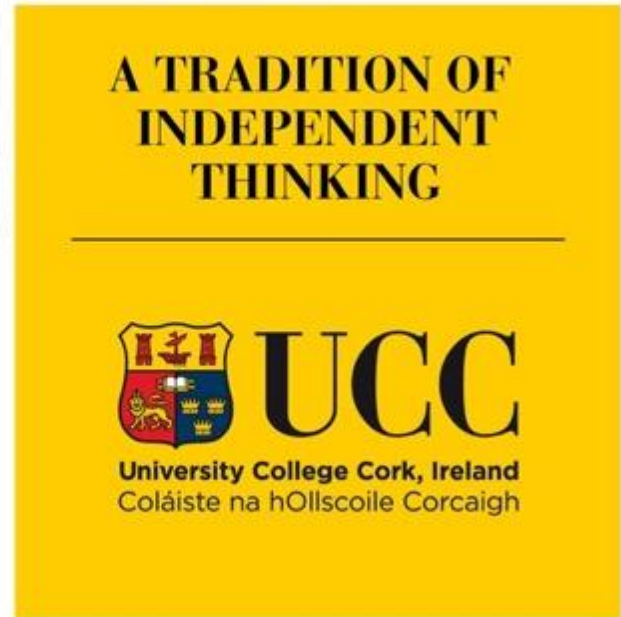




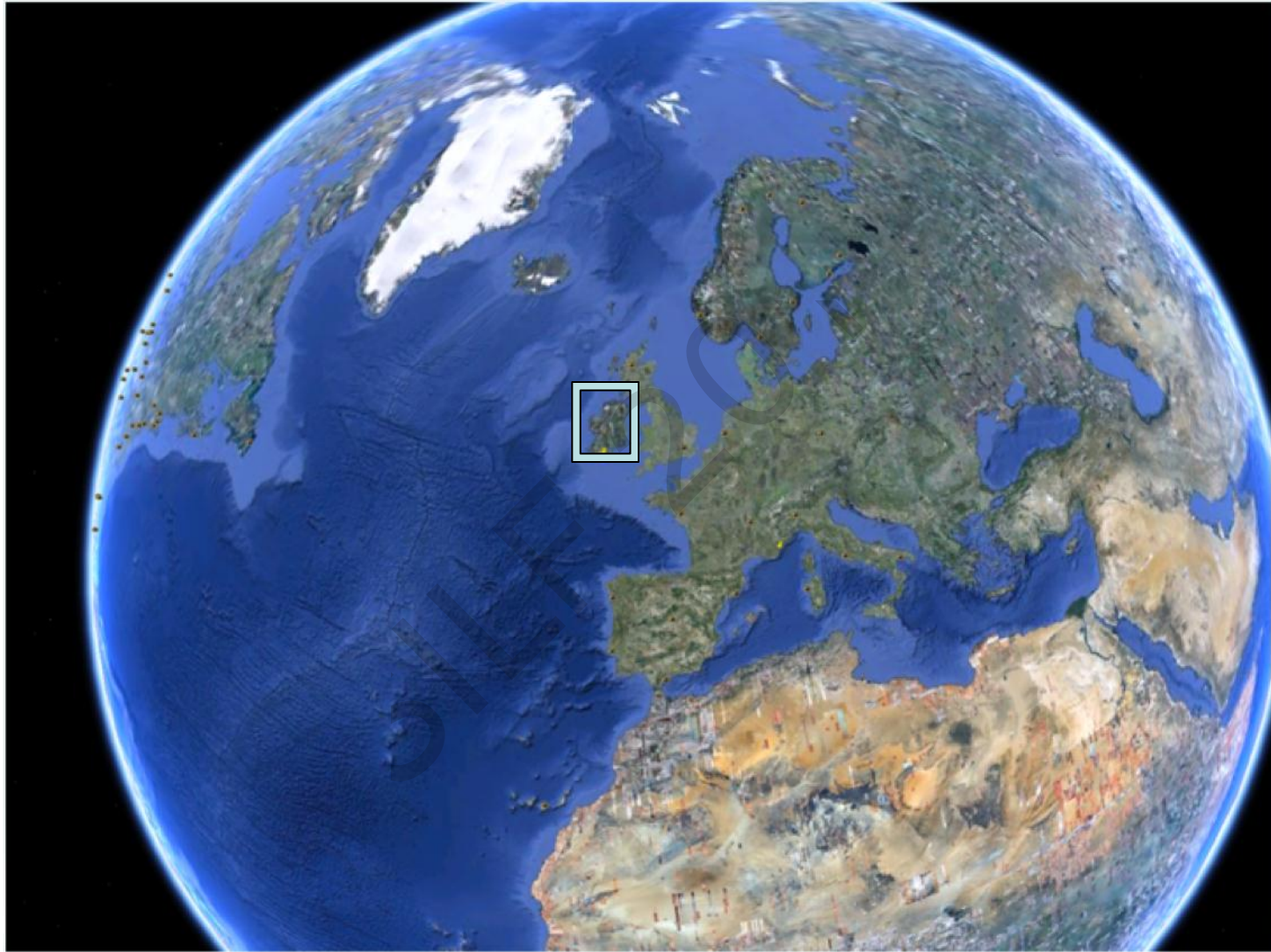
# ”Greening the Library”

John FitzGerald, UCC  
SILF, Shanghai, October 2018









# Connections & Collaborations

## SILF 2012



*John FitzGerald (j.fitzgerald@ucc.ie)*



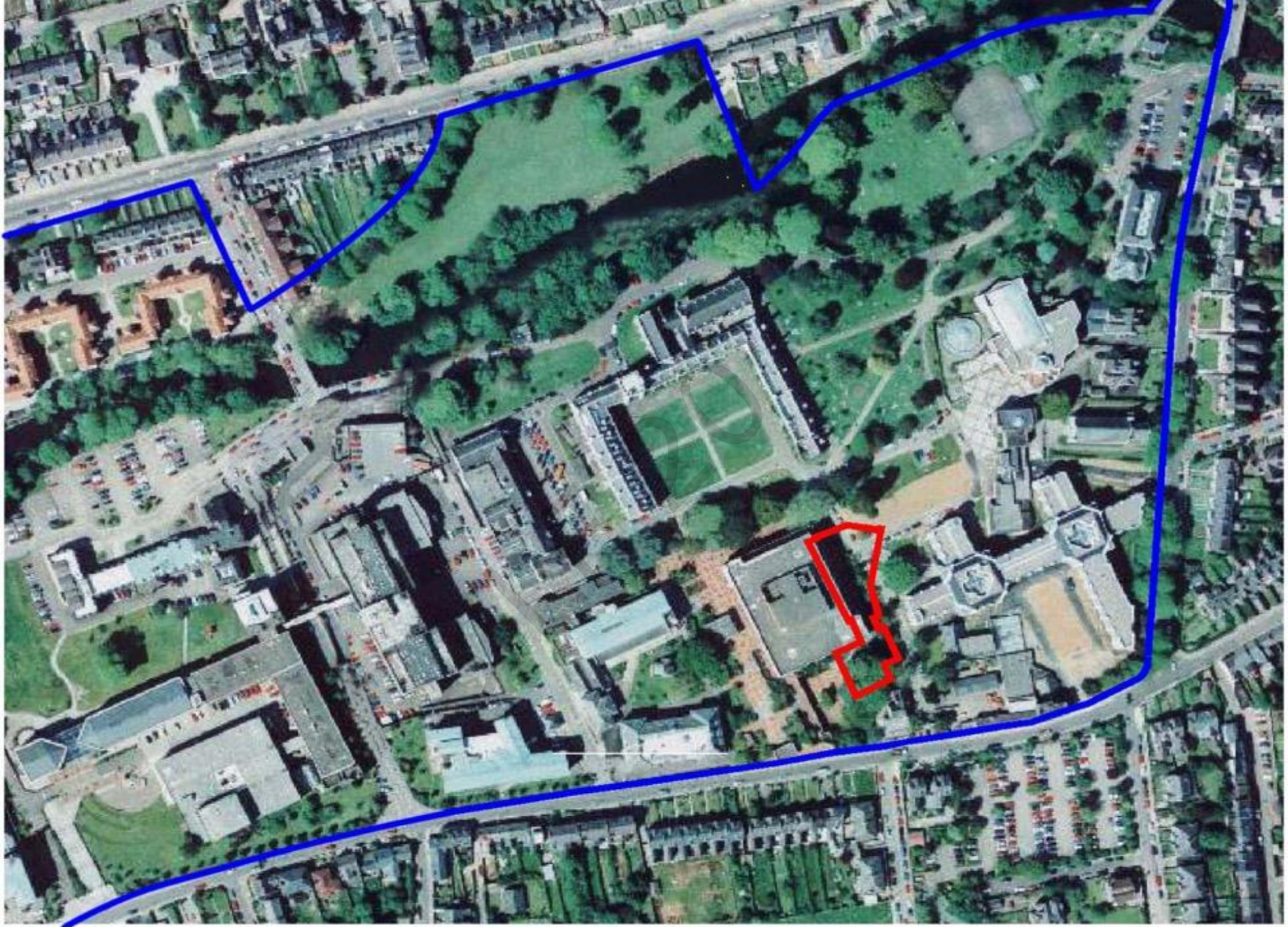
孔子学院

UCC Confucius Institute













# Green-Campus Ireland

Smarter Sustainable Campus Communities

[Learn More](#)



THE TAKE IS



In 2007, UCC students instigated a pilot Green Campus programme, with the help of *An Taisce*, which would see the university become the first in the world to be awarded a Green Flag from the Foundation of

UCC renewed its Green Flag in 2013 and 2016, and in July 2016 published its Sustainability Strategy committing to be a “world-class University leading the drive towards sustainability in Higher Education



Our programme is student-led, research-informed and practice-focused and our success demonstrates the strong commitment across all levels and divisions in the university

# SUSTAINABILITY: a core university value





# TEACHING & LEARNING

- A university-wide **Sustainability Module** approved as a direct result of the Green Campus Initiative.
- 35 **courses** relating to the Environmental at UCC including:
  - BSc in Env. Management
  - Certification of BSc in Env. Management & Science
  - BE Energy Engineering
  - MEngSc Sustainable Energy
  - GREP Eng Energy Systems
- Over 35 **conferences and events** per annum with an environmental theme.



# RESEARCH & INNOVATION

- *Circa.* €20M secured annually for environmental and sustainability **research**.
- >200 **research papers** published on environmental and sustainability research.
- **KEY CENTRES**
  - Environmental Research Institute
  - Beaufort Laboratory
    - HMRC
    - CMRC
    - SERG
  - Tyndall (Enabling Technologies)
  - Internal Engineering Research Centre



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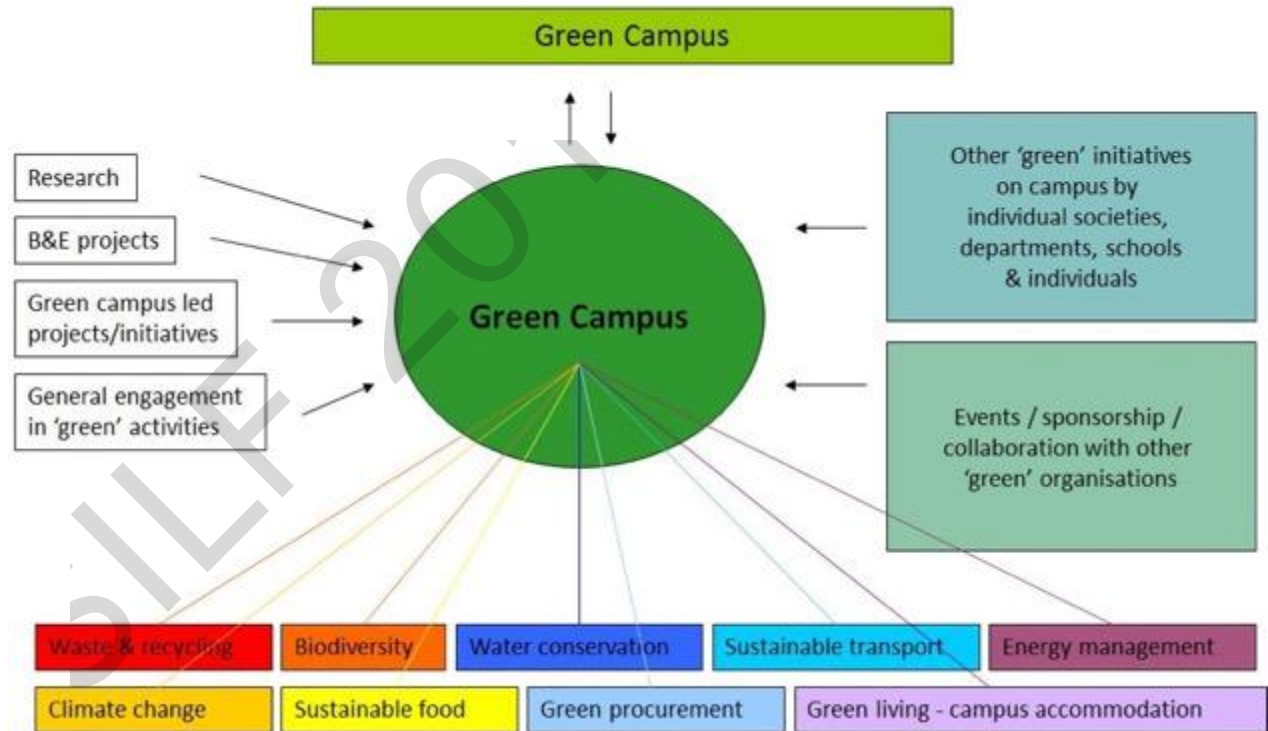
- Environmental Research Institute
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## THEMATIC RESEARCH AREAS:

- Sustainable Energy & Environmental Engineering
- Environmental Chemistry
- Environmental Microbial Genomics
- Biodiversity & Ecotoxicology
- Marine & Freshwater

# EMBEDDING THE PROCESS

- Co-Chair - VP Teaching & Learning /Director of Buildings & Estates.
- Open Meetings.
- Cross Campus Attendees.
- Involving Subsidiaries and Suppliers









# GLOBAL CONTEXT



**SUSTAINABLE  
DEVELOPMENT**

**GOALS**



# SUSTAINABLE DEVELOPMENT GOALS





# SUSTAINABLE DEVELOPMENT GOALS

1 无贫穷

2 零饥饿

3 良好健康与福祉

4 优质教育

5 性别平等

6 清洁饮水和卫生设施

7 经济适用的清洁能源

8 体面工作和经济增长

9 产业、创新和基础设施

10 减少不平等

11 可持续城市和社区

12 负责任消费和生产

13 气候行动

14 水下生物

15 陆地生物

16 和平、正义与强大机构

17 促进目标实现的伙伴关系

可持续发展  
目标





**UCC SUSTAINABILITY STRATEGY**

JUNE 2016

 **UCC**  
University College Cork, Ireland  
Coláiste na hOllscoile Corcaigh

 **University College Cork**  
World's First Green Campus

CLICK TO ENTER >

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# Practice Focused

## UCC's Sustainability Journey.

In 2007, UCC students instigated a pilot Green Campus programme, with the help of An Taisce, which would see the university become the first in the world to be awarded a Green Flag from the Foundation of Environmental Education. UCC renewed its Green Flag in 2013 and 2016, and in July 2016 published its Sustainability Strategy committing to be a "world-class University leading the drive towards sustainability in Higher Education Institutes and beyond, to our community, region and planet." Our programme is student-led, research-informed and practice-focused and our success demonstrates the strong commitment across all levels and divisions in the university.



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# KEY INGREDIENTS

- Students
- Practitioners and managers
- Researchers
- An Taisce and other external agencies



*Team work – all working together at the highest level through collaboration and engagement*





View from Honan Square

University College Cork  
Postgraduate Research Library







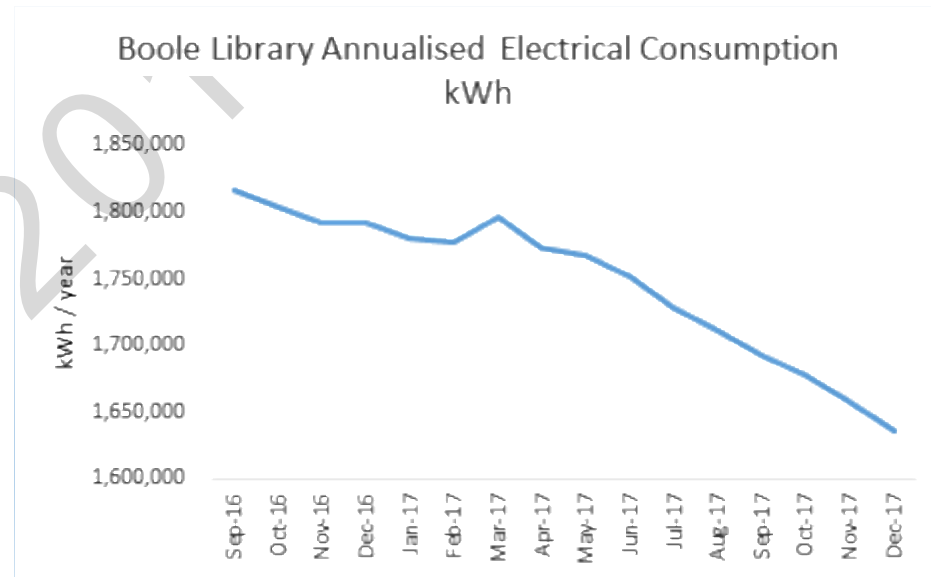






# Key Statistics

- Library consumes 10% of campus energy – 1.5 million visits per year
- The Library's energy budget was assigned in 2016
- Savings can be retained!
- A Green Team of staff
- Waste management & water use also
- Savings in 2018 provided a Green Wall



LOVE OUR  
LIBRARY

SORRY, DISPOSABLE CUPS,  
IT'S OVER.  
YOU'RE NOT COMING IN!



COFFEE & TEA  
ARE WELCOME  
IN REUSABLE  
TRAVEL MUGS  
& CUPS ONLY

Let's keep it  
CLEAN & GREEN

Leabharlann Boole  
Boole Library





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Keep it CLEAN & GREEN

LOVE OUR LIBRARY

HELP TO KEEP OUR LIBRARY A GREAT PLACE TO STUDY FOR EVERYONE



BRING YOUR OWN  
WATER BOTTLE  
TO REFILL



BRING YOUR OWN  
COFFEE CUP AND  
LET'S DEFEAT THE  
DISPOSABLE



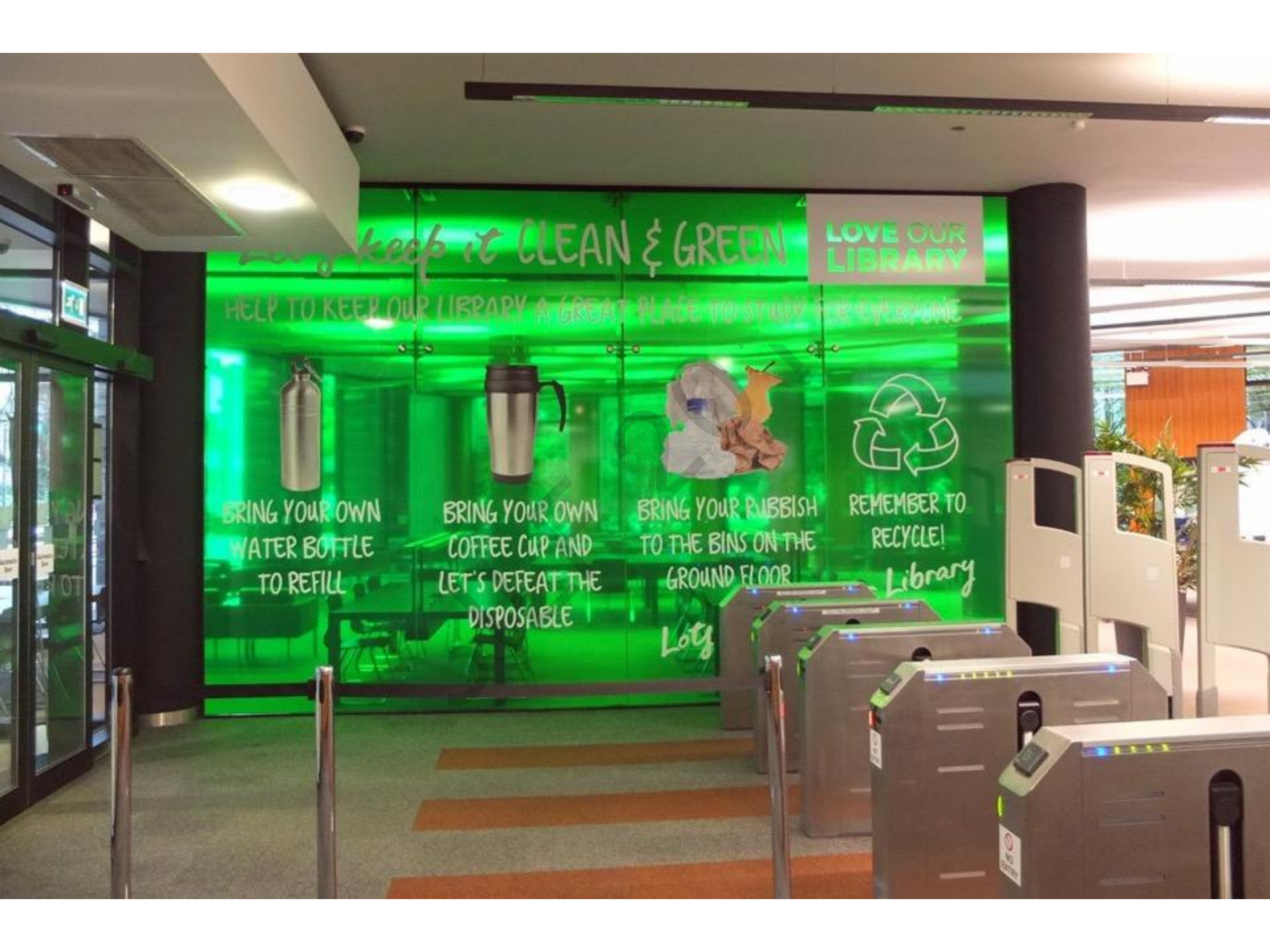
BRING YOUR RUBBISH  
TO THE BINS ON THE  
GROUND FLOOR



REMEMBER TO  
RECYCLE!

Library

Loty





**WE ARE TURNING OFF THE LIGHTS**

**TO SAVE ENERGY**

**NATURAL LIGHT ONLY**

**IN THIS ROOM**



Library  
Leabharlann





Let's keep it **CLEAN & GREEN**

**LOVE OUR LIBRARY**

TAKE THAT SPLIT SECOND TO DO THE RIGHT THING AND DISPOSE OF YOUR WASTE PROPERLY.

Four recycling bins with the following labels and icons:

- Blue Bin:** Plastic Bottles (with bottle icon) and a "recycle" symbol.
- Green Bin:** Dry Mixed Recyclables (with bottle and paper icons) and a "recycle" symbol. A "Green Bin" poster is attached to the front, listing items like Cans, Cardboard, Paper, and more.
- Black Bin:** Food & Contaminated Waste (with food can icon).
- White Bin:** Paper (with paper icon) and a "recycle" symbol.





LOVE OUR LIBRARY

Let's keep it  
**CLEAN & GREEN**

Try to drink 2 litres of water a day to keep your mind and body functioning normally.



**BRING YOUR OWN BOTTLE & FILL IT FOR FREE!**



**AND AVOID THAT PLASTIC BOTTLE THAT CAN TAKE OVER 400 YEARS TO DECOMPOSE.**

GREEN CAMPUS UCC



LIBRARY & I.T.  
printing membership

SERVICES

LOVE OUR  
LIBRARY



BY SWITCHING OFF YOU  
HAVE SAVED US  
150,000 KWH  
IN 2017

THAT'S ENOUGH ENERGY  
TO LIGHT THIS LIGHT  
BULB FOR 1770  
YEARS !!



OR



TRAVEL AROUND  
THE WORLD  
TWENTY FOUR  
TIMES IN AN  
ELECTRIC CAR

GREEN CAMPUS



## UCC Library Green Energy: Welcome

Information on UCC Library's Green Energy Campaign.

[Welcome](#)
[Recycling & Waste Management](#)
[Energy Saving](#)
[Water use](#)
[Ditch the Disposable](#)
["You smoke, I smoke"](#)
[How are we doing?](#)

What do you think?

### News & Events

#### Pakman Finalists!

UCC Library has been shortlisted as a finalist for the 2018 Pakman Awards.

The Pakman awards are the annual awards for excellence in Waste Management and Recycling, organised by the Repak Group.

It is such a big achievement to be shortlisted and even better because we are the only third-level institution on this list.

This is a huge recognition of all our efforts to increase recycling in the library.

A big Thank You to all involved.



#### The Green Wall



The Green Wall in the Quad Reading Room (Fishbowl), was installed last June by local Cork company Greenveldt Ltd.

Paid for from savings made so far as part of the "save saves scheme", this eco vertical garden, full of growing plants, has brought nature into this indoor environment and already the air quality has improved. It should create a

more positive and healthy space for students particularly at exam time, when the

### LOL Love Our Library



**BYOB**  
BRING YOUR OWN BOTTLE

- Only 1 in 5 plastic bottles are recycled
- Mild tap water is more heavily tested and regulated than bottled water
- Plastic water bottles can take between 400 and 1,000 years to decompose
- It requires 3 times the amount of water to produce a plastic bottle than it does to fill it
- Bottled water costs over 1,000+ times more than tap water
- It takes 17 million barrels of oil to produce plastic bottles yearly. This could fuel 1 million cars for a year

Bring Your Own Bottle - Help reduce plastic use

### LOL Love Our Library





**UCC Library**  
@UCCLibrary

Following

Day 1 of #loveourlibrary. Let's reduce, re-use and recycle to clean and Green the Boole.

@abyrnecork @ucc



10:54 AM - 4 Sep 2017

29 Retweets 46 Likes



1 29 46



Tweet your reply



**Kathryn Briggs** @kbriggsslydon · 5 Sep 2017  
Replying to @UCCLibrary @abyrnecork @UCC  
Brilliant!

1



THANK YOU  
FOR USING OUR  
NEW WASTE BINS  
TOGETHER WE HAVE  
INCREASED OUR  
RECYCLING RATES BY  
700%





# Greening UCC's IT Services

There are **7,000** Desktops & Laptops across campus



**4 Million** student pages were printed in 2016 compared to **24 Million** in 2009



**80%**  
↑  
**20%**

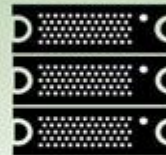
**Virtualisation** of Servers has increased dramatically in the past 6 years

**5 Years** Average lifespan of each Desktop & Laptop



*afterwards these are donated to the charity CAMARA or to local schools*

There are **2** Data Centers in UCC



Both use **Eco-Cooling**

**10 Minutes** time after which screens monitored by IT Services go on standby if unused



UCCGREENCAMPUS









# Overall Rankings 2017

HOME \

Ranking	University	Country	Setting and Infrastructure	Energy and Climate Change	Waste	Water	Transportation	Education	Total Score
1	Wageningen University & Research		1128	1606	1800	976	1012	1030	7552
2	University of Nottingham		1088	1469	1800	925	1162	1020	7464
3	University of California Davis		1050	1502	1800	972	1362	679	7365
4	University of Bradford		839	1511	1800	925	1262	953	7290
5	Nottingham Trent University		997	1587	1800	850	962	1014	7210
6	University of Oxford		1006	1273	1725	1000	1412	783	7199
7	University of Connecticut		1084	1386	1701	895	1212	870	7148
8	Bangor University		1044	1437	1800	650	1062	888	6881
9	University College Cork		777	1410	1701	905	1112	956	6861
10	Hochschule Trier - Umwelt-Campus Birkenfeld		752	1733	1527	761	1012	1021	6806
11	University of Groningen		774	1181	1725	925	1262	906	6773

# LOVE OUR LIBRARY Strategy & Action Plan

University College Cork

2017-2020





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3. Audience, scope and theme.....	3
4. Campaign Objectives.....	4
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6. Waste – People Matrix.....	1
7. Stakeholders.....	0
8. Energy Behaviours, Barriers and Target audiences.....	1
9. Waste management, behaviours, barriers and target audiences.....	2
10. Communications channels.....	3
11. Training / Audits.....	4
12. Other Campus Initiatives.....	4

DRAFT 2011





# UCC GREEN CAMPUS

## eNews July 2018



### Navigate stories:

-  [Arrival of the honey bees!](#)
-  [Sustainability Summer School](#)
-  [CRAC Air Quality Monitoring Station](#)
-  [UCC signs principles for responsible investment](#)
-  [CUH awarded Green Flag](#)
-  [Saver Saves Scheme update](#)
-  [ERI Annual report/ MaREI - Volvo Cork Week](#)
-  [A Green Campus Internship](#)

## Arrival of Honey Bees to UCC Campus



A lengthy, and bitterly cold winter saw the anticipated arrival of bees to UCC delayed just a tad. However, on the 4th of April, a local beekeeper, Thomas Quigley, established seven hives and one nucleus hive on our North Mall campus.

The introduction of honey bee colonies to UCC is an effort to further improve the university's conservation efforts, while also supporting the National Biodiversity Data Centre's [All-Ireland Pollinator Plan](#). It coincides with plans to provide more habitat for bees, in the form of wildflower meadows, and the development of our UCC Biodiversity Action Plan.

The arrival of the bees also coincided with the news that the EU has agreed a total ban on neonicotinoid pesticides from all outdoor farming fields in Europe. This is welcome news for all bee species. To find out more about this ban, read our recent [blog post](#).

This summer, UCC Green Campus also held an information stand at Cork Summer Show, to talk about bees and pollinators and the important role that they play in our food chain. This has become a regular slot for Green Campus and we are delighted to be able to share our experiences with the wider public.

Thankfully, our UCC bees are thriving, with good stocks of honey to bring them over the winter months. To find out more about them, or arrange a visit, contact us at the email given below. To read more about our efforts in biodiversity conservation, see the ["Landscape, Heritage and Natural Resources"](#) page on our website.



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## Sustainability Summer School in UCC



In May 2018, UCC's inaugural "Sustainability Summer School" took place. The school was a collaboration between UCC, UMASS Lowell, UNAL Colombia, and the Ludgate Hub in Skibbereen. Participants spent three days at UCC and two days in West Cork, learning about sustainable rural development and visiting a real Irish farm! The school took an interdisciplinary approach in exploring themes of sustainability at local, national, and international levels and focusing on how society can "make sustainability work" through incorporating people, planet, peace, prosperity, and partnership.

Particular focus was given to food as a "nexus" theme, that connects all of the Sustainable Development Goals. The week was a mixture of lectures, roundtable discussions, keynote addresses and workshops. A highlight was our "Sustainability Showcase" in the Aula Maxima, which focused on collaborations between UCC and the local community in the area of sustainability. At the Ludgate Hub in Skibbereen, Eamonn Gilmore, the EU Special Envoy to the Peace Process in Colombia gave a keynote address highlighting the role of sustainable development in maintaining peace. Other speakers included Brendan Touhy, Chair of MaREI and Dr Tara Shine, Mary Robinson Foundation.

The packed timetable was a great demonstration of the level of expertise within UCC in sustainability. We would like to sincerely thank all those staff members who delivered lectures and helped to organise the event.





# UCC GREEN CAMPUS

## eNews July 2018



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## Saver Saves Scheme update



This infographic displays some of the significant benefits the Boole Library has seen since taking part in the scheme. What's more, the Library recently invested some of their savings in the installation of a "living wall" in the Quad reading room.

Living walls are known to increase alertness, decrease noise levels, improve air quality and reduce air temperature during hot days. The Library and Green Campus hope that the wall will enhance students' experience, particularly when studying for exams during the dark winter days.

For more info please email: [greencampus@ucc.ie](mailto:greencampus@ucc.ie)

[Website](#)

[Sustainability Strategy](#)

FORWARD



# Infographic

## BOOLE BUILDING ENERGY STORY

The Boole complex comprises of the Boole Library and the adjoining lecture theatres. The original building was constructed in the 1980's and further extended in 2006 to bring the total floor area to 18,826 m<sup>2</sup>. In 2016/17 the Boole Library accounted for 8% of UCC's electrical consumption and the building is classed as a significant energy user for UCC.

### Energy Use

Lighting

30%



Ventilation

21%



Laptops/PCs/  
Plugins

15%



Special  
Collection

14%



13 Energy Projects completed since 2011



22.4 GW/h of electricity consumed from 2008 to 2017

6 GW/h of energy use avoided through energy projects


### Saver Saves

45% Reduction in electrical consumption since 2008

€720,000 of savings since 2008

€35,000 of savings from 2016/2017 reinvested into the building

1 GWh will power 200 homes for a year!

5% 

Reduction target set for 2017/2018 consumption





















# AWARDS



## GREEN FLAG

First in the world to achieve (2010)

First to retain (2013)

# AWARDS



## AASHE Gold Star

First third-level institution outside the US to get a Gold Star rating from the Association for the Advancement of Sustainability in Higher Education (2018)





The Sustainability Tracking, Assessment & Rating System™ (STARS) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance.

Reporting Tool



## University College Cork - National University of Ireland, Cork

### EN-5: Outreach Campaign

Status	Score	Responsible Party
✓	4.00 / 4.00	<b>Maria Kirrane</b> Sustainability Officer Office of the Director of Buildings and Estates

Reporting Fields    Credit Info

\*...\* Indicates that no data was submitted for this field

<b>Overall Rating</b>	Gold
<b>Overall Score</b>	66.39
<b>Liaison</b>	Maria Kirrane
<b>Submission Date</b>	July 20, 2018
<b>Executive Letter</b>	Download

Has the institution held at least one sustainability-related outreach campaign during the previous three years that was directed at students and yielded measurable, positive results in advancing sustainability? :

Yes

**STARS v2.1**

INSTITUTIONAL CHARACTERISTICS

INSTITUTIONAL CHARACTERISTICS :

- IC-1: Institutional Boundary
- IC-2: Operational Characteristics
- IC-3: Academics and Demographics

Has the institution held at least one sustainability-related outreach campaign during the previous three years that was directed at employees and yielded measurable, positive results in advancing sustainability?:

Yes

Name of the campaign:

# AWARDS



Cork Environmental Forum  
(CEF) Environmental Award  
2013



First third level institution  
worldwide to achieve the ISO  
50001 energy standard.



IBEC Environment Awards



2<sup>nd</sup> place  
worldwide.  
Only Irish institution  
in the top 50.

# Environmental Forum Award







# University College Cork

## World's First Green Campus

[www.ucc.ie/en/greencampus](http://www.ucc.ie/en/greencampus)

Thank You!



[j.fitzgerald@ucc.ie](mailto:j.fitzgerald@ucc.ie)