



Environmental Sustainability Annual Report 2017





Welcome from Matthew Cragoe

As the chair of the University's Environmental Sustainability Committee, I'm particularly pleased to see the progress that has been made with regard to sustainability at the University of Lincoln during the 2016/17 academic year.

This year, a greater focus has been placed on energy management across our growing estate, and ways that we can minimise our carbon impact. With energy efficiency projects and a switch to 100% renewable electricity, we're working towards the ambitious target of reducing carbon emissions by 43% by 2020/21.

The launch of the UN Sustainable Development Goals in 2015 have cemented the need for cross-sector collaboration to help find solutions to these global issues. By offering Education for Sustainable Development opportunities to our students, and identifying the contribution we can make within our own estate and operations, we hope to be able to contribute towards the achievement of these goals and equip our students with the skills and knowledge to be responsible global citizens.

*Professor Matthew Cragoe
Pro Vice Chancellor / Head of College of Arts
Chair of the Environment and Sustainability Committee*

Key Achievements

- ✓ The University has achieved accreditation to the ISO50001 Energy Management System
- ✓ All electricity consumed across the University estate is now procured from renewable sources
- ✓ Go Green week ran in October 2016, with more sign-ups and attendees at events than ever before
- ✓ Student donations of clothes at the end of 16/17, totalled a donation equivalent to £14,000 for the British Heart Foundation

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Energy and Carbon Management

Energy Consumption during Academic Year 2016/17

Electricity (kWh)

12,364,314

Gas (kWh)

14,397,536

Fuel Oil (litres)

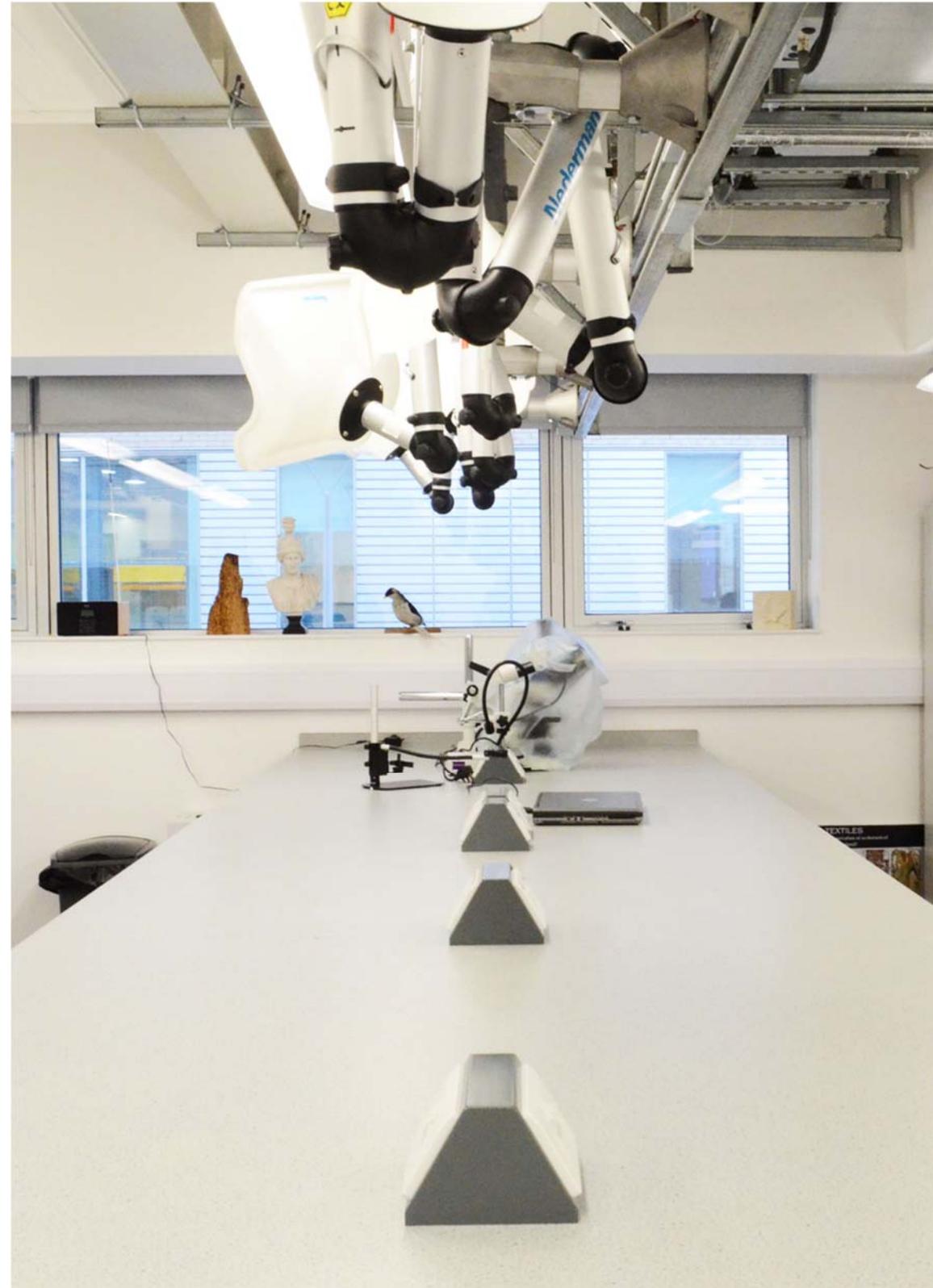
1,043,126

Total scope 1 & 2 carbon
emissions (tonnes CO²)

7,253

Energy consumed from
onsite generation
(photovoltaic) (kWh)

8,539



Energy Management System



The University is now accredited to the ISO 50001 Energy Management System. This international energy accreditation is recognition for its commitment to increasing energy efficiency and reducing energy waste. It has followed a programme of energy saving initiatives led by the Estates team in 2016/17, as well as the creation of a new Energy and Carbon Management Policy.

The Environmental Management System will be used to manage our energy usage, lower energy related costs and reduce our carbon impact.

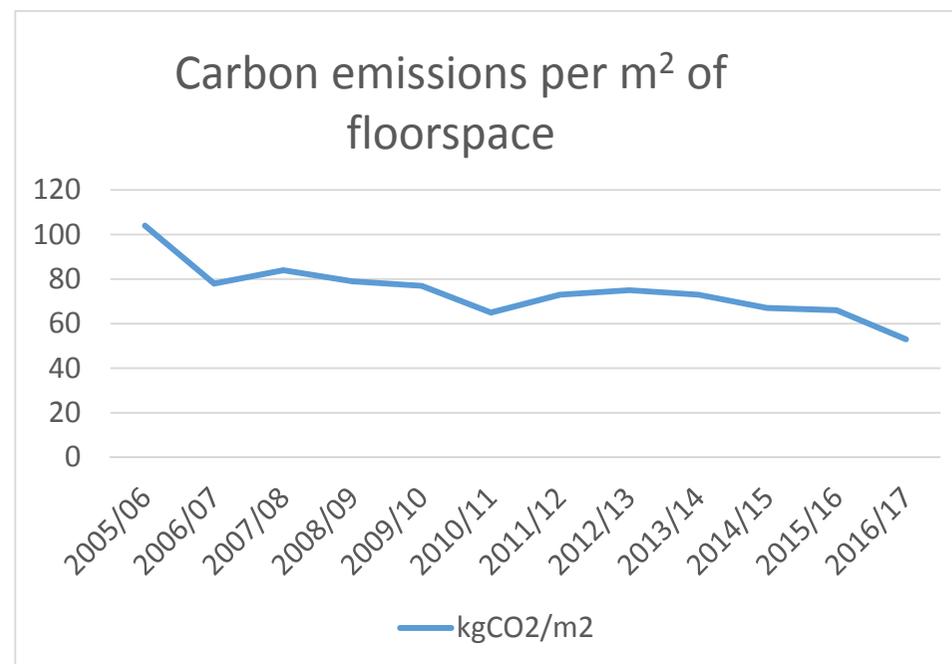
100% Renewable Energy

In addition to improving energy efficiency, the University has switched electricity supplier and now procures all electricity from renewable sources. All electricity used across the main Brayford Pool campus will come solely from renewable sources such as wind, water and solar power. This will significantly reduce the University's carbon footprint.

Carbon Reduction

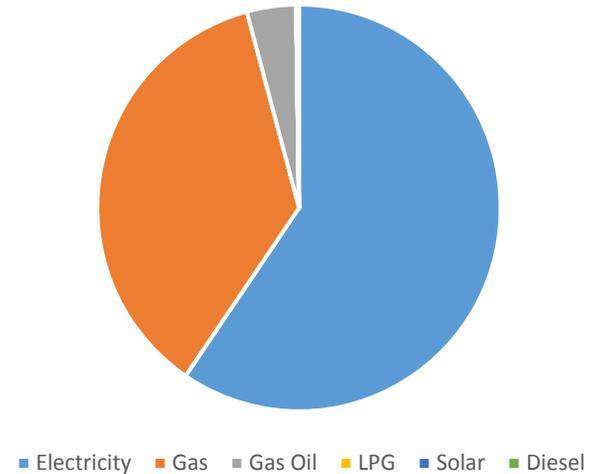
We continue to work towards our target to reduce our carbon by 43% by 2020/21, against a baseline year of 2005/06. This is in line with the HEFCE Carbon Reduction Targets and reflects Scope 1 and 2 emissions (i.e. carbon dioxide emissions due to direct fuel usage and electricity consumption).

The calculated carbon dioxide emissions in 2005/06 were 8,733 tonnes of carbon dioxide equivalent (tCO₂e). In 2016/17 emissions were 1,480 tCO₂e lower at 7,253 tCO₂e. This is an absolute reduction of 16.9%. This year the estate has dropped from 66 kgCO₂/m² (2015/16) to 53 kgCO₂/m².





Carbon emissions from energy use (kg CO₂e)



As the University Estate grows, we are constructing new buildings to accommodate for our growing student numbers. We aim to build energy efficient buildings, however increasing our floor space and number of building users is causing an increase in overall carbon emissions resulting from energy use.

At the end of 16/17, the University estate grew in internal area by 14,021 m² due to the addition of three large new buildings; Sarah Swift, Isaac Newton and Cygnet Wharf.

Energy Efficiency – Case Study

As part of our efforts to improve energy efficiency across the estate, Salix energy efficiency funding was used to install absence detection controls in two of our buildings on Brayford Campus. This reduces energy used by adjusting the heating or cooling when space is not in use.

Engagement

We have continued to encourage all staff and students to understand how they can personally make a contribution to energy reduction on campus.

As part of the ISO 50001 standard on Energy Management, we have implemented a bespoke sustainability training system for all staff to complete. 58 people registered for this training in 16/17.

The 2016 Christmas Switch Off Campaign

A Christmas Switch off Campaign was run in December 2016, to remind all staff to switch off electrical items before they head home for the Christmas holidays. All staff were provided with checklists of items to switch off before leaving offices before the Christmas break.

The campaign helped to save 30,000kWh of energy over the Christmas closure period. The amount of energy was enough to heat one of our large buildings, the David Chiddick Building, for two months!



What's next?

In line with the new Estates Strategy, the updated Energy Management Strategy will be launched in 2018, setting out our future plans to reduce energy consumption across the estate.

We will be maintaining and improving our Energy Management System for our re-audit in Autumn 2018.

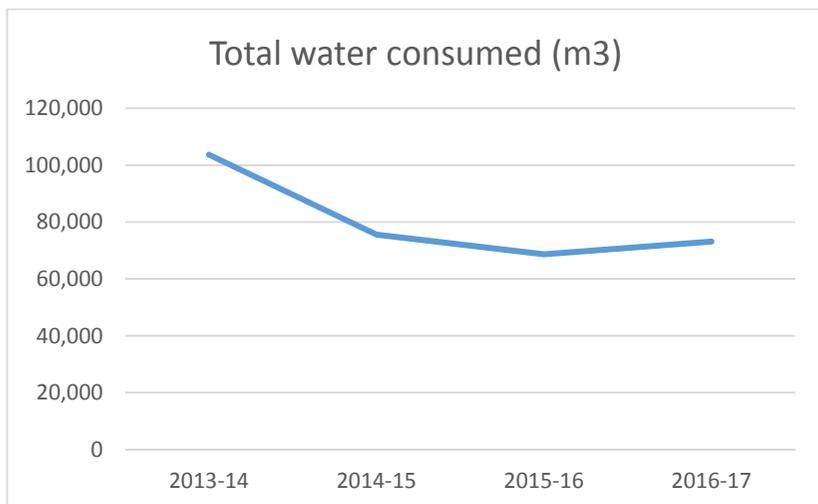
We will continue to engage staff and students in 'switch off' campaigns, during periods of University closure

We will continue to invest in energy efficiency initiatives across the estate, including the replacement of air compressors and additional heating controls.

Water Resources

Water Consumption

In 2016/17, the total water consumption for the University was 73,139 m³, a slight increase from 68,670 m³ in 15/16. This is due to the increasing internal area our University Estate, and therefore increased water usage. We are ensuring that data collection remains accurate so that leaks and peaks in usage are identified and addressed.



What's next?

We are in the process of replacing a number of water meters across our estate. This will provide us with more accurate data to target specific areas of high usage.



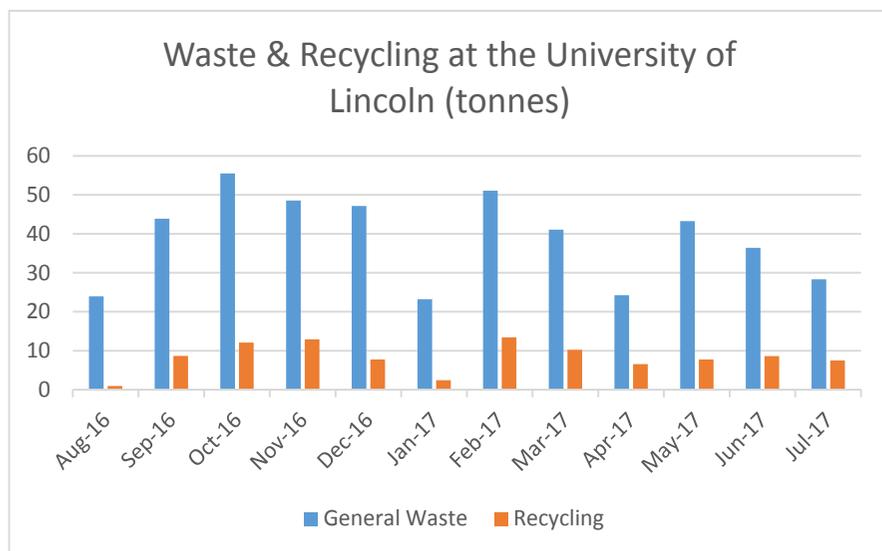
Waste Management

The University started a new waste contract with Veolia at the start of the 16/17 academic year. Data on the weight of waste collected is now provided for both general waste and recycling, meaning an improved ability to use this data to improve communications on recycling.

What happens to our waste?

Both the general waste and recycling is taken to Materials Recovery Facilities at either Caythorpe or Barkston. The waste is then mechanically sorted into various material streams for recycling. Any waste that cannot be recycled is used to make Solid Recovered Fuel (SRF), which can be burnt in an Energy from Waste facility, minimising the amount of waste from the University that is sent to landfill.

Waste Production



A total of 565.6 tonnes of waste (residential and non-residential) was produced across the University Estate in 2016/17. Of this, 17.5% was recycled.

Engagement

Case Study – Raising awareness of recycling with Every Can Counts

As part of our aim to increase recycling across the Brayford Pool campus, the University has partnered up with recycling programme provider Every Can Counts. Bins for aluminium cans have been installed in over 15 buildings, to provide students with the opportunity to recycle their cans on the go and receive education about the importance of recycling.



We hope to build on this campaign during 17/18, through further engagement events run in partnership with Every Can Counts.

Case Study – Pack for Good

In June 2016, the University joined the Pack for Good Campaign, with one student residence building hosting a large donation box in its foyer area. Initial collections in summer 2017 totalled 1,031 bags of donated items. This has an estimated value to the British Heart Foundation of £14,000, and the equivalent of 8.2 tonnes of items diverted from the waste stream.

What's next?

We're working with teams from across the University to embed the waste hierarchy of Reduce, Reuse and Recycle, into day-to-day activity.

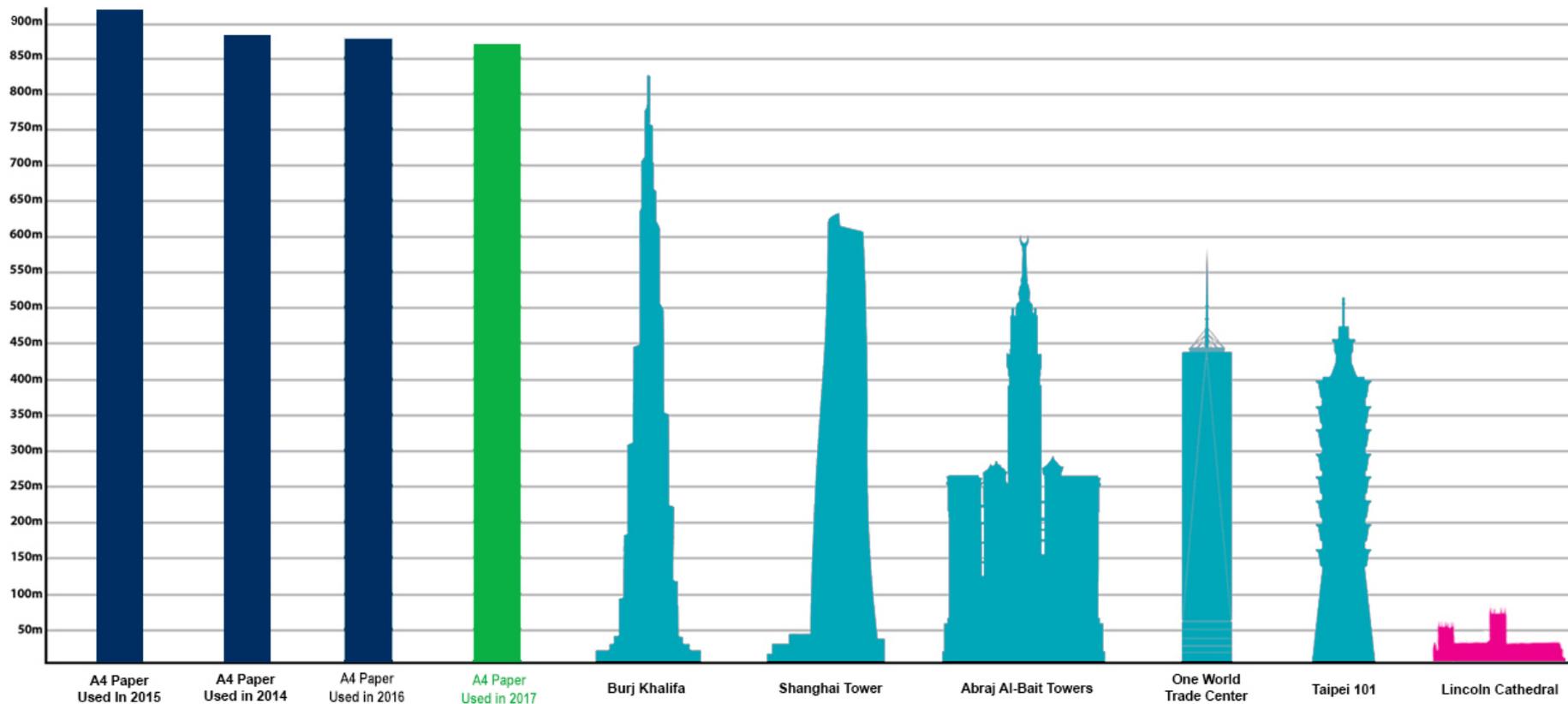
We will increase the number of clothing donation points across campus, based on student suggestions made via the Student Union.

Our first priority is to reduce the amount of waste that is being produced, through initiatives such as print reduction programmes.

A4 Paper Consumption on Campus

We have seen a steady reduction in the amount of A4 paper used by the University of Lincoln over the past 3 years, which is more substantial if you compare these figures to the rising student population, for each academic year, on campus:

Graph shows the height of A4 paper used each year when stacked up as a tower, compared to the tallest buildings in the world.



Sustainable Transport

Staff and Student Travel Surveys – 2017

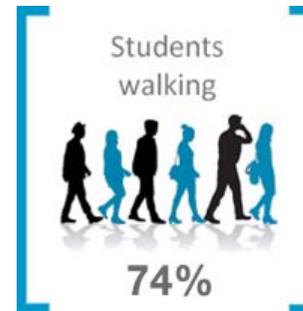
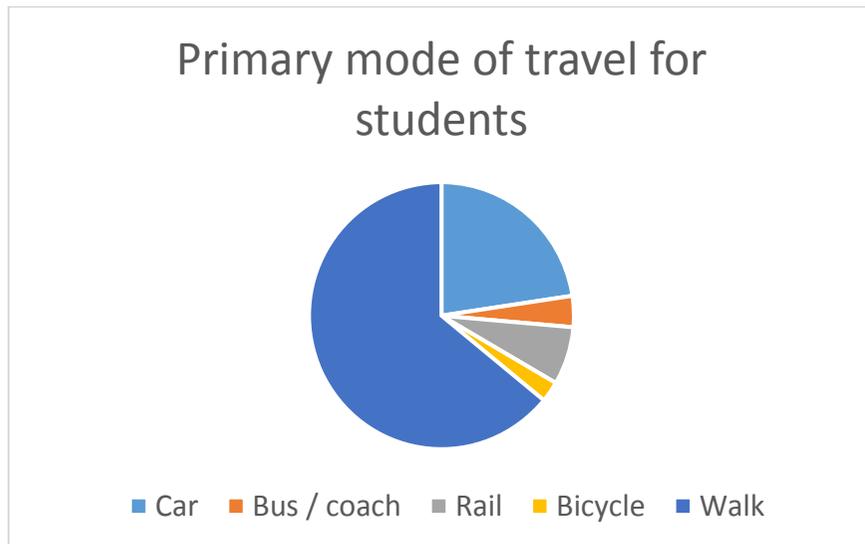
In 2017, we ran our biennial travel survey, for both staff and students. This provided us with valuable information about travel patterns, to inform our sustainable travel plan.

The University continues to perform well compared to the rest of the sector for students commuting by sustainable methods. The high pedestrian rate is due to the compact nature of Lincoln City Centre and the local situation of the main student accommodation.

Key Statistics



There are 280 cycle parking spaces at Brayford Campus

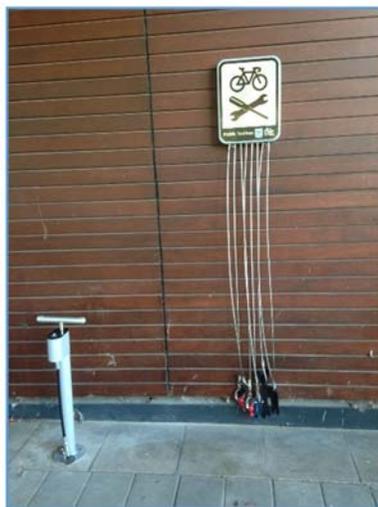


Engagement

To encourage greater use of sustainable transport on campus, tools and cycle pumps have been installed near cycle compounds for staff and student use.

In September 2016, Dr. Bike delivered a drop-in workshop session outside Think Tank, fixing 16 staff bikes.

Access Lincoln also delivered an event in the Minerva atrium to promote Lift Share week during October 2016.



Sports Centre Bike Hire scheme – CycLin

The CycLin Bike Hire Scheme continues to operate from the Sports Centre and offers bike rental for months, terms, or a full academic year, which includes maintenance provided by Halfords. Click here for [current prices](#).



(Supported by Lincoln City FC players Paul Farman & Sam Habergham)

What's next?

Following the latest travel survey in October 2017, feedback will be analysed to inform future travel service provision at Brayford campus

The Sustainable Travel Plan will be updated and released in 2018

8 electric Vehicle charging points are being installed across Brayford campus, going live in January 2018

Biodiversity

Ongoing Projects

- During Bird Box Week, February 2017, the team worked with staff and students in the School of Life Sciences to build and put up bird boxes on the Brayford Campus.
- The JBL wildflower meadow continues to be managed by a group of volunteers from the School of Life Sciences.
- Brayford Pool & River Witham clean up initiatives. Working with RiverCare and the University of Lincoln Students Union we are able to continue to enhance the two habitats for swans and other birds.
- Bird feeding at Riseholme was introduced to support partridge populations during winter.
- We are working with the Internal Drainage Board (IDB) to support local flood defences with water management on our estate.
- In March 2017, the University Kitchen Garden was launched. For more information on this project, please refer to the Sustainable Food section later in this report.



Case Study - Bioblitz on Campus

On October 3rd 2016, naturalist and visiting professor at the University, Chris Packham supported the Brayford Campus Bioblitz.

The objective was to produce a snapshot of wildlife around the Campus. During the event a bird netting and ringing operation was set up to identify the varieties of bird species that visit the Campus. The bird ringing was conducted by members of the British Trust for Ornithology, who are licensed to undertake bird netting and ringing.

Nets were used to catch the birds, which were identified, weighed and measured before being ringed and then released. A total of 41 birds were identified, providing valuable research data and increasing student engagement with biodiversity on campus.

Case Study - Enhancing pond habitats

The restoration of balance ponds on our Brayford Campus has provided additional flood defence for the University and local communities. In 16/17, the ponds were dredged to improve water flow. Since then, biodiversity has improved, with numerous bird species spotted in the area, including Egrets.



What's next?

Pollinator strips planted at Riseholme, working in partnership with the Lincolnshire Wildlife Trust.



Field margin management research projects taking place at Riseholme.



Supporting the Campaign for the Farmed Environment, with a talk hosted in 2017 for growers, focused on hedgerow management.



Agro-forestry research project, concerning the ability of tree species to withstand climate change.



Flood attenuation research at Riseholme, managing streams to reduce flooding.

Environmental Engagement

Freshers Fayre

Freshers Fayre is an opportunity to engage with new students, introduce them to environmental issues on campus, and encourage them to sign up to newsletters and initiatives that happen throughout the year.

Go Green Week – Oct 17th – 21st 2016

Go Green Week is our annual period of sustainability engagement. This weeks' theme was to help staff and students kick-start their carbon footprint reduction journey. It was split into five themes:

- Meat Free Monday, supported by the Vegan and Vegetarian Society.
- Recycle Tuesday, an event to highlight what can and can't be recycled on campus.
- Community Wednesday, offering staff and students the opportunity to support RiverCare in removing litter from Brayford water. The Fashion and Design Society also held an Upcycling Workshop for students to get creative and re-use items that might otherwise have been thrown away.
- Energy Aware Thursday, providing information on how people can lower their energy usage and reduce their carbon footprint.
- Travel Friday, when Dr Bike, Access Lincoln and the local Community Police Officer attended an outdoor event to promote sustainable transport.

What's next?

A bigger and better Go Green Week. Encouraging more groups to be involved in Go Green week. Utilising the mailing list to enhance environmental issues on campus



Sustainable Food and Fairtrade

Fairtrade Status / Fairtrade Fortnight

The University of Lincoln is proud to be a Fairtrade University.

In February 2017, the University supported Fairtrade Fortnight, by hosting a variety of events to raise awareness and further promote why its staff and students should choose Fairtrade. It was hosted in collaboration with the Chaplaincy, Quad, Lincoln International Business School, the Student Union and the University Shop. We worked in partnership with a number of organisations including Traidfair and The Body Shop, to provide samples of the high quality goods available through Fairtrade practices that ensure communities and farmers get paid a fair wage for what they produce.

KeepCups

We sell KeepCups from Quad outlets across campus. In 2016/17, 332 cups were sold. This helped to save an estimated 2817 paper cups, reducing waste sent to landfill.

Since introducing KeepCups at the University, the use of almost 7000 paper cups has been avoided.



Edible Campus and Allotment Space

At the University of Lincoln we're striving to incorporate sustainable food within its structure. We have edible gardens throughout the campus, including apple trees and a vegetable patch, free drinking water available throughout the campus and we actively encourage our catering department to be more sustainable in their food procurement.

In March 2017, the Edible Kitchen Garden was established to provide space at the Brayford Campus for students to grow their own food. Raised beds have been constructed behind Witham House which are being used for vegetable planting. 19 staff and students came together to plant courgettes, carrots, potatoes, beetroot, onions, broad beans, parsnips, lettuce, spinach and garlic. 22 people signed up as volunteers to maintain this area.

The vegetables grown in these beds have been used to make soups for the Chaplaincy soup kitchen, creating meals for members of the University community to enjoy and share together.



Water Fountains

Drinking water is available for free in all our catering outlets and drinking water fountains are available throughout the campus.



Environmental Management System

Environment and Sustainability Committee

The Environmental Committee meets once a quarter to discuss environmental and energy issues within the university and, how they can be addressed and overcome.

Committee Members:

Chairperson: Prof Matthew Cragoe, Pro-Vice Chancellor, Head of College of Arts
Secretary: Helen Pillinger, Secretariat Officer
Rebecca Forster, Environment Manager
Dr Claire May, Senior Lecturer
Jane Kilby, Volunteering Manager
Grant Anderson, Head of Space Strategy, Planning and Sustainability
Roger Holloway, Head of Procurement
Tracey Turton, Energy & Environment Officer
Emma Hindley, Engagement Officer
Kudzai Muzangaza, SU Student President
Isobel Wright, Senior Lecturer
Student body representative – invited by the Environment Team

Investors in the Environment Green Award

In October 2016, the University was recertified to the Investors in the Environment standard, achieving the highest rating of Green Award for our Environmental Management Standard.

ISO14001 Accreditation Update

The University is continuing to develop the Environmental Management System to be audited against the ISO14001 standard. We hope to achieve accreditation in 2018/19, following membership to the EcoCampus programme, which will provide support specific to the Higher Education sector.

Future ambition

Our updated Environmental Sustainability strategy will be developed and launched in 2018, with a set of new targets and updated areas of focus to drive sustainability performance across the university.

Within this strategy, we will target four key areas of sustainability on campus, including waste management and travel.

We will use the LiFE framework to help drive our sustainability performance and set targets to work towards during 17/18.

Education for Sustainable Development

With the recent opening of the School of Geography, and future courses relating to ecology and conservation, we hope to use resources on our estate as a 'living lab', to assist with student research projects. Resources include the balance ponds at Charlotte Scott, and flood management at Brayford campus.

There are further opportunities to work with psychology students on behaviour change campaigns around recycling, and with architecture students on sustainable construction.

We hope to engage our students in sustainability and use their innovative ideas to improve projects and processes across the University.

