



# ENVIRONMENTAL SUSTAINABILITY

Annual Report  
2017 - 2018



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# INTRODUCTION

This environmental sustainability performance report provides a summary of the excellent progress the university has made in the last academic year 2017/18.

Ulster University, Northern Ireland's civic university is committed to understanding and managing its environmental impacts in line with our environmental sustainability policy and for the benefit of students and staff as well as neighbouring and global communities.

Ulster seeks to be a leader in environmental sustainability by promoting campus environmental sustainability awareness, embedding environmental sustainability into research and teaching programmes, adopting best practice in estates management and ensuring the university operates within the legal framework for environmental protection.

The university's environmental sustainability steering group (ESSG) is responsible for environmental sustainability across the institution. The group oversees the development and introduction of policy and strategy to reduce the university's impact on the environment. The group also raises the profile of environmental sustainability internally and encourages participation in initiatives by staff and students.

The Pro-Vice Chancellor for Global Engagement Professor Ian Montgomery, as chair of the ESSG, acts as the university's environmental sustainability champion. The Chair raises the profile of the university's environmental sustainability efforts and monitors progress of plans and initiatives against targets.

2017/18 performance improvements are in line with the university's policy commitments and contribute to the UN Global Sustainable Development Goals highlighted throughout the report. The improvements support the university's Five & Fifty Strategic Plan in relation to providing world-class infrastructure, civic contribution and environmental impact under the following sections:

- **Sustainable Estates**
- **Sustainable Travel**
- **Sustainable Procurement**
- **Education for Sustainable Development**
- **Sustainability Engagement**

Coleraine campus – Solar power generation





# SUSTAINABLE ESTATES



Magee campus new teaching block – LED lighting

## Buildings and infrastructure projects

### Sustainable Building

The new £11 m teaching block (above) at our Magee campus in Derry~Londonderry officially opened in June 2018. The building covers a floor space of almost 4,000 sq metres, includes a 314-seat lecture theatre, 20 classrooms and a café. The building is constructed to BREEAM Excellent (environmental) standards, has high levels of air tightness and thermal insulation, includes a 40kW photovoltaic array, natural ventilation and LED lighting along with low water use sanitary ware and a low energy passenger lift.

### Sustainable Refurbishments

The Gate Lodge (bottom left), a listed building on Magee campus was refurbished in 2017/18. The original fabric of the building was retained during what was a sensitive refurbishment. The salvage and transformation of this unoccupied and dilapidated building provided modern flexible accommodation. The refurbishment included new high performance insulation throughout, new floors and dry lining to walls and roof space. Secondary glazing was installed at single glazed sash windows to enhance their thermal performance. Additional trees and extensive shrub planting provide building occupants with desirable outdoor spaces.

Other refurbishments include the completion of a Cycle Hub and showers at our Coleraine campus in the ground floor of the Tower, glazing replacements at Coleraine Riverside Theatre and Octagon to enhance thermal performance, roof repair and insulation at Magee Foyle Arts and replacement of Atrium roof lights at Magee Duncreggan Student Village to improve efficiency and reduce heat loss.



Magee campus Gate Lodge – Refurbishment

## Biodiversity

Monitoring of red squirrels commenced on Magee campus and at the Duncreggan Student Village with the installation of cameras in partnership with Ulster Wildlife. Magee campus also opened a purpose built green and general waste facility.

Planting of native trees and shrubs took place during the development of the Coleraine car-parking project.

At Jordanstown campus investment in pitch management applications reduced irrigation and cutting thus saving on fuel consumption and emissions. The chemical growth regulating product extends the grass growth sideways and downwards through the root structure.

## World Class Infrastructure

## Energy

Electricity usage per square metre decreased by 2.8% in 2017/18. This maintains a 9-year downward trajectory in electricity consumption brought about by the rationalisation and modernisation of the estate along with the introduction of energy efficient technologies and electricity saving projects.

In 2017/18, energy-related carbon emissions decreased by 5.8%. This was due to realisation of the full annual benefit of the second wind turbine at Coleraine campus and the ongoing decarbonisation of the electricity grid. The two wind turbines generated over 3,000,000 KWH and the eight solar panel arrays generated over 100,000 KWH of electricity. The total renewable electricity generated was equivalent to 17% of the university's electricity consumption.

The Student Energy Project (TSEP) is a national organisation, which aims to engage students in reducing energy and water consumption in residences. The initiative across all University owned student residences has led to a 1.4% reduction in electricity consumption and 6% reduction in water consumption. 52% of students registered for the programme to improve their eco behaviour and get redeemable vouchers as rewards.

Coleraine campus – Wind turbine generator



## Waste

In 2017/18, the total routine commercial waste generated across the estate fell by 7.2% from the previous year, as did the total waste percentage landfilled.

Initiatives to support the reduction in waste generation include awareness raising amongst staff and students through the environmental champions initiative and the use of Insight articles, managed print service contract and multi-function device double-sided printing alongside use of Skype and video-conferencing.

During the reporting year, 8,664,500 sheets of A4 paper and card were purchased. This is a decrease of 1,439,000 sheets and a reduction of 14.2% from the previous year.

Initiatives, which have contributed, to this reduction include encouraging the use of duplex (two sided) printing, staff awareness to encourage the use of electronic media and migration to the use of networked multi-function devices to reduce the number of standalone printers and photocopiers.



## Water

Reported water consumption increased by 0.9%. The small increase was due to now resolved metering and leak issues.

## World Class Infrastructure

### Progress against our environmental targets:

Policy Commitment	Baseline Year	Baseline	Target %	Target Year	Target	2017/18 Performance
Scope 1 & 2 Carbon Emission Tonnes	2005/06	19,889	▼29	2020/21	14,207	10,878
Mains Water Consumed m <sup>3</sup>	2009/10	159,821	▼20	2020/21	127,857	80,448
Routine Commercial Waste Tonnes	2009/10	682	▼38	2020/21	425	523.99
Scope 1 & 2 Carbon Emission Tonnes	2013/14	15,211,250	▼5	2019/20	14,450,688	8,664,500



Video conferencing – Immersive suite

# SUSTAINABLE TRAVEL

## Business Car Travel

During the reporting year, staff travelled a total of 1,573,115 miles by car on University business, which resulted in approximately 453 Tonnes of carbon emissions. This is a decrease of 0.1% from the previous year.

Initiatives, which have contributed, to this reduction include the increasing use of, and further investment in, video-conferencing facilities on all campuses and rationalisation of teaching programmes to single campus locations where possible.



Electric vehicle charging

## Vehicle Charging

E-car charging infrastructure installed at Coleraine and Magee campuses to provide another sustainable form of transport to campus for staff, students and visitors. Pure electric vehicles use no petrol and no diesel and therefore have no tail pipe CO<sup>2</sup> (carbon dioxide) emissions.

## Business Air Travel

During 2017/18, there were 7538 flights taken by University representatives with Carbon Emissions of 1,668 tonnes. Close monitoring of business travel by air is required as over the coming years, it is possible that there will be an increase in travel due to overseas placements and international recruitment and teaching activity.

*Environmental  
Impact*

### Progress against our environmental targets:

Policy Commitment	Baseline Year	Baseline	Target %	Target Year	Target	2017/18 Performance
Business Car Travel Miles	2009/10	2,258,754	▼25	2019/20	1,694,066	1,573,115
Air Travel Carbon Emission Tonnes	2013	1,370	▼20	2020/21	1,096	1,668



# SUSTAINABLE PROCUREMENT

## Procurement Office

By utilising the UK Government's Sustainable Procurement Flexible Framework, the Procurement Office has achieved and maintained ISO14001, the internationally recognised environmental management system standard.

Sustainable procurement aligns to the civic contribution priority within the Five & Fifty Strategic Plan. In particular engaging with our local supply chain to contribute towards the social and economic prosperity of our society. Social responsibility is one of the Procurement goals, and within it is a commitment to responsible processes.

We have embedded this into our procurement procedures by ensuring that a Sustainability Impact Analysis (SIA) is carried out for all major expenditure. SIA identifies the environmental, social and economic impacts associated with any contract, considering both positive and negative impacts.



Green catering services – Compostable cups

## Civic Contribution

### Sustainability in our Supply Chain

We want our suppliers to understand our ambitions to be a socially responsible university so that our expenditure activity reflects our values. We also want to support and develop our suppliers to minimise risk in our supply chain at the same time as demonstrating the positive contributions they can help us to make.

We utilise a Supplier Engagement Tool to help our suppliers create their own sustainability action plan and as a means for promoting sustainability throughout the university's extensive supply chain. The tool enables suppliers to create a simple and bespoke sustainability action plan for their business, which focuses on issues specific to the individual organisation.

All Ulster University suppliers have been encouraged to sign up to this new tool as a way of helping them to improve their sustainable and corporate responsibility activity. As they do so, we can demonstrate and monitor the collective activity of all of our suppliers and celebrate progress. The tool is free for suppliers to use and is used in collaboration with other universities and Higher Education organisations.

As an example of sustainable procurement in practice and in an effort to reduce environmental impact the university's main catering service provider, Mount Charles, has introduced non-plastic and compostable cups at all their campus catering outlets. Customers can now purchase a reusable 'Keep Cup', made from bamboo fibre or a standard disposable cup, which is fully compostable.

# Civic Contribution

The university's Facilities Services provider, Noonans, has introduced a toxic free alternative to chemical cleaners. The Stabiliser Aqueous Ozone system infuses cold tap water with ozone to provide a cleaning solution, which kills viruses and bacteria including E.coli, Salmonella and MRSA. This has significantly reduced the amount of cleaning chemicals used to keep our buildings clean and residual chemical wastewater.

Purchase of multi-functional devices to replace desktop printers



## Progress against our environmental targets:

Policy Commitment	Baseline Year	Baseline	Target Year	Target	2017/18 Performance
Sustainable Procurement	2015/16	Level 1 Flexible Framework	2018/19	Level 4 Flexible Framework	Level 3 Flexible Framework



# EDUCATION FOR SUSTAINABLE DEVELOPMENT

Graduates need to be equipped to tackle the challenges of the world’s most pressing environmental issues relating to climate change, resource depletion, water scarcity and land, water and air pollution.

Ulster University has endorsed the establishment of an Education for Sustainable Development (ESD) Working Group in order to encourage all our students to develop an awareness and understanding of sustainability, to transform their behaviour and take action for sustainable development.

The ESD working group has committed to implementing an ESD project on a phased approach:

## PHASE 1: Benchmarking

The aim of Phase 1 of the project is to benchmark awareness and understanding of the concept of sustainability among staff and students, and to gauge the current extent of ESD related themes evident in curricula at Ulster, as documented in the institutional Curriculum Management System (CMS).

## PHASE 2: Curriculum Development

Phase 2 of the project will explore opportunities and approaches for the explicit development of ESD in the curriculum across the institution. Furthermore, the findings of the benchmarking exercise will inform the institution-wide identification, sharing and development of best practice around ESD in the curriculum.

The project will have four particular strands of interest, namely:

1. Awareness and understanding of sustainability among students and staff.
2. Degree of existence of sustainability related themes as documented in CMS.
3. Identify and publicise existing ESD exemplars.
4. Develop and embed ESD in the curriculum via the Integrated Curriculum Design Framework and revalidation.

## Progress against our environmental targets:

## Civic Contribution

Policy Commitment	Baseline Year	Target Year	Target	2017/18 Performance
ESD Exemplars	2017/18	2019/20	Staff call for existing ESD exemplars by March 2019	ESD Working Group Formed
Benchmarking	2017/18	2019/20	Staff and student awareness surveys and analysis by June 2019	
Curriculum Development	2017/18	2019/20	Exploration and benchmarking of CMS for ESD related curriculum by April 2020	
Review	2017/18	2019/20	ESD Project report and preparation for possible launch event/conference by end of June 2020	

# SUSTAINABILITY ENGAGEMENT

Ulster  
University  
2016-17  
Gold  
NIBEC

Presentation of Green Impact award



## Green Impact

The Green Impact environmental engagement programme launched at Ulster in 2014/15. It involves staff and students designated as Environmental Champions in implementing improvement actions within their Faculties, Schools and Departments.

Upon completion of actions and an online workbook, trained students carry out audits of performance. In addition to assessing and validating the university's performance, these audits also contribute towards the students' EDGE Awards (Engagement, Development and Graduate Employability).

Provosts presented the prestigious awards to Environmental Champions in June 2018 to recognise participation in the fourth year of the Green Impact programme. 14 academic, professional services and contract support staff across the university were successful in obtaining their Gold, Silver, Bronze and Working Towards Green Impact awards.

## ISO 14001 certification

Estates and Procurement Departments maintained certification to ISO 14001:2015 environmental management system following an external audit in June 2018.

The EMS gives a structured framework for managing and minimising the impact of operations on the environment. The new ISO 14001 standard places greater emphasis on how organisations integrate environmental performance into governance, management and operational processes.



Sustainability manager receives Environmental Award

## Award Submissions

The university obtained a Platinum (highest level) award in the 2018 Business in the Community Arena Network NI Environmental Benchmarking survey. The survey annually assesses the environmental management, performance and assurance credentials of Northern Ireland organisations.



Cycle to Work Participants

## Environmental Impact



## Travel

The university held a Cycle to Work day in support of the annual nationwide campaign arranged in conjunction with Derry City and Strabane District Council, the Western Health and Social Care Trust and the Public Health Agency.

Team Translink journey planning sessions took place on all campuses during November 2017 and a car-sharing promotion took place in December 2017.

## Waste

Warp-it (Waste Action Reuse Portal), a furniture and equipment redistribution network rolled out in 2017/18 saving 17.9 tonnes carbon emissions and £33,865.

Communal office bins introduced on the Belfast; Coleraine and Magee campuses took place during autumn 2017. The initiative also rolled out at Jordanstown where fire safety and corridor space permitted.

A ResLife initiative within Student Accommodation donated 253 bags of clothes as part of the Pack for Good British Heart Foundation campaign, which reduced clothing waste by 2 tonnes, raised an estimated equivalent of £3542, and represented a 25% increase in donations compared to the previous year.



Tree planting with pupils from North Coast Integrated College

## Tree Planting

A tree-planting event took place at Coleraine campus with pupils from North Coast Integrated College during November 2017. Pupils had the opportunity to come to Ulster, to see the laboratories, the campus and take part in an Environmental Science workshop, followed by planting 345 tree saplings from the Woodland Trust.

The fully interactive environmental science workshop in the woodland of the campus allowed the students to learn through their participation by gathering information and processing it by solving problems and articulating what they have discovered.

### Progress against our environmental targets:

Policy Commitment	Baseline Year	Baseline	Target %	Target Year	Target	2017/18 Performance
Green Impact Award Bronze	2014/15	11	▲44	2019/20	25	8
Green Impact Award Silver	2014/15	2	▲40	2019/20	5	5

## Environmental Impact



Sustainability Manager with Green Impact Environmental Champion

# PROGRESS AGAINST OUR ENVIRONMENTAL TARGETS

## ENERGY

Exceeded our Scope 1 & 2 carbon emission reduction target of 29% by 2020/21.

## BUILDINGS

New construction projects built to BREEAM Excellent standard.

## TRANSPORT

Business car travel reduced 1,671 miles exceeding our 2019/20. Electric vehicle charge points installed on two campuses.

## WATER

Water use down by 79,373m<sup>3</sup> from 2010 baseline.

## WASTE

524 tonnes of routine commercial waste generated down 7.2% from last year.

## SUSTAINABLE PROCUREMENT

Investment in online Supplier Engagement Tool providing free bespoke sustainability action plans for our suppliers.

## BIODIVERSITY

Native tree planting on Coleraine campus and monitoring of red squirrels on Magee campus.

