 0.6% reduction from previous year).
- ✓ Energy-related carbon emissions amounted to 20,449 tCO_2 in 2021 and increased by 12% against 2020.
- ✓ A draft Climate Change Action Plan was issued in Jun 2021, but awaits further input from the climate action committee and sign off from the Board.
- ✓ 2021 flight emissions booked through our travel management company are down 95% vs 2016 because of Covid-19 restrictions. Expensed flights are additional to those booked through the travel management company. Data collation for these expensed flights is still ongoing and is not shown in graph overleaf.

Challenges:

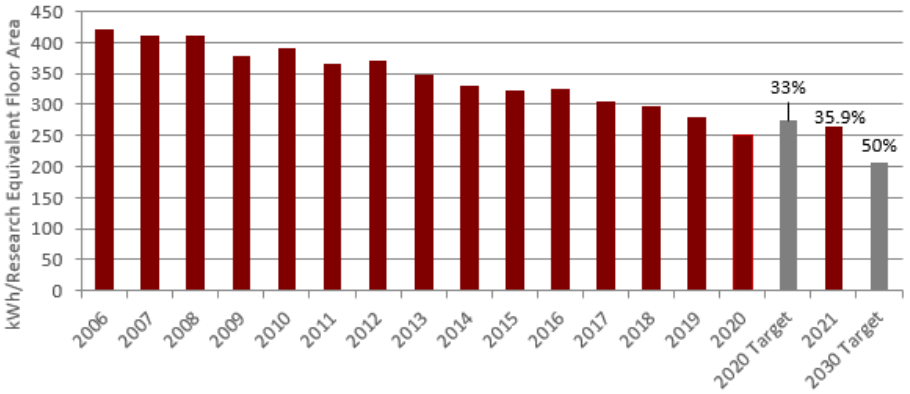
- △ Public Sector targets for 2030 are as follows:
  - 51% "absolute" reduction in energy-related emissions - decarbonisation of heating is our primary challenge, as electricity will be largely decarbonised at a national level.
  - 50% "relative" improvement in energy efficiency measured in kWh/Research Equivalent Floor Area (an annual average 1.7% improvement post 2020).
- △ Covid-19: The pandemic restrictions resulted in reduction in on site activity from March 2020 to March 2022, but a rebound in energy consumption is already apparent in 2021.
- △ Carbon footprint and Climate Action Plan work has been initiated but not yet published, as the carbon footprint will need to align with whatever SEAI publishes on Trinity with regards to both energy use and business travel.
- △ For information about Trinity's energy progress, visit the Sustainability GreenPages website.

Annual Highlights:

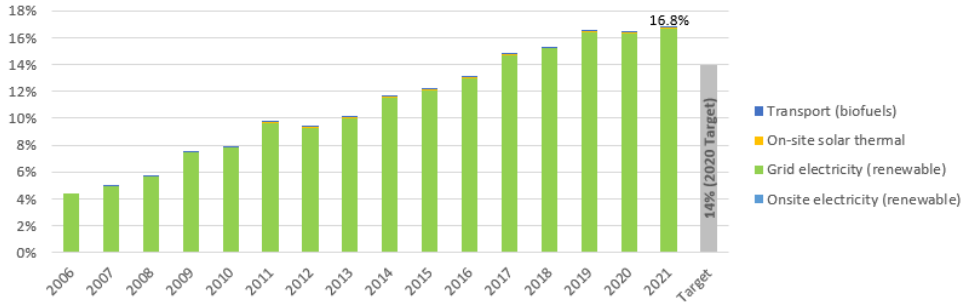
TTMI St. James: chiller replacement and installation of variable speed drives on multiple pumps.

Energy & GHG Data (by calendar year)

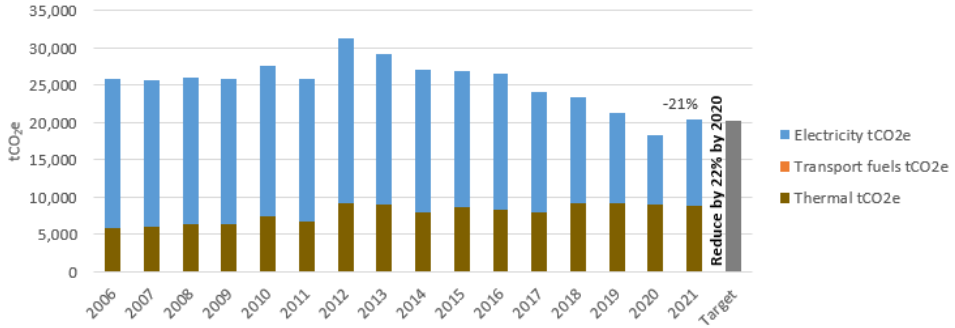
Target 1.1: 50% Increase in Energy Efficiency by 2030



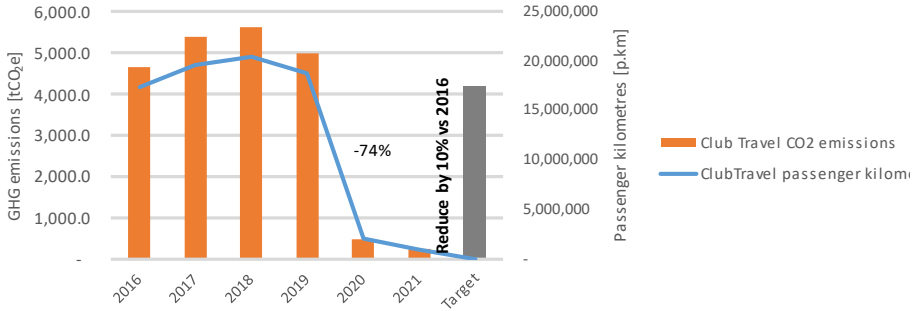
Target 1.2: 14% Renewable Energy Share by 2020



Target 1.3a: 22% Reduction in Energy-Related CO2 Emissions by 2020



Target 1.3b: Reduce Flight Emissions



2. Waste, Recycling & Litter Reduction

Objectives	Targets	Status
2.1. Reduce Waste Generation / Prevent Waste	2.1. 10% Decrease in Total Waste Generated by 2020	☺ Achieved 2020 (COVID-19)
2.2. Increase Recycling & Reuse	2.2. 50% Recycle for Municipal Solid Waste by 2020	➔ Close to Track
2.3. Reduce Waste to Final Disposal	2.3. ZERO Waste direct to Landfill by 2015	☺ Achieved 2012
2.4. Zero Litter on Grounds	2.4. 100% of University Users to be Within 100m of a Litter Bin by 2012	☺ Achieved 2012
2.5. Minimize Hazardous Waste	2.5. 10% Reduction in Hazardous Waste by 2020	➔ Off Track

Our Progress:

- ✓ Total waste is 35% lower than our 2012 baseline or 46.5% lower on a per capita basis. Both figures are up on 2019. Covid-19 resulted in less people generating waste on site, although the impact of waste reduction initiatives against a growing population is evident from the graph during 2018 and 2019.
- ✓ 48.4% recycling rate in 2021, and generally between 40% and 50% since 2014.
- ✓ Zero municipal waste to landfill since Apr'17 as this waste stream is now recovered as to waste-to-energy
- ✓ Trinity awarded litter free status 2012
- ✓ Negligible reduction in hazardous waste compared to our 2012 baseline.

Challenges:

- △ A waste audit by RPS was started in Feb'20 but never completed as a result of Covid-19.
- △ Reverse vending machines were trialled for 5 months but removed as they were never filled by members of the college community
- △ Still little control over production of hazardous waste, although LabCup was relaunched in 2020 with some optimism that it will drive change

Annual Highlights:

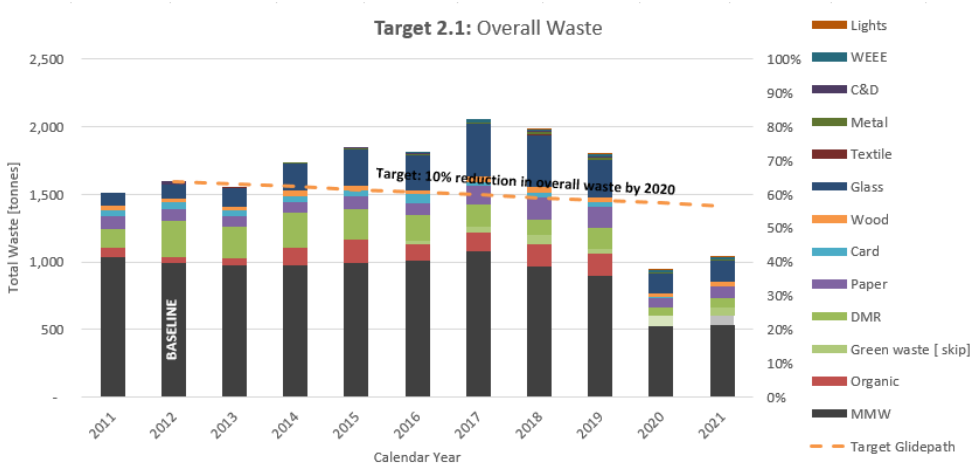
- ✓ Better World Books: 1,652 books donated since 2019, of which 1,395 have been sol, donated or recycled, and £362.03 generated from sales to Literacy Charity

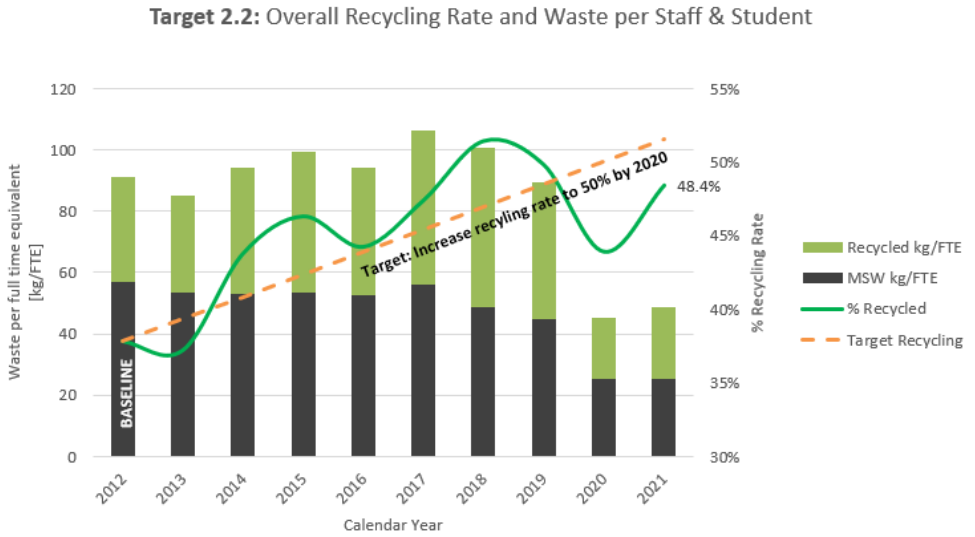
Get Involved & Learn More:

- Remember the golden rule to recycling plastics: if it is soft enough to stuff into your jeans pocket, it cannot be recycled. Make sure to bin soft plastics always.
- All catering outlets on campus offer a discount on reusable cups, so use a travel cup to save on waste and money.
- Pay attention to bins, to ensure you are putting recyclables into dedicated recycling bins.
- Consider buying food in bulk rather than in disposable plastic wrapping. For a list and map of eco-friendly grocery shops see here: https://www.zerowastefestival.ie/zero-waste/shopping-dublin/
- End of year clear-outs can be passed onto next year's students during Move Out donation drives

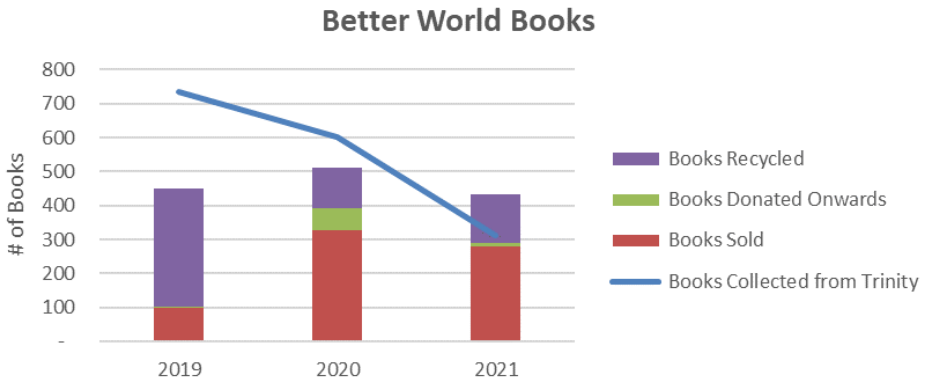
Reverse Vending Machines were trialled, but then removed as they were never filled by members of the college community

Waste Data


Target 2.1: Overall Waste
Total Waste [tonnes]
2,500
2,000
1,500
1,000
500
-
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
BASELINE
Target: 10% reduction in overall waste by 2020
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Calendar Year
Lights
WEEE
C&D
Metal
Textile
Glass
Wood
Card
Paper
DMR
Green waste [skip]
Organic
MMW
Target Glidepath


Target 2.2: Overall Recycling Rate and Waste per Staff & Student
Waste per full time equivalent [kg/FTE]
120
100
80
60
40
20
0
55%
50%
45%
40%
35%
30%
% Recycling Rate
BASELINE
Target: Increase recyling rate to 50% by 2020
48.4%
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Calendar Year
Recycled kg/FTE
MSW kg/FTE
% Recycled
Target Recycling

Target 2.5: Hazardous Waste [kg]
kg
60,000
50,000
40,000
30,000
20,000
10,000
-
Target: 10% reduction in hazardous waste by 2020
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Calendar Year


Better World Books
# of Books
800
700
600
500
400
300
200
100
-
2019
2020
2021
Books Recycled
Books Donated Onwards
Books Sold
Books Collected from Trinity

3. Water & Wastewater

Objectives	Targets	Status
3.1. Reduce Water Use	3.1. 45% Decrease in water use per capita by 2020/21 vs 2006-2008 baseline	☺ Achieved 2014
3.2. Increase Sustainable Onsite Water Use	3.2. 5% Increase in Onsite Water (groundwater and rainwater) Use by 2020 vs 2009	Rainwater harvesting in 2 buildings and planned for 4 more
3.3. Increase Water Reuse & Recycling	3.3. 10% Increase in Water Reuse by 2020 vs 2009	Closed loop water coolers in use in some labs
3.4. Decrease Wastewater Generation	3.4. 10% Reduction & Quality Improvement in Wastewater Released by 2020 vs 2009	SUDs implemented in a number of buildings in the East End.
3.5. Improve Wastewater Quality	No target set	Hazmat program to recover & re use chemical waste in place

Our Progress:

- ✓ 49.4% reduction in total water use in 2020/21 vs 2006-2008 baseline, or a 18.3% increase vs 2019/20 (Covid-19 rebound effect)
- ✓ Water use per full time staff and students was 62.7% better in 2020/21 vs 2006-2008 baseline

Challenges:

- △ No current means of measuring groundwater, rainwater harvesting, grey water recycling or wastewater quality leaving Trinity sites
- △ No meters on the following wells:
  - Iveagh grounds well - used for the few pitches and a connection to the clubhouse in case of emergencies
  - Santry well - used for the hockey and GAA pitches

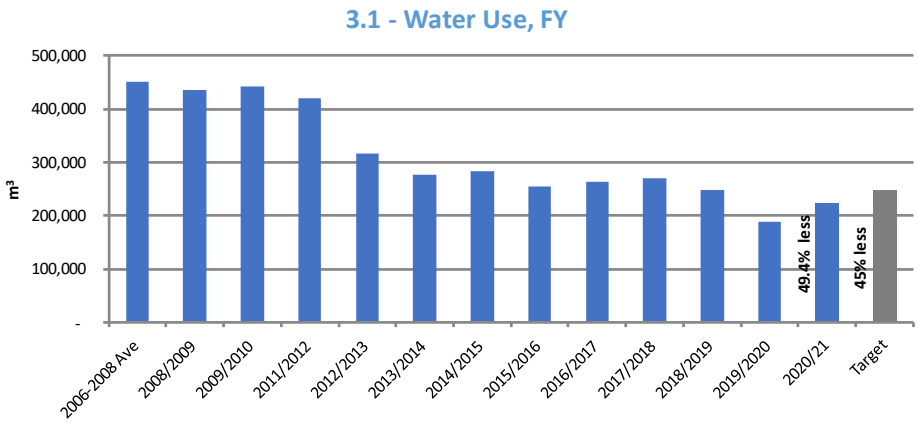
Annual Highlights:

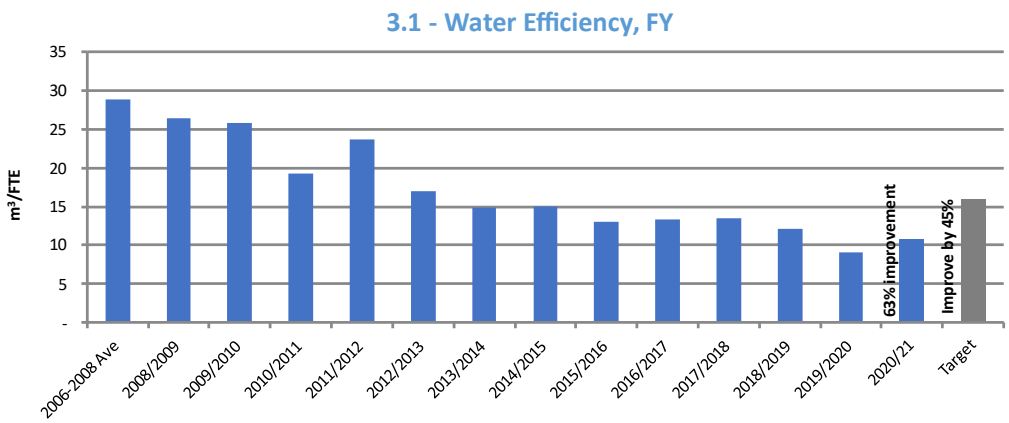
- ✓ The well at the rear of the O'Reilly now services the rugby pitch, reducing requirement for mains water. This well is also used for other campus maintenance operations e.g. power washing outdoor watering etc.

Get Involved & Learn More:

- Be more water efficient by carrying a water bottle with you and refilling it at water fountains rather than buying bottled water. One litre of bottled water consumes between 1.4 – 3.7 litres during manufacturing (visit Trinity's water efficiency page for more ideas).
- Only use dishwashers, washing machines and other water consuming devices when they are full.
- Turn off taps in labs and at home when not actively in use and save up to 41 litres of water per minute.
- Never flush chemicals, oils or hazardous substances down the drain. They could block pipes, cause leaks or damage wildlife and the environment.
- If you find a leaking tap or tap with too high a flow rate, don't ignore it. Report it to estatesandfacilities@tcd.ie.

Water Data (no data updates for 2021 calendar year)





4. Sustainable Transport

Objectives	Targets	Status
4.1. Maintain Use of Sustainable Transport	4.1. Maintain Over 90% Use of Sustainable Transport to 2020	☺ Achieved
4.2. Increase Renewable Energy Use in University Transport	4.2. 10% Increase in Renewable Energy in Transport by 2020;	☺ Achieved
4.3. Reduce Car Use	4.3. 5% Reduction in Single Occupancy Car Trips by 2020	☺ Achieved
4.4. Promote Cycling & Active Travel	4.4. 10% Increase in Bicycle Use by 2020	🡻 Off Track

Our Progress:

- ✓ With Covid-19 forcing remote working and studying, daily commuter activity was significantly down in 2020 and 2021
- ✓ A travel survey in Jun'20 asked participants what travel mode they would use post Covid-19 and the results of this are displayed in the graph overleaf. According to this survey (n = 2,653), which presumably reflects the fears of Covid-19 transmission in public transport:
    - Walking would remain relatively static at 27% but cycling would increase from 14% to 27.8%, provided safe, segregated cycling infrastructure is provided by the Dublin Local Authorities
    - Overall public transport share (bus, Luas, train, DART) would shrink from 58% to 26.7%
    - Car would increase from 1% to 15.6%
- ✓ The University campus has access to some of the best public transport in Ireland and has a very limited amount of car parking. Due to this, Trinity has one of the best sustainable transport rates for a university in the world.

Challenges:

- △ Post Covid-19: In aggregate, the recent travel survey would mean that only 81.8% would use sustainable modes of transport, down from 99% in the Mar'19 online travel survey
- △ Safe segregated cycling is still required in Co. Dublin, with 4 main routes of primary importance to staff and students travelling to the main campus identified by Healthy Trinity as follows:
    - Trinity Hall (1,200 students)
    - St. James Hospital
    - Pearse St. - No obvious pathway like Bus Connects exists through which we can influence this route
    - Nassau St.
- △ Without safe, segregated cycling beyond the campus, it will be difficult to achieve goal 4.4, a 10% increase in bicycle use, e.g. Cycling to Tallaght is not safe
- △ The impacts of international travel, i.e. flights, on the University's carbon footprint is not being fully assessed – see section 1 on Energy and Emissions.

Annual Highlights:

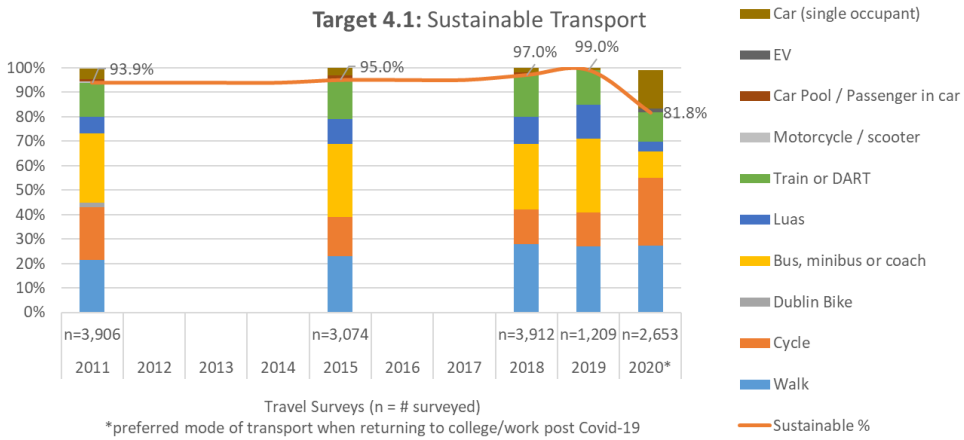
- ✓ **Supportive Environment for Cycling:** 1,135 bike racks on campus were upgraded from toast racks to secure racks. 2 bike repair stations were installed on campus. These changes were completed by Estates and Facilities.

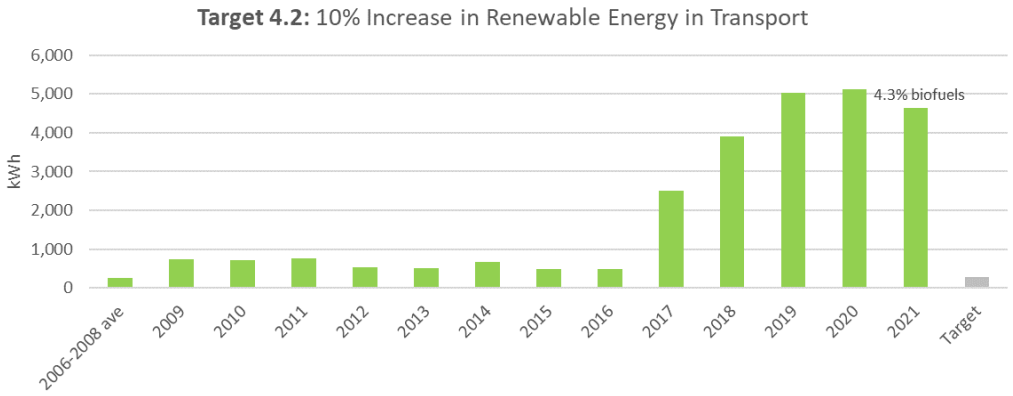
- ✓ Healthy Trinity: Smarter Travel Committee made six **submissions** to national organisations on behalf of Trinity pursuing infrastructure for walking, cycling and public transport. Details here.
- ✓ **Events and Interventions:** 720 students/staff took part in walking and cycling challenges co-ordinated by Trinity Sport. >400 people attended or viewed our "Future of Dublin" seminar with the Deputy Lord Mayor of Paris for Biodiversity. Watch here.
- ✓ **Living Lab:** Last data on commuting trends in 2020/2021 published June 2021
- ✓ **Co-curricular:** 70 Mechanical Engineering students created solutions for walking/cycling/public transport problems as part of Prof. Gar Bennett's Universal Design Innovation module. 20 Social Marketing students created campaigns to promote active travel as part of the Masters in Trinity Business School run by Prof. Sarah Browne. Details here.
- ✓ **Funding:** allocated €100,000 in funding from the National Transport Authority
- ✓ **Communications:** ran multiple campaigns promoting walking, cycling and public transport on our Instagram, Facebook and Twitter.

Get Involved & Learn More:

- Why not try cycling/walking to college once or twice a week. It's a great way to keep fit and there are plenty of cycle friendly facilities available.
- Instead of driving or flying to meetings/events, see if you can telecommute using videoconferencing such as Skype, Google Hangouts, FaceTime, GoToMeetings, Zoom etc.
- There is a range of financial incentives for sustainable travel such as bike-to-work tax breaks, tax incentive travel cards and grants for Electric Vehicles (EVs).
- Please visit www.tcd.ie/healthytrinity/travel for more on sustainable transport for the campus.

Transport Data

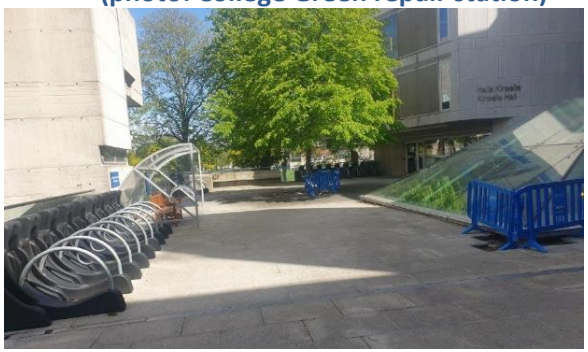




2 Bike repair stations installed
(photo: College Green repair station)

Cycle Pods bike storage (photos L Botany Bay; R Moyne Institute)

Bike shelters (photo: rear Botany Bay)



Bike parking in various locations on campuses

5. Resource Use & Sustainable Food

Objectives	Targets	Status
5.1. Reduce Paper Use	5.1. 20% Decrease in Paper Use by 2020 vs 2011	☺ Achieved 2014/15
5.2. Increase Sustainable Food Use	5.2. 50% Food to Meet 1 of 4 Sustainability Criteria (outlined on GreenPages) by 2020	? No data
5.3. Reduce Bottled Office Water Use	5.3. 50% Reduction in Bottled Water Use by 2020 vs 2011	☺ Achieved 2020/21 (82% reduction)
5.4. Reduce Disposable & Single Use Materials	5.4. 50% Reduction in Disposable Materials by 2020	Various schemes in place to reduce single use materials (see highlights below)

Our Progress:

- ✓ 66% reduction in paper use since 2011, although still using 8.059 million pages in 2020/21 during Covid-19 restrictions
- ✓ 82% reduction in water drums and consequent reduction in the use of disposable cups
- ✓ The last graph overleaf also shows a move from single use plastics to paper cups at water drum stations, transition completed in the 2019/20 financial year

Challenges:

- △ Covid-19: As we were operating under the Government's COVID-19 and Hospitality restrictions during this time we were only operating one outlet (The Buttery) on a strictly takeaway basis, no indoor dining was permitted , access to the College was also restricted during this time , As such, there were no sustainability initiatives completed under this time.
- △ Not collating data on sustainable sourcing of food (euro spend) or on disposable materials whether single use plastic or compostable (quantities)

Annual Highlights:

- ✓ All disposable items in catering are fully compostable
- ✓ "Conscious cup campaign", which promotes outlets that accept and incentivise customers bringing their own mug/cup (BYOM)
- ✓ Catering has replaced all eggs with free range eggs as of 2019
- ✓ Consolidation of deliveries: down from 39 approx. per week to 17 per week
- ✓ Increased Vegan and Vegetarian offers:
  - Main menu was 3 options of which 1 vegetarian/vegan, but over Green Week moved to 3 options of which 2 vegetarian/vegan
  - Increased offering such as vegan scones, sausage rolls, burgers, soups, etc
  - The Perch Cafe in the Arts Block will become a vegetarian café in 2021.
- ✓ Commercial Revenue Unit (CRU) initiatives
  - Retail bags: Substitution of paper for plastic shopping bags for customers; A wide selection of cotton tote bags are also now on offer

- Retail clothing: We have encouraged our clothing suppliers to investigate the use of recycled cotton and recycled polyester in product production which is testing now
- Continue to introduce sustainable product options/ranges: Supplier sustainability manifestos as part of the decision to collaborate and the insistence to the larger suppliers that they use recyclable packaging in deliveries, e.g. Carve-On – Recycled paper packaging to be introduced; Caulfield County Boards – Upcycled Trinity Wood Range; Traditional Craft recycled plastic bottle clothing options in the pipeline

✓ Sustainable Procurement Policy approved Nov'19: this was a major achievement and publishing the policy and guidelines has given the sustainable procurement programme more weight and focus.

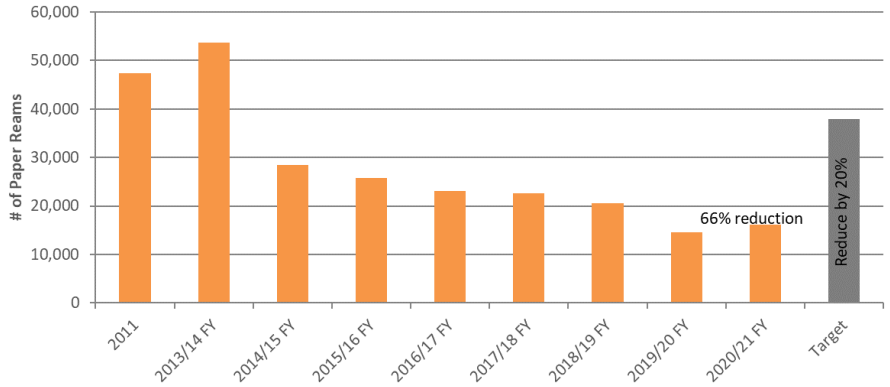
- Catering tender to have 10% points for sustainability as an award criteria

Get Involved & Learn More:

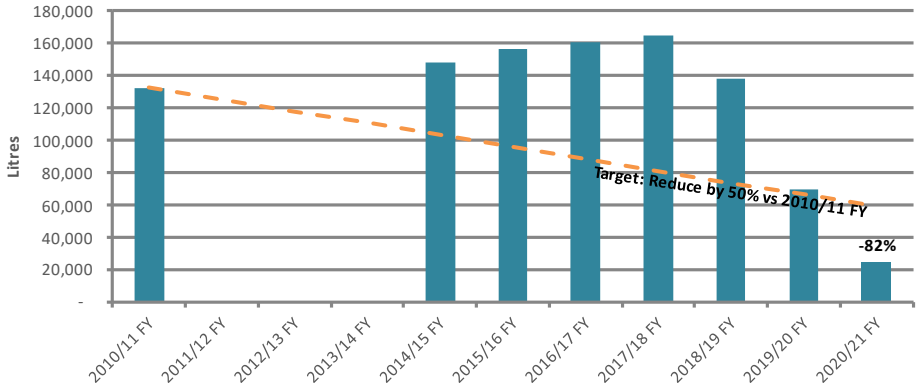
- Every piece of paper has come from a forest, so minimise printing wherever possible, and always print double sided, to save paper.
- Choose vegan or vegetarian food options to significantly lower the environmental impact of your food.
- Bring your own cutlery to campus, to eliminate the need for disposable cutlery
- You can give suggestions to Catering for a more sustainable menu here: catering@tcd.ie

Resource Use Data

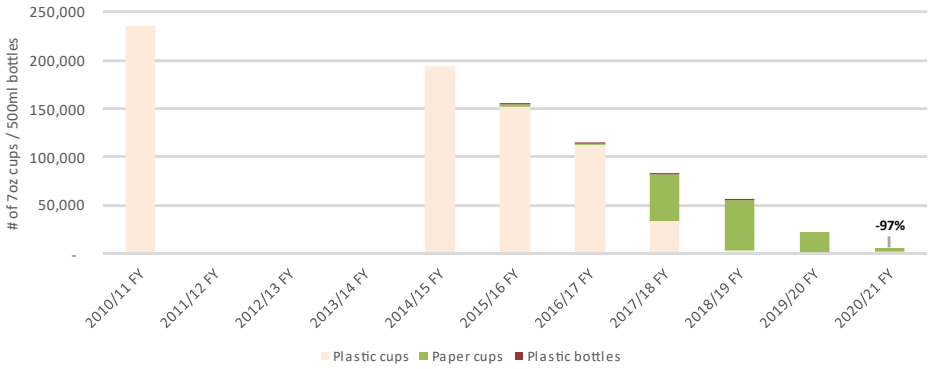
Target 5.1: Paper Use



Target 5.3: Bottled Water (mainly 19L drums)



Target 5.3: Disposable Water Drinking Cups & Bottles



6. Biodiversity & Trees

Objectives	Targets	Status
6.1. Increase Numbers of Trees	6.1. 10% Increase in Number of Trees by 2020;	☺ Achieved 2015/16
6.2. Increase Green Areas & Green Corridors	6.2. Maintain and Improve Green Areas by 2020	☺ Achieved
6.3. Increase Biodiversity & Protect Soil	6.3. 5% Increase in Biodiversity Rich Areas by 2020	☺ Achieved 2020/21

Our Progress:

- ✓ 85.4% increase in tree numbers versus our 2011/12 baseline (increase mainly due to additional young trees or "whips" at Santry, Darty Halls and the main campus between 2016 and 2019)
- ✓ 40.1% of space is green with 23.7% more green area since 2011/12, mainly due to the purchase of Iveagh Sports Grounds site in 2017
- ✓ 18.6% of space is biodiverse or pollinator friendly (12.4% improvement against 2011/12 baseline)
- ✓ A survey using i-Tree Canopy software shows that we have 97,000 m^2 (9.7 ha) tree canopy cover, sequestering 109 tCO_2 annually with an additional 2,841 tCO_2 stored in the trees and a value of € 235,000 which aims to capture the carbon, air pollution and avoided runoff benefits of trees in our environment

Challenges

- △ Improving native biodiversity on campus and recording this improvement remains a challenge.

Annual Highlights:

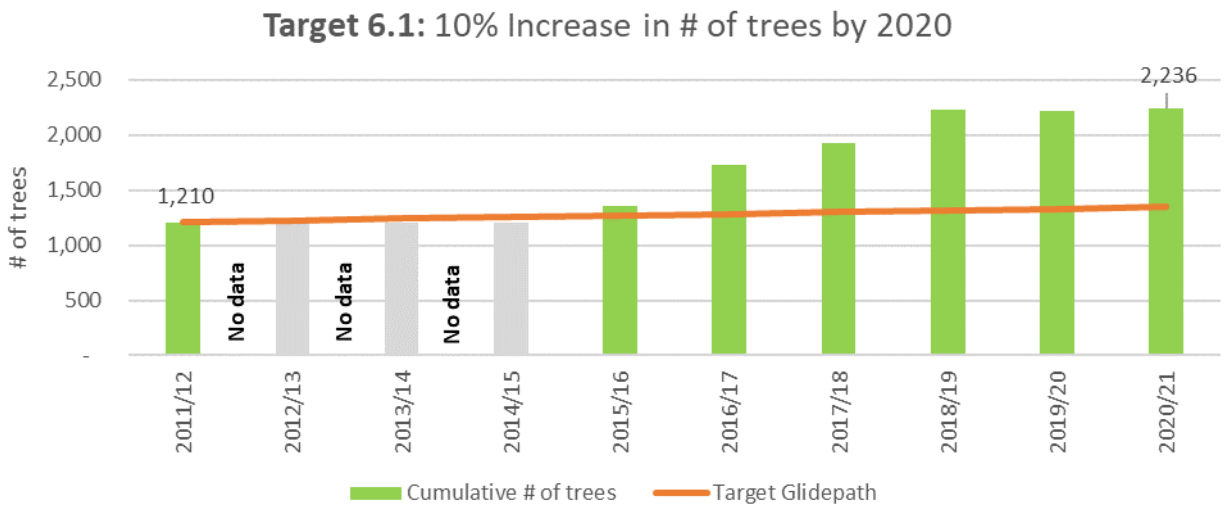
- ✓ In 2022 a comprehensive biodiversity audit has commenced which includes a calculation of the carbon storage of the Trinity tree stock as well as surveys of tree benefits using the i-Tree Canopy tool.
- ✓ 4,000 bulbs planted, 9 trees added and an additional 1,075m^2 wildflower turf areas
- ✓ Iveagh Grounds pitch and Putt course decommissioned, turned into a low mow area now until development occurs (8,500m^2)
- ✓ Rose Garden replanted
- ✓ Arts sedum roof: old ones stripped out and 160mm deep beds installed waiting to be planted as work on windows due
- ✓ Long room hub on hold until Cladding issues fixed
- ✓ Trinity Central: E&F office space planted up with 80 counter top planters and 30 large potted plants
- ✓ Good progress with Habitats maintenance policy; Campus maintenance essentially chemical free bar invasive weed control e.g. buddleia and Knotweed and limited use on sports grounds, hand weeding and trialling alternative weed control methods.

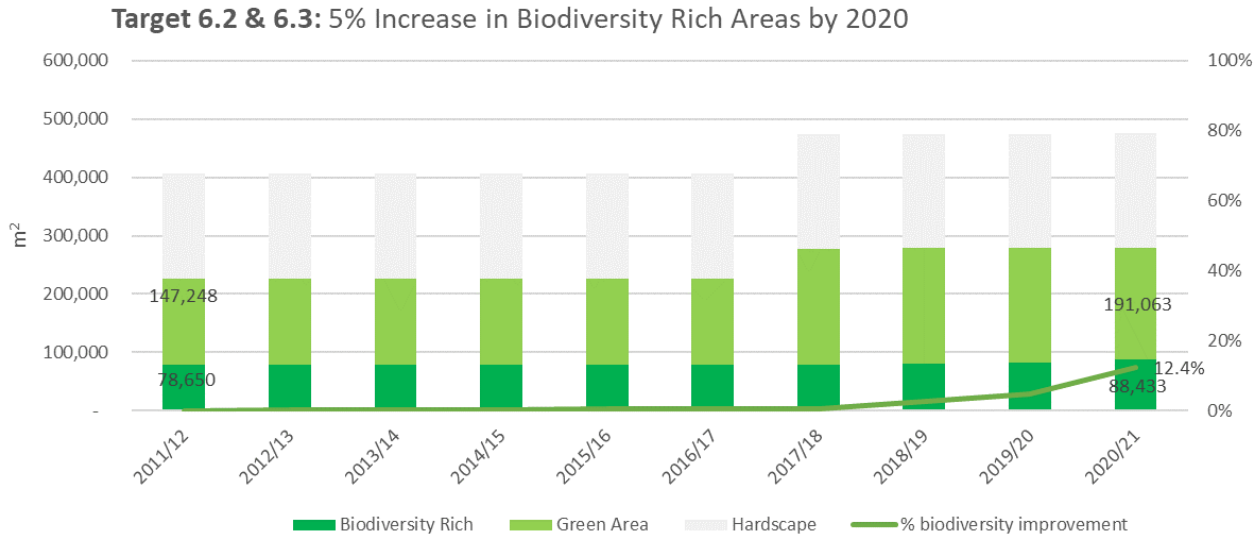
Get Involved & Learn More:

- Spend time in nature, appreciate nature and everything it does for us, and make space for it, i.e. by leaving wild areas in your garden.
- Plant a tree. As the Chinese proverb says, "the best time to plant a tree was 20 years ago, the second best time is now".
- Support wildlife by avoiding the use of pesticides and chemical fertilizers in gardens and lawns where possible.
- Try to incorporate green roofs and walls into new construction projects or even keep a few office plants if space is limited.

- If you want further information on the trees of Trinity, read the “Trees of Trinity College Dublin” book available in the Library shop.

Biodiversity & Trees Data





Date of Survey using i-Tree Canopy software: 26/08/2022
by: John Parnell

conversion rate € 1.15171

*value of carbon converted from GB£ from i-Tree Canopy software
i.e. we have not used Irish carbon tax or shadow price of carbon

		Points	Area (m2)	% tree/shrub cover	Tree cover (m2)	kgCO2e			Value €*				
						Sequestered annually	CO2e stored in trees	Total	Carbon sequestered annually	Carbon stored in trees	Air pollution	Hydrological (avoided runoff)	Total
1	Main Campus	601	171,200	15%	26,485	29,720	746,370	776,090	€ 2,362	€ 59,313	€ 1,842	€ 752	€ 64,269
2	Santry	218	139,600	31%	43,276	48,550	1,219,360	1,267,910	€ 3,858	€ 96,900	€ 3,009	€ 1,229	€ 104,996
3	Halls Dartry	600	43,500	41%	17,979	20,170	506,510	526,680	€ 1,603	€ 40,251	€ 1,250	€ 510	€ 43,614
4	TTEC	300	21,159	1%	142	158	2,975	3,133	€ 13	€ 316	€ 8	€ 6	€ 342
5	St James' Hospital	500	15,860	12%	1,840	2,064	51,840	53,905	€ 164	€ 4,120	€ 128	€ 52	€ 4,463
6	Tallaght Hospital (cou	149	3,416	5%	183	206	5,168	5,374	€ 16	€ 411	€ 13	€ 6	€ 446
7	Bioscience Building	no trees			-			-	€ -	€ -	€ -	€ -	€ -
8	Boathouse Islandbrid	103	4,805	38%	1,819	2,042	51,270	53,311	€ 162	€ 4,075	€ 109	€ 81	€ 4,427
9	Goldsmith Hall	no trees			-			-	€ -	€ -	€ -	€ -	€ -
10	Foster Place	no trees			-			-	€ -	€ -	€ -	€ -	€ -
11	Phoenix House	no trees			-			-	€ -	€ -	€ -	€ -	€ -
12	D'Olier St	no trees			-			-	€ -	€ -	€ -	€ -	€ -
13	Westland Sq	no trees			-			-	€ -	€ -	€ -	€ -	€ -
14	Dunlop Oriel House	no trees			-			-	€ -	€ -	€ -	€ -	€ -
15	Oisin House Redevel	no trees			-			-	€ -	€ -	€ -	€ -	€ -
16	Iveagh Sports Ground	400	66,002	8%	5,280	5,920	148,780	154,700	€ 471	€ 11,823	€ 367	€ 150	€ 12,812
17	Stack B	trees facing George's Dock included in Trinity property?						-	€ -	€ -	€ -	€ -	€ -
	Totals	**2,871**	**465,542**	**21%**	**97,004**	**108,830**	**2,732,273**	**2,841,103**	**€ 8,649**	**€ 217,208**	**€ 6,726**	**€ 2,785**	**€ 235,368**

Rewilding of Pitch and Putt course at Iveagh

7. Green Procurement

Objectives	Targets	Status
7.1. Increase Environmental Awareness of Suppliers	7.1. 100% Tenders Requested to Submit Environmental Information by 2020	🡻 Off Track
7.2. Increase Green Criteria in Tender Marking	7.2. 10% Increase in the Number of Tenders with Green Award Criteria by 2020	☺ Achieved 2018^
7.3. Improve Use of Whole Life Cycle Costing (WLCC)	7.3. Maintain or improve levels of sustainable criteria used in category management	**Early phase#**

Our Progress:

- ✓ Environmental information requested in 101 out of 140 tenders
- ✓ 7.1: * Category management approach to increase awareness. Formal vendor review process has been adopted and applied to Top 20 vendors.
- ✓ 7.2: ^ Office of Government Procurement (OGP) and quantifiable criteria: Progress with regard to inclusion of green criteria in Trinity's tenders is bound by OGP, EPA and HEAnet rules. We are progressing nonetheless with inclusion of this criteria where possible and legal.
- ✓ 7.3: # EU Green Procurement Policy project has acknowledged the need for Whole Life Cycle Cost (WLCC) training to mitigate legal challenge to tender outcomes https://ec.europa.eu/environment/gpp/toolkit_en.htm

Challenges:

- △ Trinity spends €100 million on goods, services and works annually. We aspire to use this buying power to move to more environmentally and socially responsible suppliers
- △ A software based system is required to track sustainable criteria in category management. The University Procurement & Contracts Office engaged a consultant and the new system went 'live' in September 2020.

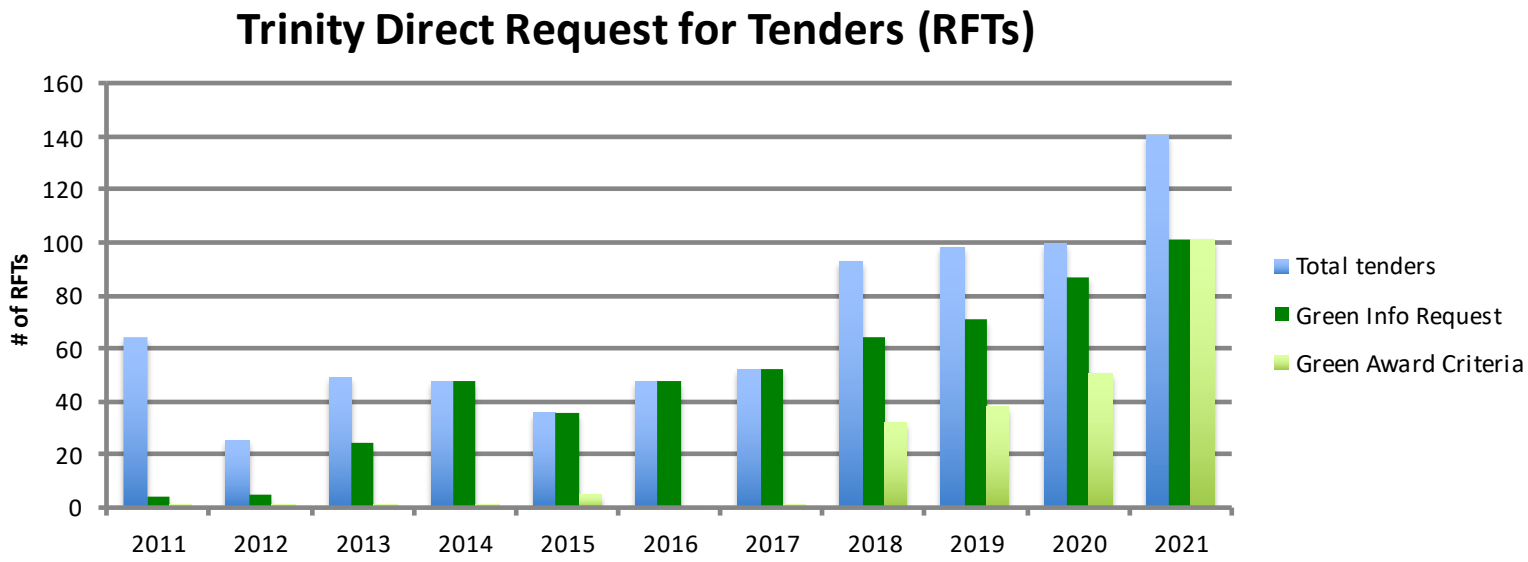
Annual Highlights:

- ✓ Printing House Square will provide accommodation for 249 students while meeting the Near Zero Energy Building (NZEB) requirements and achieving a BREEAM Excellent standard. Works continued on this in 2020/21.
- ✓ The Martin Naughton E3 Learning Foundry: works have commenced on this Near Zero Energy Building which has been designed to BREEAM Excellent and WELL Building standards to further improve the relationship between the building and the health and wellness of the occupants, with living lab elements. JJ Rhatigan has been selected to construct the new teaching facility, which will not use any fossil fuel when complete.
- ✓ Historic Accommodation Buildings Project (Rubrics and the Chief Steward's House):
    - This conservation project will significantly improve the energy efficiency of both historic buildings.
    - For the Rubrics, this means Ground Source Heat pumps using 16 bore holes ~150 meters deep to preheat the water for domestic water supply and heating as well as improving the thermal efficiency of the building fabric.

- For the Chief Steward's House an air to water heat pump will be installed. Clancy Project Management has been selected to carry out the building works.

Get Involved & Learn More:

- What will you do with what you are buying at the end of its life? Make sure you think cradle-to-cradle for lifecycle of purchases.
- Think before buying. The item you need may already be in your department, elsewhere on campus or available from a reuse website. Find out more on the Yammer Repurpose/ Reuse group.
- If you want to see if there are any sustainable alternatives for your purchase, contact the Trinity procurement office directly at procurement@tcd.ie.
  Buy A-rated lab appliances and for home appliances to reduce energy use.



8. Education, Research & Entrepreneurship

Objectives	Targets	Status
8.1. Induct all College Users into Green Campus	8.1. 100% Staff and Students Inducted into Green Campus by 2020	➔ Close to Track
8.2. Increase Sustainability Focus in Taught Courses	8.2. 10% Increase in Sustainability Course Content by 2020	☺ Achieved
8.3. Support Sustainability Research	8.3. Promote and Increase the Use of the Campus as a Living Lab by 2020;	↑ On Track
8.4. Support Sustainability Focused Entrepreneurship	8.4. Create an Annual Sustainability Award (i.e. Green Carpet Awards) by 2020	☺ Achieved in 2018
	8.5. Increase and Support Entrepreneurship in Area of Sustainability by 2020.	↑ On Track

Our Progress:

- ✓ About 3,500 junior freshmen, 500 senior freshmen, 2,500 postgraduates and 600 visiting and Erasmus students enrolled in 2020 were inducted to green campus
- ✓ 17% of all courses (undergraduate, postgraduate, Trinity Electives and online courses) now have content in sustainability
- ✓ 15 out of 48 launchbox alumni to date have set up businesses on sustainability topics since 2011/12

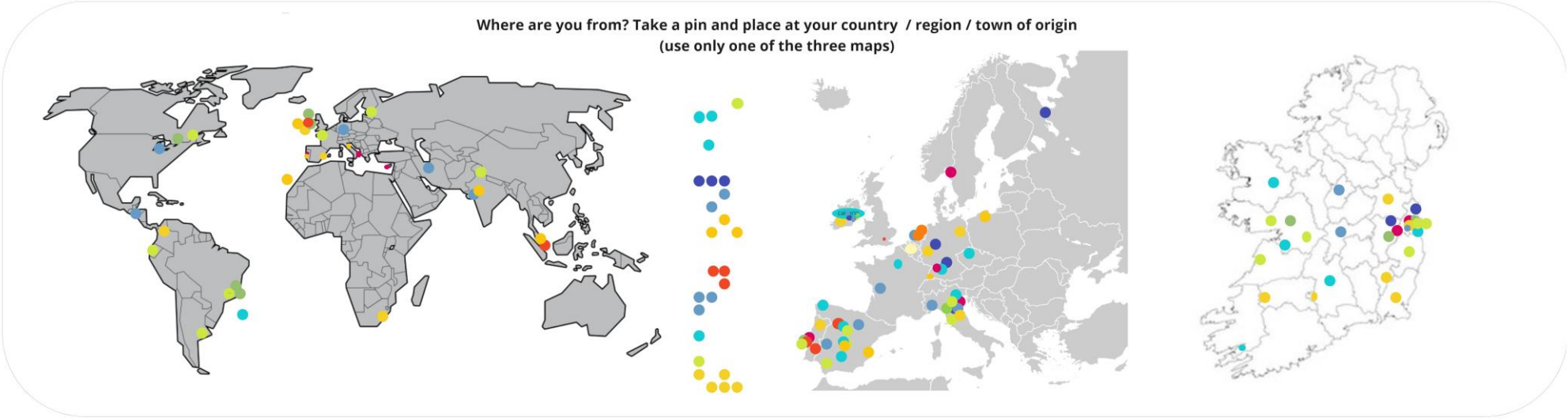
Challenges:

- △ Induction during Covid-19 had to move online, but had the benefit that students could watch in their own time
- △ There are still over 3,000 existing staff that have not received the sustainability awareness presentation

Annual Highlights:

- ✓ EIT Climate-KIC:
  - Journey Summer school was hosted online for 40 international students for two weeks in July 2021, part of a network of 320 students overall. Focus on sustainability and Climate Action.
  - Climate Innovation Leadership (CIJ) programme: 15 MSc and PhD level students from TCD participated in the programme, which took place between April and December 2021. Students focussed on leadership skills in sustainability and Climate Innovation. A graphic from one of the TCD hosted online workshops showing the geographic reach of the session is overleaf.
  - Climathon: climate hackathon hosted in TCD, and part of a global event in November 2020: https://climathon.climate-kic.org/en/climathon/
- ✓ New Postgraduate Certificate in Climate Entrepreneurship launched (March-August 2021) funded through the HEA Springboard+ scheme, run as a collaboration between the School of Natural Sciences and TCD Tangent. 200 applications for 42 places, of which 40 students completed the course.
- ✓ Environmental Entrepreneurship: This was the 2nd year running the new MSc level module (5 ECTS), as part of the Masters in Environmental Sciences, which is hosted by the School of Natural Sciences. The module helps students to examine sustainability from multiple perspectives using a systems thinking approach.

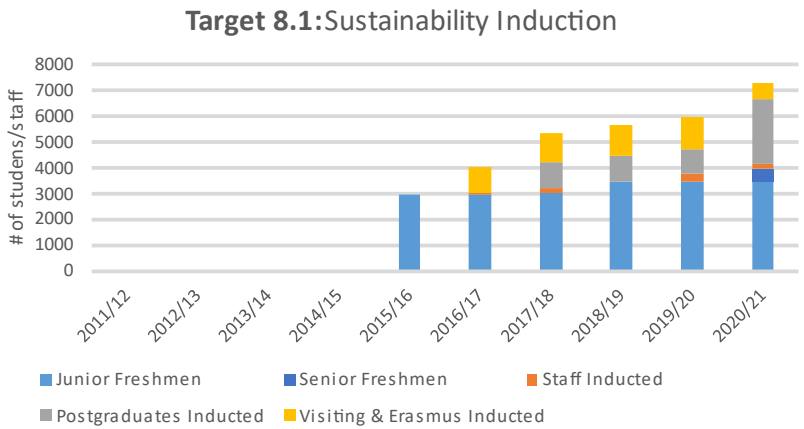
- ✓ Erasmus+: Uni-ECO project - focussed on sustainability involving four separate universities across the EU. Highlights include student projects ("Green Challenges"), a summer symposium and a winter school on sustainability. Students and staff from different Faculties participated in the project: https://uni-eco.umontpellier.fr/.

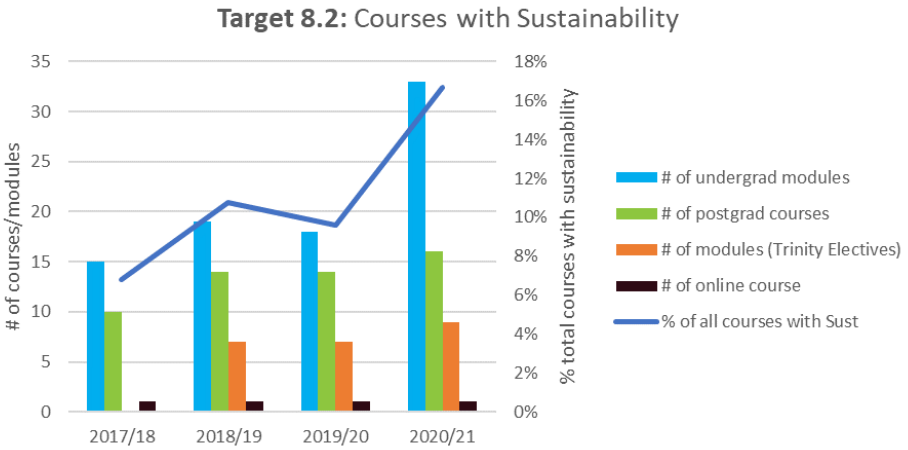


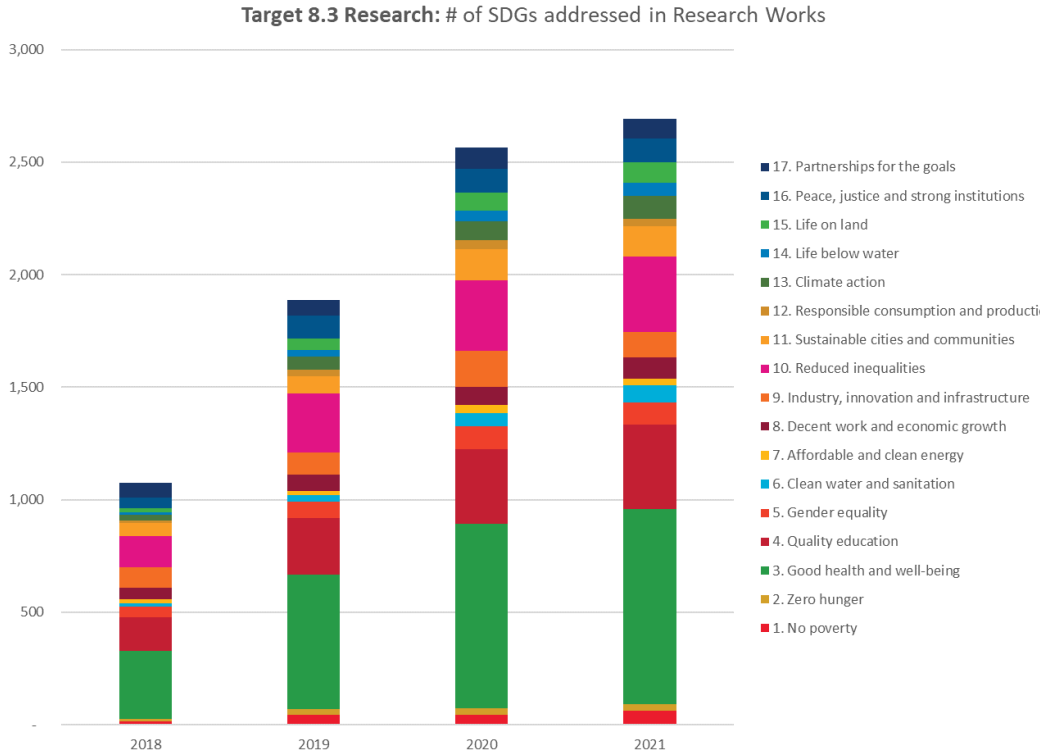
EIT Climate-KIC: Climate Innovation Leadership (CIJ) programme - location of participants from one workshop

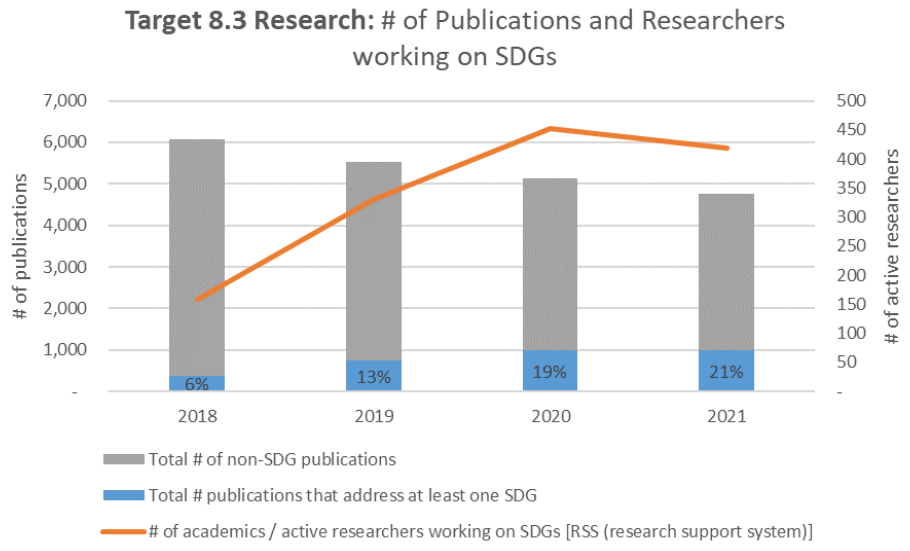
Get Involved & Learn More:

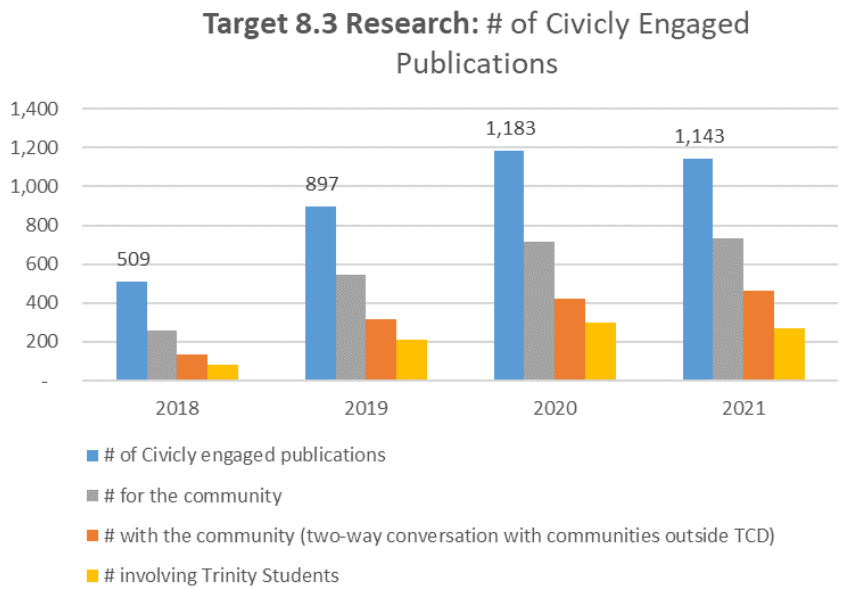
- Visit the sustainability greenpages website to induct yourself into the green campus programme (https://www.tcd.ie/provost/sustainability/).
- Get involved with the Green Campus Committee (https://www.tcd.ie/provost/sustainability/greencampuscommittee/)
- If you have a suggestion for increasing the sustainability focus of your chosen subject, ask your lecturer if it could be included in future teaching.
- If you are interested in research in the area of sustainably, contact the Research Office (https://www.tcd.ie/innovation/contact/)
- Launchbox, Trinity's accelerator for student start-ups, is always looking for sustainable startup ideas. Why not apply on http://www.launchbox.ie/ and join the list of previous sustainable start-ups including FoodCloud and LabCup.

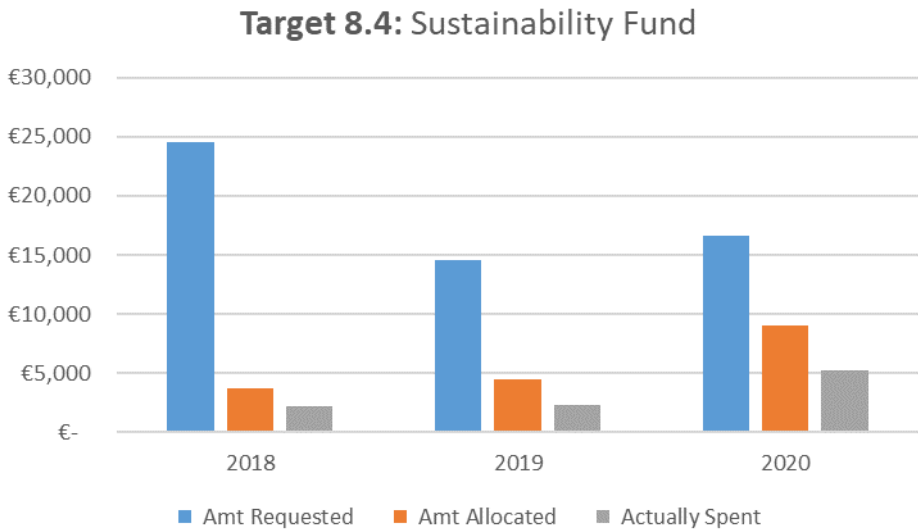

Target 8.1:Sustainability Induction
8000
7000
6000
5000
4000
3000
2000
1000
0
# of studens/staff
2011/12
2012/13
2013/14
2014/15
2015/16
2016/17
2017/18
2018/19
2019/20
2020/21
Junior Freshmen
Senior Freshmen
Staff Inducted
Postgraduates Inducted
Visiting & Erasmus Inducted

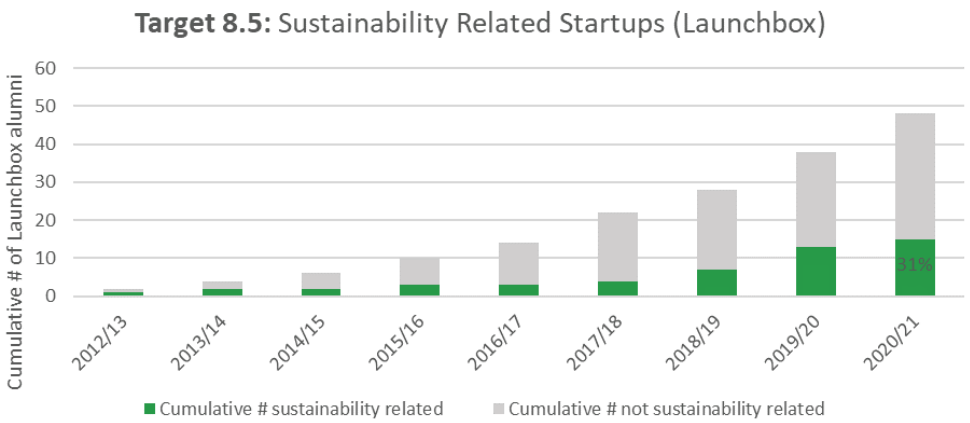

Target 8.2: Courses with Sustainability
35
30
25
20
15
10
5
0
# of courses/modules
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
% total courses with sustainability
2017/18
2018/19
2019/20
2020/21
# of undergrad modules
# of postgrad courses
# of modules (Trinity Electives)
# of online course
% of all courses with Sust

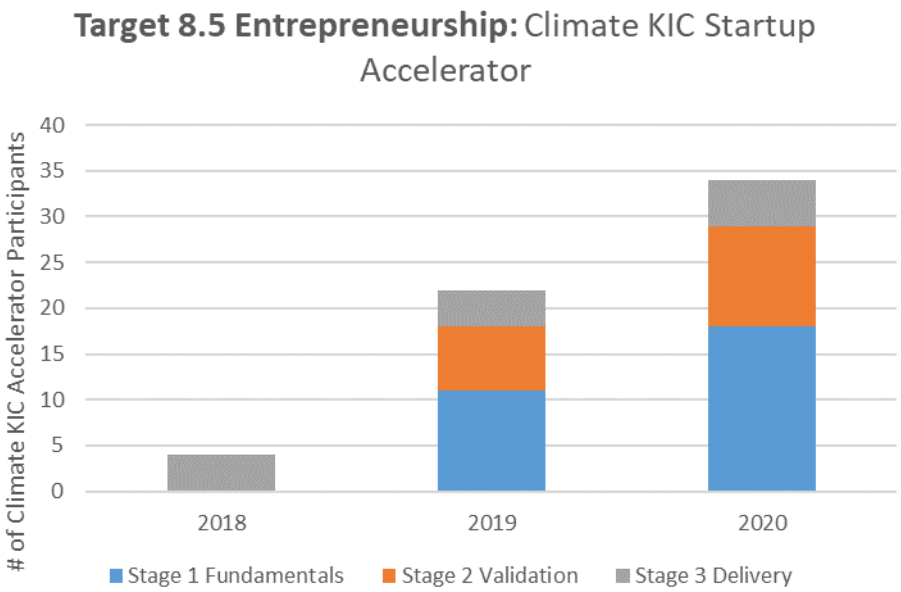

Target 8.3 Research: # of SDGs addressed in Research Works
3,000
2,500
2,000
1,500
1,000
500
-
2018
2019
2020
2021
17. Partnerships for the goals
16. Peace, justice and strong institutions
15. Life on land
14. Life below water
13. Climate action
12. Responsible consumption and producti
11. Sustainable cities and communities
10. Reduced inequalities
9. Industry, innovation and infrastructure
8. Decent work and economic growth
7. Affordable and clean energy
6. Clean water and sanitation
5. Gender equality
4. Quality education
3. Good health and well-being
2. Zero hunger
1. No poverty


Target 8.3 Research: # of Publications and Researchers working on SDGs
# of publications
# of active researchers
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
500
450
400
350
300
250
200
150
100
50
-
6%
13%
19%
21%
2018
2019
2020
2021
Total # of non-SDG publications
Total # publications that address at least one SDG
# of academics / active researchers working on SDGs [RSS (research support system)]


Target 8.3 Research: # of Civicly Engaged Publications
1,400
1,200
1,000
800
600
400
200
-
509
897
1,183
1,143
2018
2019
2020
2021
# of Civicly engaged publications
for the community
with the community (two-way conversation with communities outside TCD)
involving Trinity Students


Target 8.4: Sustainability Fund
€30,000
€25,000
€20,000
€15,000
€10,000
€5,000
€-
2018
2019
2020
Amt Requested
Amt Allocated
Actually Spent


Target 8.5: Sustainability Related Startups (Launchbox)
Cumulative # of Launchbox alumni
60
50
40
30
20
10
0
2012/13
2013/14
2014/15
2015/16
2016/17
2017/18
2018/19
2019/20
2020/21
31%
Cumulative # sustainability related
Cumulative # not sustainability related


Target 8.5 Entrepreneurship: Climate KIC Startup Accelerator
# of Climate KIC Accelerator Participants
40
35
30
25
20
15
10
5
0
2018
2019
2020
Stage 1 Fundamentals
Stage 2 Validation
Stage 3 Delivery

9. Communication, Student Involvement & Transparency

Objectives	Targets	Status
9.1. Increase the Number of Green Events & Attendees on Campus	9.1. Maintain or Improve Levels of Sustainable Events by 2020	☺ Achieved
9.2. Increase the Number of Societies Involved with Green Week	9.2. 10% Increase in Number of Societies Participating in Green Events by 2020	Several societies involved in Green Campus Committee.
9.3. Meet all Requests for Access to Information on the Environment	9.3. 100% Fulfilling of Requests for Information on the Environment (On-going)	☺ Achieved
9.4. Report on all Environmental Aspects	9.4. Develop and Launch Annual Sustainability Report by 2016	☺ Achieved
9.5. Increase the Use of Trinity Green Pages Website	9.5. 5% Increase in Visitors to GreenPages Website by 2020	☺ Achieved

Our Progress:

- ✓ Communication on sustainability relies heavily on social media, and our engagement continues to grow. The graph overleaf includes 231 posts across LinkedIn, Facebook, Twitter and Instagram (figure excludes TikTok and YouTube). We are now using a reporting tool (Falcon) that measures and reports this progress, including 1.67million impressions and 26,280 video views for the 20/21 academic year
- ✓ One Step Closer: 4,875 votes on 4 campaigns including Green Labs, Sustainable Consumption, Sustainability focused innovation & entrepreneurship and COP26
- ✓ Green Webpage views up 93% vs 2012 baseline
- ✓ This is our seventh Annual Sustainability Report

Challenges:

- △ Covid-19: some events postponed such as Trash to Treasure to May 2023
- △ Web data has been reported under two separate systems and is not consistent (AWSTATS to 2017, and with Google Analytics thereafter)

Annual Highlights:

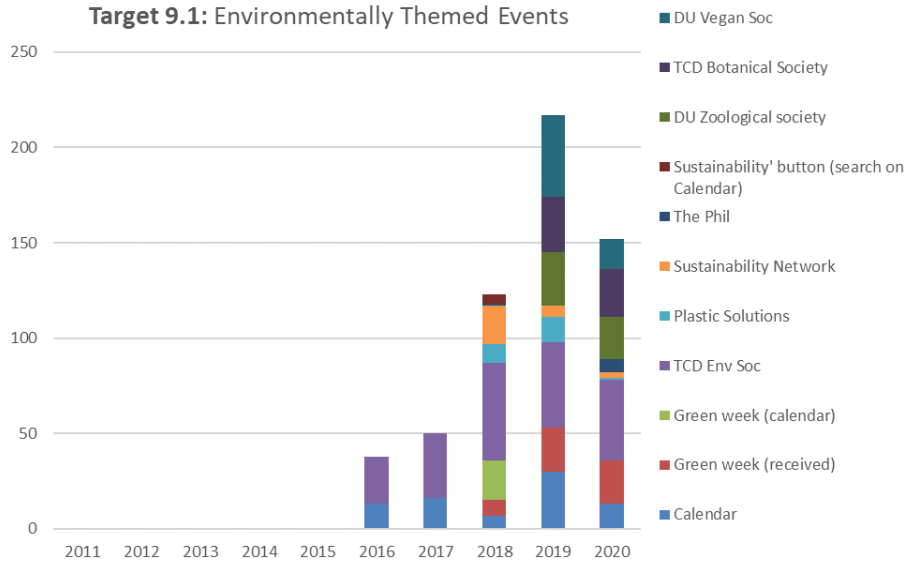
- ✓ Communication includes T-Net (college intranet), Trinity College Dublin Talks podcast, our own News and Events site and the digital information screens across campus. We also feature a sustainability story almost every Friday in the Weekly Wrap Up (for staff members).
- ✓ We promote research and campus initiatives to the external media through press releases and media invites, such as the cross-European partnership UNI-ECO, Resident Sustainability Champions, the Provost's Hackathon at Tangent, Green Labs, Green Procurement, and the student-developed app EthiCart.
- ✓ We hosted a series of student-led webinars highlighting the great work of Trinity's sustainability researchers and giving students an idea of how to get involved
- ✓ We disseminated information on recycling, accessing filtered water on campus, and promoting ways to reduce waste. We talk about health, climate and biodiversity- related benefits of plant-based diets
- ✓ The most viewed video was created in-house and had 5,300 views on Facebook and 1,000 views on Twitter. The video involved a student talking about proper recycling on campus.

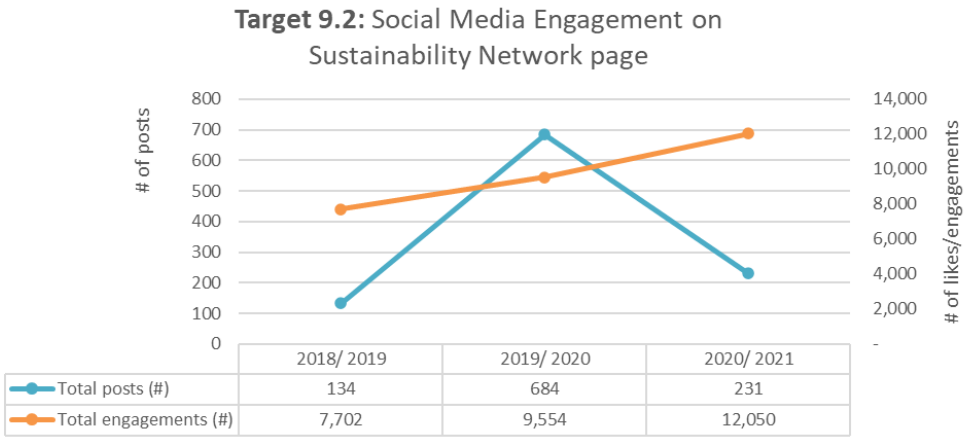
- ✓ The full social media report including each post is available at this link: https://app.falcon.io/public/#/shareables/db333417-360c-4cb3-909d-42b7e824da1d?token=3ddf88eb-ddc0-4fce-9add-eaa49cc16acd
- ✓ Continue to use **OneStepCloser** social engagement platform ran 4 campaigns with 16,666 votes (see overleaf)
    - My Green Labs received largest interest: 49,300 impressions and a reach of 222,000

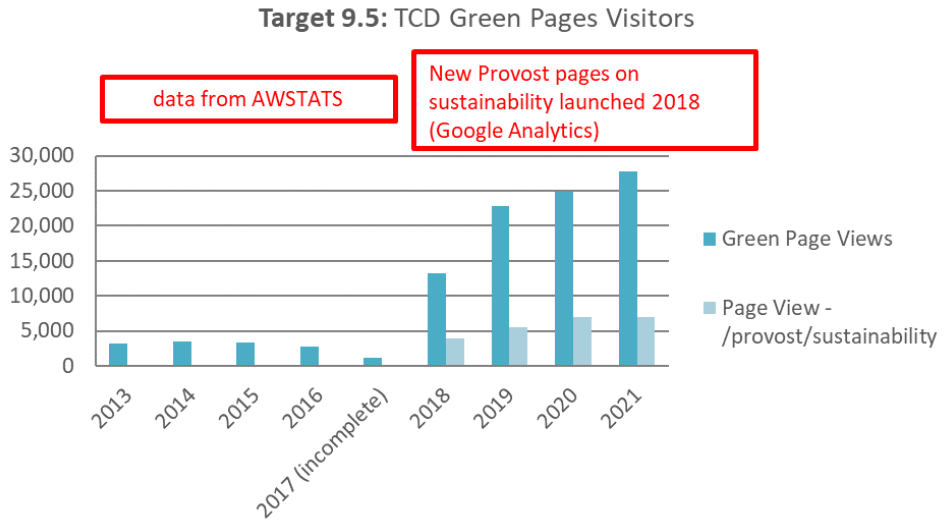
Get Involved & Learn More:

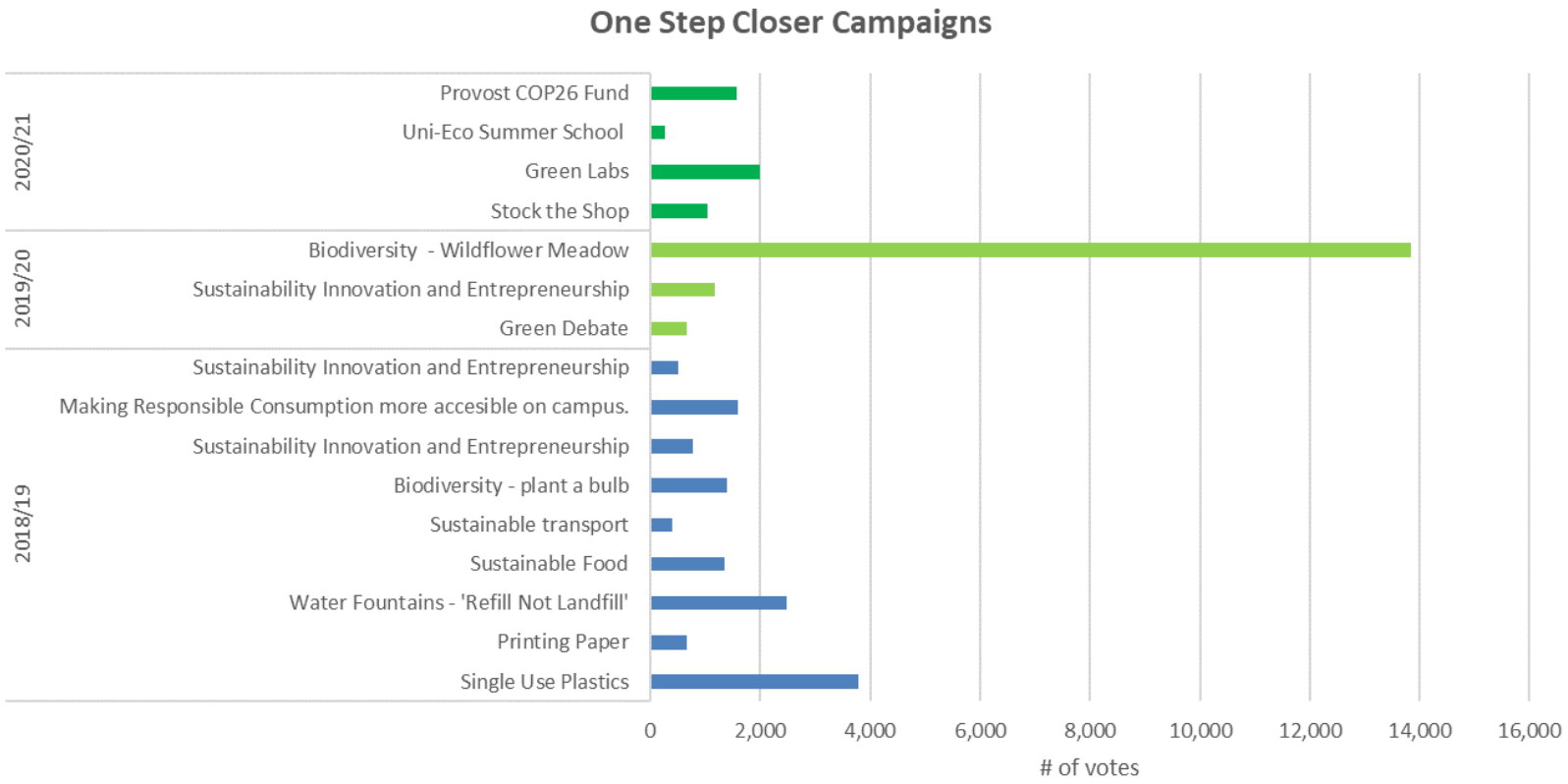
- If you are involved in a society or sport club why not organise a sustainability event for your members.
- Why not volunteer for the Green Campus committee or organize an event for the annual Trinity Green Week.
  Visit the Trinity Sustainability – GreenPages website to learn more about what you can do (https://www.tcd.ie/provost/sustainability/).

Engagement Data






Target 9.5: TCD Green Pages Visitors
data from AWSTATS
New Provost pages on sustainability launched 2018 (Google Analytics)
30,000
25,000
20,000
15,000
10,000
5,000
0
2013
2014
2015
2016
2017 (incomplete)
2018
2019
2020
2021
Green Page Views
Page View - /provost/sustainability


One Step Closer Campaigns
2020/21
Provost COP26 Fund
Uni-Eco Summer School
Green Labs
Stock the Shop
2019/20
Biodiversity - Wildflower Meadow
Sustainability Innovation and Entrepreneurship
Green Debate
2018/19
Sustainability Innovation and Entrepreneurship
Making Responsible Consumption more accesible on campus.
Sustainability Innovation and Entrepreneurship
Biodiversity - plant a bulb
Sustainable transport
Sustainable Food
Water Fountains - 'Refill Not Landfill'
Printing Paper
Single Use Plastics
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
# of votes

Sept 2020- Aug 2021

4 campaigns & 4875 votes

Green Lab

Campaign raising awareness of the sustainability impact of campus laboratories.

1989 votes

COP26 Fund

The Provost COP26 Fund was set up to enable climate projects on campus. Student votes allocated the fund.

1570 votes

Sep 2020

Aug 2021

Stock The Shop

Campaign with a focus on Responsible Consumption and Sustainability Focused Innovation

1045 votes

UNI-Eco Summer School

Campaign letting students and staff shape the summer school Hackathon.

271 votes

POWERED BY:
one step closer

Gaps & Challenges

There are a number of areas we hope to improve on as we report on our sustainability journey. This section of the annual sustainability report has been included to help us outline to the Trinity community, areas where we are facing challenges and gaps in the data we collect and report on. We aspire to be transparent in our approach and highlight where we think we can improve the accuracy or content in the future. In particular, 7 of our 37 targets are unclear or do not yet have robust data sets. It should also prove useful to other institutions to highlight challenges they might also experience in reporting on sustainability in their own organisations.

- Emissions from travel: Flights for international projects and conferences are proving a significant challenge, as staff and students can purchase flights through our appointed travel service provider or by themselves with reimbursement through iExpenses. The SEAI requires us to report on business travel from 2021 onwards including flights, expensed mileage, as well as public and commercial travel (taxis, buses, trains, etc), so we now need to capture passenger kilometres by each travel mode.
- Embodied carbon / Scope 3 indirect emisisons: We are currently investigating how we can account for the carbon emissions associated with the embodied carbon in materials used in construction projects on the campus. This becomes more important as newer buildings become more energy efficient and the embodied carbon in materials used becomes more significant. We will also endeavour to look at the embodied carbon in our purchases including food, drinks, paper and other consumables.
- Fugitive emissions from refrigerant gases (HFCs/PFCs) are usually lost when equipment fails and vents the gases to atmosphere. We are currently working with our contractor in the area to collate this data on an annual basis.
- The majority of renewable energy consumed in the campus comes via grid-based renewables, which contribute, to electricity supply in Ireland. We also are limited in purchasing green electricity sources by government procurement rules.
- The majority of renewable energy in transport comes from biofuel blended at a national level for use in meeting Ireland's biofuel obligations around renewable energy in transport.
- We do not currently include construction and demolition (C&D) waste in our statistics. This waste is generally very heavy and usually 100% recycled. While this would skew our recycling rates upwards significantly, it does not reflect how people are disposing of their waste in general and so, when the data becomes available, will be reported on separately.
- We do not currently report on wastewater or indoor air quality. This is an area we hope to improve on in future possibly as part of our living lab initiative. A post occupancy evaluation study on Trinity Business School will monitor environmental parameters including air quality.
- While the numbers of people walking has increased, our numbers of cyclists continues to decrease. We assessed how far students live from campus in 2019. Around 80% live within 10kms of campus. The barrier to cycling is lack of protected, comfortable infrastructure beyond campus walls.
- We have found quantifying the sustainability of food served on the campus problematic based on difficulties with available data and definitions of sustainability. We will continue to work with our catering departments to better quantify sustainability.
- Trinity has recently lost some of its oldest and most famous trees. While we endeavour to protect and enhance our trees on campus, sometimes due to age and disease, we continue to lose some of our most iconic trees.
- Collecting data on the sustainability content of all courses and research carried out across the University has been challenging, as there is no central repository. We continue to investigate practical ways to gather and improve this information. Currently we review the green webpages annually
- Keeping staff and, in particular, students engaged in sustainability initiatives is difficult especially as students change each year. How we communicate and reach them is also changing rapidly with technology so we continue to experiment with the best ways to reach all our community.

Our Journey

A Brief History of the Sustainability Actions in Trinity College Dublin – The University of Dublin.

1979	▪ Trinity Environmental Sciences Unit created
1990s	▪ Focus on improving recycling of waste on the campus
1992	▪ First recorded minutes of the College Recycling Committee (CRC)
1998	▪ Establishment of Trinity Centre for the Environment
2000s	▪ CRC renamed College Recycling and Environment Committee (CREC)
2003	▪ First student led Green Week event held
2007	▪ Drafting of University Sustainable Development Policy
2008	▪ Trinity Sustainable Development Policy approved by Board
2012	▪ CREC Renamed the Green Campus Committee (GCC) as part of Green Flag application
2013	▪ Trinity applied for and awarded Green Flag Award for campus sustainability
2015	▪ Trinity reapplies for Green Flag Award for Campus Sustainability and GCC student led co-chair position established
2016	▪ Trinity publishes its 1st Annual Sustainability Report and the Board approves it; ▪ Trinity divested from fossil fuel investments thanks to a student-led campaign
2017	▪ Provost's Advisory Committee on Sustainability and Low Carbon Living established & Sustainability Policy updated ▪ Sustainability Champion and Sustainability Advisor appointed ▪ Trinity Pollinator Plan launched
2018	▪ First university in Ireland to join the International Sustainable Campus Network (ISCN); the Provost presented at a panel discussion entitled "Leadership for Sustainable Development" at the annual ISCN conference in June 2018, hosted by KTH Royal Institute of Technology, Stockholm ▪ Established a Plastic Disposables Plan to reduce disposable plastics from catering outlets on campus by 2020. ▪ Sustainable Procurement Working Group established ▪ Move-Out donation of student belongings to charity to divert waste from incineration ▪ Sustainability Fund for education/ awareness raising projects established.
2019	▪ Green Flag re-awarded ▪ Climate Action Group established ▪ OneStepCloser platform proves very useful in engaging students ▪ Ireland's first disability parking space ▪ Trinity's first NZEB building – Trinity Business School (May'19) ▪ First on-site solar PV installation on the main campus ▪ Trash to Treasure Sept 2019 - resale of salvaged/ donated items from Move Out in May 2019.
2021	▪ First college Climate Action Plan drafted
2022	▪ First Vice President for Climate Action & Biodiversity appointed as well as dedicated Sustainabilty Manager

Roll of Honour

"None of us is as smart as all of us."

Special thanks to all our contributors to this report who make Trinity a more sustainable place to live, work, play and learn, in no particular order: Prof Jane Stout, Mike Clarke, Michele Hallahan, Peter Hynes, Ben Hartnett, Gordon Hughes, Jill Summers, David Hackett, Maurice Sweeney, Christoph Schmidt-Supprian, Martina Mullin, Moira O'Brien, Ciara Murphy, John Parnell, Prof John Parnell, Tony Dalton, Aiden O'Neill, Eimear Rouine, Michele Ryan, Rosaleen Gleeson, Rima Fitzpatrick, Olivia Lombard, Catherine Finnegan, Aideen Woods, Kevin Kiely, Quentin Crowley, Gavan Drohan, Maura Horan, Dave Smith, Joanna Mulkeen, Katie Byrne, Patrick Prendergast, Linda Doyle, Joe Borza … and the many, many others that have contributed to Trinity's journey to sustainability over time.

Photos contributed by: Martina Mullin (travel), John Parnell (biodiversity)

Go Raibh Maith Agat.

Web: **https://www.tcd.ie/provost/sustainability/**
If you have any questions or would like to know more, feel free to contact us: **sustainability@tcd.ie**

Printed on 100% recycled materials & disseminated electronically where possible.

Annex 1 – International Sustainability Campus Network (ISCN) Report

The International Sustainability Campus Network (ISCN) is a network of universities and colleges from across the world who have committed to achieving sustainable campus operations and integrating sustainability in research and teaching.

Principle 1: To demonstrate respect for nature and society, sustainability considerations should be an integral part of planning, construction, renovation, and operation of buildings on campus. A sustainable campus infrastructure is governed by respect for natural resources and social responsibility, and embraces the principle of a low carbon economy. Concrete goals embodied in individual buildings can include minimizing environmental impacts (such as energy and water consumption or waste), furthering equal access (such as nondiscrimination of the disabled), and optimizing the integration of the built and natural environments. To ensure buildings on campus can meet these goals in the long term, and in a flexible manner, useful processes include participatory planning (integrating end-users such as faculty, staff, and students) and life-cycle costing (taking into account future cost savings from sustainable construction).									
Topics	**Goals and Initiatives**		**Results**							
Priority topics (with units of measurement)	**Objectives and targets** (for…	**Key Initiatives** (in reporting year, and /or planned for the following and beyond)	**Baseline**	**Performance 2015/16 2016**	**Performance 2016/17 2017**	**Performance 2017/18 2018**	**Performance 2018/19 2019**	**Performance 2019/20 2020**	**Performance 2020/21 2021**	
Resource use										
Water Consumption (m^3)	Reduce water use by 51% by 2020 compared to 2009/2010 levels	On-going leak detection and water management programme. Water awareness campaign as part of annual Green Week.	454,559 m3 (29.63 m3 per person per year) (2006-08 Average)	43.6% Reduction (CY) 256,293 m3 (13.38 m3 per person per year) (CY)	42.0% Reduction (CY) 263,561 m3 (13.64 m3 per person per year) (CY)	42.3% Reduction (CY) 262,339 m3 (13.31 m3 per person per year) (CY)	44.5% Reduction vs 2006-08 baseline (CY) 252,133 m3 (12.54 m3 per person per year) (CY)	61.9% Reduction vs 2006-08 baseline (CY) 172,990 m3 (8.35 m3 per person per year) (CY)	50.5% Reduction vs 2006-08 baseline (FY) 223,531 m3 (10.79 m3 per person per year) (FY)	
Rain/Grey Water Consumption (m^3)	Increase onsite water generation by 5% by 2020.	Rainwater harvesting on Biosciences Building & in New Square. No new initiatives.	Zero (2009/2010)	Estimates based on rainfall levels for 2016.	Reduction based on estimates for rainfall levels in 2017.	Estimates of rainwater harvesting potential. No submetering data for rainwater harvesting.	Estimates of rainwater harvesting potential. No submetering data for rainwater harvesting.	Estimates of rainwater harvesting potential. No submetering data for rainwater harvesting.	Estimates of rainwater harvesting potential. No submetering data for rainwater harvesting.	
Energy (kWh)	Improve energy efficiency by 33% by 2020 (public sector target) compared to 2006-2008 baseline.	Various energy efficiency projects on-going including better heating controls, LED lighting, energy efficient equipment, insulation retrofits & behavioural campaigns.	414.6 kWh / Research Equivalent Floor Area (2006/2008)	324.0 kWh / Research Equivalent Floor Area (21.9% saving versus baseline)	306.2 kWh / Research Equivalent Floor Area (26.1% saving versus baseline)	298.6 kWh / Research Equivalent Floor Area (28.0% saving versus baseline)	281.0 kWh / Research Equivalent Floor Area (32.2% saving versus baseline)	249.7 kWh / Research Equivalent Floor Area (39.8% saving versus baseline)	265.7 kWh / Research Equivalent Floor Area (35.9% saving versus baseline)	
Renewables and Combined Heat and Power (kWh)	Increase renewable energy use to 14% by 2020	Use of grid electricity to facilitate grid based renewables. Onsite solar water panels.	5.0% energy from renewables (2006/2008)	12.9% energy from renewables (99%+ renewable electricity on grid)	14.7% energy from renewables (99%+ renewable electricity on grid)	15.2% energy from renewables (99%+ renewable electricity on grid)	16.5% energy from renewables (99%+ renewable electricity on grid)	15.2% energy from renewables (99%+ renewable electricity on grid)	16.8% energy from renewables (99%+ renewable electricity on grid)	
Paper Reduction	Reduce paper consumption by 20% by 2020	Numerous processes going paperless including board meetings and SU meetings.	47,363 Reams (2011 Baseline)	25,782 Reams	23,048 Reams	22,668 Reams (52% reduction vs baseline)	20,500 Reams (57% reduction vs baseline)	14,655 Reams (69% reduction vs baseline)	16,118 Reams (66% reduction vs baseline)	
Waste, recycling, local emissions, and non-compliance										
Total waste produced (tonnes MSW, Recyclables, Compost)	Reduce total waste by 10% by 2020	Binless office system expanded and source separate bins installed in buildings. Behaviour	1,595 tonnes (2012 Baseline)	1,806 tonnes	2,059 tonnes (29% increase vs 2012 baseline)	1,984 tonnes (4% decrease vs previous year)	1,796 tonnes (9% decrease vs previous year)	940 tonnes (48% decrease vs previous year because of Covid-19)	1,037 tonnes (35% decrease vs previous year because of Covid-19)	
Hazardous Waste	Reduce total hazardous waste by 10%	Labcup trial rolled out to help prevent purchase of chemicals already in stock. Training on	42,270 kg (2012 Baseline)	48,890 kg	46,670 kg (4.5% decrease)	44,550 kg (4.5% decrease vs previous year)	52,333 kg (17.5% increase vs previous year)	32,678 kg (37.6% decrease vs previous year)	42,303 kg (29.5% decrease vs previous year)	
Research/IT facilities and sustainability										
Green Data Centre	Reduce Energy and GHG emissions	Award winning Green Data centre opened in 2014.	NA	On-going monitoring.	On-going monitoring.	On-going monitoring.	On-going monitoring.	On-going monitoring.	On-going monitoring.	

Users									
Stakeholder engagement	Increase visitors to green pages website	Annual Green week held and investigation of induction into student orientation.	3,000 users on green pages (2013 Baseline)	1,224. Being updated due to website revamp.	670 visitors. New website being developed.	20,000 visitors with launch of new sustainability pages.	5,505 page views for /provost/sustainability vs 2,394 in 2018	7,040 page views for /provost/sustainability vs 2,394 in 2018; 47 instagram posts with 1,655 likes; 637 FaceBook posts with 7,899 engagements	6,982 page views for /provost/sustainability vs 2,394 in 2018; 231 posts across LinkedIn, Facebook, Twitter and Instagram
Building design aspects									
Sustainable Building Standards	Increase campus as a living lab.	New building designed to excellent standard and near zero energy buildings.	NA	2 significant building projects still in design stage. Business School and Oisin House residences.	2 significant building projects in construction stage. Business School and Printing House Square (Oisin House) residences. E3 centre in design stage.	2 significant NZEB building projects in construction stage. Business School (BER - A2; opened May'19) and Printing House Square (Oisin House, scheulded for completion Aug'19) residences. E3 centre in design stage.	Trinity's first NZEB building, Trinity Business School (BER A2) opened May'19; Printing House Square (Oisin House, scheulded for completion Aug'20) residences. E3 centre in design stage.	Heat pumps to decarbonise historic structures and provide renewable heating (Rubrics and Chief Stewards House going to tender).	The Martin Naughton E3 Learning Foundry Project has been designed to BREEAM Excellent and WELL Building
Campus Strategic Plan	Green, energy efficient campus.	All new buildings aim to meet or exceed building energy codes.	NA	New buildings in planning.	New buildings in planning.	Next Strategic Plan 2020-2024 being drafted	Next Strategic Plan 2020-2025 published. The Martin Naughton E3 Learning Foundry, by 2022 will achieve Well Building standards and BREEAM excellence.	Next Strategic Plan 2020-2025 published. The Martin Naughton E3 Learning Foundry, by 2022 will achieve Well Building standards and BREEAM excellence.	Next Strategic Plan 2020-2025 published. The Martin Naughton E3 Learning Foundry, by 2022 will achieve Well Building standards and BREEAM excellence.

Principle 2: To ensure long-term sustainable campus development, campus-wide master planning and target-setting should include environmental and social goals. Sustainable campus development needs to rely on forward-looking planning processes that consider the campus as a whole, and not just individual buildings. These processes can include comprehensive master planning with goals for impact management (for example, limiting use of land and other natural resources and protecting ecosystems), responsible operation (for example encouraging environmentally compatible transport modes and efficiently managing urban flows), and social integration (ensuring user diversity, creating indoor and outdoor spaces for social exchange and shared learning, and supporting ease of access to commerce and services). Such integrated planning can profit from including users and neighbors, and can be strengthened by organization-wide target setting (for example greenhouse gas emission goals). Existing low-carbon lifestyles and practices within individual campuses that foster sustainability, such as easy access for pedestrians, grey water recycling and low levels of resource use and waste generation, need to be identified, expanded and disseminated widely,

Topics	**Goals and Initiatives**		**Results**						
Priority topics (with units of measurement)	**Objectives and targets** (for…	**Key Initiatives** (in reporting year, and /or planned for the following and beyond)	**Baseline**	**Performance 2016**	**Performance 2017**	**Performance 2018**	**Performance 2019**	**Performance 2020**	**Performance 2021**
Institution-wide carbon targets and related achievements									
Carbon Emissions (tCO2e) (Energy-related only excluding flights & business travel)	Short Term: reduce carbon emissions by 2% year-on-year. Long Term: reduce carbon emissions by 80% by 2050.	See energy efficiency. Investigating use of electric vehicles in fleet. Review of climate change plan.	25,875 tCO2e (2006-2008) 1.69 tCO2e / full time equivalent	26,478 tCO2e (2.3% increase vs 2006-08) 1.38 tCO2e / full time equivalent	24,139 tCO2e (6.7% decrease vs 2006-08) 1.25 tCO2e / full time equivalent	23,451 tCO2e (9.4% decrease vs 2006-08) 1.19 tCO2e / full time equivalent	21,255 tCO2e (17.9% decrease vs 2006-08) 1.06 tCO2e / full time equivalent	18,258 tCO2e (29.4% decrease vs 2006-08) 0.88 tCO2e / full time equivalent	20,449 tCO2e (21.0% decrease vs 2006-08) 0.96 tCO2e / full time equivalent
Master Planning									
5 Year Strategic Plan	Sustainable Development	Implementation of sustainability elements of strategic plan & updating of sustainable development policy.	2009 – 2014 TCD Strategic Plan.	On-going.	Sustainable Development policy updated and renamed Sustainability Policy.	2020-2024 strategic plan being drafted	2020-2025 strategic plan published	2020-2025 strategic plan published	2020-2025 strategic plan published
Campus Development Plan	Sustainable Development	In development.	NA	Master plan in development.	Master plan in development.	Estates Strategy published Nov'18	Condition Survey underway to establish a ten-year assessment of the maintenance liabilities across the buildings and supporting infrastructure.		
Transportation									
Transportation initiatives	Promote sustainable transport.	Review strategy and set objectives and targets to increase the sustainability of business travel.	1,700 bicycle spaces (2011)	Not counted (run every two years due to resourcing).	1,615 bicycle spaces (decrease of 6% from baseline).	97% surveyed in 2018 using sustainable transport, with only 3% travelling by car. No data on cycling spaces.	99% surveyed in 2019 using sustainable transport, with only 1% travelling by car. No data on cycling spaces.	Survey reviewing transport modes staff and students would like post Covid-19. Students want to talk, staff to cycle. Lower interest in public transport presumably from Covid-19 concerns wrt transmission.	1,135 bike racks upgraded, 2 bike repair stations, 6 submissions to pursue smarter travel, walking & cycling challenges, "Future of Dublin" seminar, multiple campaigns, €100k funding from National Transport Authority.
Food									
Stakeholder engagement	Promote sustainable food.	Student led talks on sustainable food and food waste. Support for trinity start-up FoodCloud.	Not recorded.	Catering investigating improving sustainable food.	On-going catering investigating improving sustainable food.	OneStepCloser, a social engagement platform used to engage students and staff on elimination of disposable plastics on campus and vegetarian choices of food at the Buttery Café (23% participation rate).	OneStepCloser, a social engagement platform used to engage students and staff on elimination of disposable plastics on campus and vegetarian choices of food at the Buttery Café (23% participation rate).	OneStepCloser, a social engagement platform used to engage students and staff: 4 campaigns with 16,666 votes in total. Wildflower to Front Lawns received largest vote. 3,000 initially and then 13,850 when opened up to public; Picked up by media channels such as Top 50 in BBC, Huffington Post, etc	231 posts across LinkedIn, Facebook, Twitter and Instagram (figure excludes TikTok and YouTube). We are now using a reporting tool (Falcon) that measures and reports this progress, including 1.67million impressions and 26,280 video views for the 20/21 academic year
Food purchase	Promote sustainable food.	Reduce pre-consumer and post-consumer waste.	None.	On-going.	On-going. Free water available in catering areas.	No data	No data	No data	No data

Land-use and biodiversity									
Sustainable Building Standards	Enhance campus biodiversity	Green roofs on campus at arts block, Long Room Hub and Biomedical Sciences Institute.	Green roofs.	None added.	None added.	Trinity Business School to have green roof (completed May'19)	Trinity Business School to was first NZEB building. Printing House Square (Oisin House, scheulded for completion Aug'20) residences. E3 centre in design stage with Well Standards and BREEAM excellent.	No additional projects.	E3 centre in design stage with Well Standards and BREEAM excellent.
Pollinator plan	Enhance campus biodiversity	Campus pollinator plan being drafted.	NA	Drafted.	Completed and published. https://naturalscience.tcd.ie/pollinator/	Pollinator Plan in place	Pollinator Plan in place	Pollinator Plan in place	Pollinator Plan in place; i-Tree Canopy surveys and tree surveys to estimate benefits of tree population in progress.

Principle 3: To align the organization's core mission with sustainable development, facilities, research, and education should be linked to create a "living laboratory" for sustainability. On a sustainable campus, the built environment, operational systems, research, scholarship, and education are linked as a "living laboratory" for sustainability. Users (such as students, faculty, and staff) have access to research, teaching, and learning opportunities on connections between environmental, social, and economic issues. Campus sustainability programs have concrete goals and can bring together campus residents with external partners, such as industry, government, or organized civil society. Beyond exploring a sustainable future in general, such programs can address issues pertinent to research and higher education (such as environmental impacts of research facilities, participatory teaching, or research that transcends disciplines). Institutional commitments (such as a sustainability policy) and dedicated resources (such as a person or team in the administration focused on this task) contribute to success.

Topics	**Goals and Initiatives**		**Results**						
Priority topics (with units of measurement)	**Objectives and targets** (for…	**Key Initiatives** (in reporting year, and /or planned for the following and beyond)	**Baseline**	**Performance 2016**	**Performance 2017**	**Performance 2018**	**Performance 2019**	**Performance 2020**	**Performance 2021**
Topical Integration									
Sustainability in Courses	Increase sustainability focus in courses.	Sustainability is taught to undergraduates via the broad curriculum programme and via some course content i.e. engineering.	NA.	2 relevant broad curriculum courses open to undergraduates in area of sustainability. On-going review of general course content.	2 relevant broad curriculum courses open to undergraduates in area of sustainability. On-going review of general course content.	Website currently lists: - 15 undergraduate courses - an online course on Achieving Sustainable Development (5,000 participants) - 3 modules for Trinity Electives	Website currently lists: - 19 undergraduate courses - 14 postgraduate courses - 7 Trinity Electives - 1 online course on Achieving Sustainable Development	Website currently lists: - 18 undergraduate courses - 14 postgraduate courses - 7 Trinity Electives - 1 online course on Achieving Sustainable Development	Website currently lists: - 33 undergraduate courses - 16 postgraduate courses - 9 Trinity Electives - 1 online course on Achieving Sustainable Development
Sustainability Training	Induct all college users into Green Campus.	Induction for new staff and for Campus residents includes promotion of campus sustainability.	None.	Continuing to be expanded.	All new staff inducted into sustainable campus initiative.	285 new staff inducted on sustainability + approx 80% of 3,000 freshers	Continue to induct new staff inducted on sustainability + approx 80% of 6,500 students enrolled (freshers, postgraduates, visiting & Erasmus students)	Continue to induct new staff inducted on sustainability + approx 88% of 6,500 students enrolled (freshers, postgraduates, visiting & Erasmus students)	Continue to induct new staff inducted on sustainability + approx 88% of 6,500 students enrolled (freshers, postgraduates, visiting & Erasmus students)
Sustainability Focused Courses	Increase courses with sustainability education.	Review of all current courses and those with sustainability at their core.	NA.	Review continuing Including running open online courses in area.	Review continuing. New open online courses in sustainable development launched.	See above and https://www.tcd.ie/provost/sustainability/researcheducation/	See above and 14 postrgad courses up from 10 in 2017/18	Same as previous year + 1 New Postgraduate Certificate in Climate Entrepreneurship (March-August 2021).	Same as previous year + 1 New Postgraduate Certificate in Climate Entrepreneurship (March-August 2021).
Social Integration									
External Organisations	Increase green areas.	Linking with the Dublin City Council Greening the City initiative.	0	Continued contact with DCC.	Biannual meeting at executive level to discuss synergies and opportunities.	Continue to meet with DCC to liaise on cycling infrastructure; addition of Iveagh Sports ground provides 67,000m2 green space	1,780m2 pollinator friendly areas added	1,600m2 pollinator friendly areas added	5,575m2 pollinator friendly areas added
Green Campus Committee (GCC)	Increase the number of green events on campus.	The GCC run the annual green week for the university with events held each day to raise sustainability awareness across the campus community.	21 (2011)	Data collection under review.	Increase in green events during the annual green week.	Green events up to 123 in number in 2018	Green events up to 235 in number in 2019	165 Green events in 2020	No data
Research & Education projects on Laboratory/IT facilities and sustainability									
LabCup software – chemical management trial.	Facilitate living lab & support sustainable start-ups.	LabCup was trialled in the campus to help reduce hazardous waste generation and improve safety.	0	Further roll out and expansion.	Embedded and training for staff.	Hazardous biological and chemical waste down 4.5% for two consecutive years	Hazardous biological and chemical waste up 17.5% vs previous year	Hazardous biological and chemical waste down 37.6% vs previous year)	Hazardous biological and chemical waste up 29.5% vs previous year)

Commitments and resources for campus sustainability									
Green Campus Committee (GCC)	Student involvement.	The GCC is made up of staff and student volunteers (approx. 20 people) who run the annual Green Week and the University's Green Flag programme.	NA	The Green flag award and status was successful for another 3 years.	The Green flag award interim review (retained).	GCC continue to maintian green flag status, host green week and discuss sustainability initiatives and engagement strategies	GCC continue to maintian green flag status, host green week and discuss sustainability initiatives and engagement strategies	GCC continue to maintian green flag status, host green week and discuss sustainability initiatives and engagement strategies	GCC continue to maintian green flag status, host green week and discuss sustainability initiatives and engagement strategies
Green Campus Co-ordinator	Running Green Flag reporting.	Data collection, TCD GreenPages website updates and reporting.	1	Additional external support provided.	Additional external support provided via communications support.	Green Campus report completed Jan 19; In addition this Annual Sustainability report has been completed for 4th consecutive year	Green Campus report completed Jan 19; In addition this Annual Sustainability report has been completed for 5th consecutive year	This Annual Sustainability report has been completed for 6th consecutive year	This Annual Sustainability report has been completed for 7th consecutive year
Sustainability Task Force	Joining ISCN & annual sustainability reporting.	Initial database creation for sustainability data including energy, waste, water, transport, etc.	NA	Research into creation of TCD Sustainability Task Force is continuing with the development of its scope and composition. Due to report directly to the University's Provost.	Application to ISCN commenced. Annual report 2017. Provost Advisory Group Established.	Provost's Advisory Committee on Sustainability (PACS) established, co-chaired by the registrar as "Sustainability Champion" and support by "Sustainability Advisor" Michele Hallahan	Provost's Advisory Committee on Sustainability (PACS) established, co-chaired by the registrar as "Sustainability Champion" and support by "Sustainability Advisor" Michele Hallahan	Provost's Advisory Committee on Sustainability (PACS) continues to meet, co-chaired by the registrar as "Sustainability Champion" and support by "Sustainability Advisor" Michele Hallahan	New Vice President for Biodiversity & Climate Action appointed as well as full time sustainability manager.

Annex 2 - Green Flag Campus Report

This annex is used to provide any additional material required for the annual update to An Taisce for the Green Flag campus programme.

1. Green-Campus Committee

   https://www.tcd.ie/provost/sustainability/greencampuscommittee/

2. Environmental review

   http://www.tcd.ie/provost/sustainability/initiatives/

3. Action plan

   See section 1 – 9 of the annual sustainability report.

4. Monitoring and evaluation

   See section 1 – 9 of the annual sustainability report.

5. Link to learning on campus

   https://www.tcd.ie/provost/sustainability/researcheducation/ & https://www.tcd.ie/OnlineEducation/free-online-course/

6. Informing and involving campus and wider community

   http://www.tcd.ie/provost/sustainability/initiatives/communicationstudentinvolvementtransparency/

7. Green Charter

   http://www.tcd.ie/provost/sustainability/policies/