



Environmental Performance Report 2013-14





Lancaster University understands its responsibility to protect the environment. We are fully committed to reducing the impact of our operations whilst demonstrating best practice in sustainability, thereby encouraging others to do the same.

This report summarises the University's environmental performance in the year 2013-2014. During this time the University has implemented a range of exciting environmental projects, leading to major improvements in environmental performance. These developments have been made possible with the combined commitment of staff, students and other stakeholders. We are working together to significantly reduce our environmental impact whilst creating a sustainable campus.

Energy, Utility & Carbon Management

Implementation of Lancaster University's Carbon Management Plan (CMP) has delivered a 28% reduction in carbon emissions. The CMP, which sets out the University's carbon reduction strategy, details the projects which will help us to meet our carbon reduction target of 43% by 2020.

In the year 2013-14 Lancaster University's annual carbon emissions fell by 18% to 18,793tCO₂e.

Our target is to reduce carbon emissions by 43% by 2020.

The CMP has been reviewed and updated; the majority of projects in the original plan have now been successfully implemented.

Since the appointment of a new Energy Manager in 2013 an extensive range of energy saving projects have been identified and prioritised. Three major energy efficiency projects were implemented during 2013-14, which were funded from a £500k grant from the HEFCE Revolving Green Fund (RGF) 3.

Projects

- Replacement insulation for the district heating pipes in the spine duct.
- Installation of energy efficient lighting in LEC glasshouses.
- Installation of a thermal store in the energy centre to enable extended operation of the Combined Heat and Power (CHP) engine.

Energy & Carbon Performance

- Total annual electricity consumption reduced by 4% to 33,070MWh, compared to consumption of 34,381MWh in 2012-13.



- The new Combined Heat and Power engine (CHP) generated 9,030MWh of electricity in 2013-14 or 28% of the University's electricity. This is sufficient to supply approximately 2,000 houses for a year.
- The wind turbine generated 5,042MWh of electricity during its first full year of operations in 2013-14, sufficient to supply over 1,000 houses for a year.
- The University generated 43% of its own electricity from the wind turbine and CHP.
- The major reduction in carbon emissions has resulted in the University having to pay significantly less tax for its carbon emissions under the Carbon Reduction Commitment (CRC) emissions scheme. For 2013-14 CRC allowances cost the University £256,000, 18% lower than the previous year.
- Total annual gas consumption was reduced by 4%.
- The biomass boiler operated at higher efficiency in 2013-14, generating 15% of heat output from the energy centre. Woodchip for the boiler is sourced from Cam Forest in the Yorkshire Dales.
- The new energy saving staff PC power management system was trialled and roll out commenced in 2014.



Biomass Boiler fueled by woodchip



The CHP in the Energy Centre



Waste & Recycling

Lancaster University is committed to reducing waste by improving its reuse and recycling rates. This year has seen the ongoing implementation of Lancaster University's 'Waste Strategy', which sets out a long term strategy for improving waste management and recycling.

Key projects and performance indicators have included:

- Waste segregated on campus for reuse or recycling increased to 30.5%
- Overall recycling rate for 2013-14 increased to 76%, up from 64% in 2012-13.
- Development of a new central waste compound commenced in summer 2014.
- Carbon emissions from waste and recycling continue to reduce and are now at 185tCO₂e, a reduction of 58% since 2006-07.



Fairtrade University

Lancaster University is proud of its 'Fairtrade University' status. We supported a range of Fairtrade Activities in 2013-14.

Fairtrade highlights of the year included:

- Successful Fairtrade Fortnight was held in February 2014; highlights included the Fairtrade banana eating competition and a fascinating talk on Fairtrade and Direct trade sourcing of coffee by Ian Steel of Atkinsons.
- Reaccreditation of Lancaster University 'Fairtrade Status' by the Fairtrade Foundation, recognising our efforts to promote and support provision of Fairtrade on campus. Lancaster University has held Fairtrade Status since 2007.





FAST FACTS FOR 2013-14

ON THE INCREASE

- **Wind Energy**

The wind turbine generated 15% of University electricity consumption in 2013-14, up from 13% in 2012-13.

- **Sustainable Heat**

The biomass boiler produced 15% of the heat output into the district heating system from the energy centre.

- **Recycling Rate**

Overall recycling rate up from 64% to 76%.

- **Waste Segregated for Reuse**

Waste segregated for reuse in Project Exodus increased from 12.5 tonnes to 45 tonnes.

- **Sustainable Food**

Lancaster is the first University to achieve two 'Food for Life Catering Mark' Gold awards for sustainable food provision.





ON THE DECREASE

- **Carbon Emissions**
Long term carbon emissions were reduced by 28% between 2005-06 and 2013-14.
- **Annual Carbon Emissions**
from gas and electricity were reduced by 18% compared with 2012-13.
- **Waste Carbon Emissions**
Carbon emissions from waste and recycling were reduced to 185tCO₂e in 2013-14 from 258tCO₂e in 2012-13.
- **Annual Gas and Electricity Consumption**
Was reduced by 4% in comparison with the previous year.



Sustainable Travel

Implementation of Lancaster University's Travel Plan continued in 2013-14, with a focus on a number of areas.

Key achievements have included:

- Development of a partnership agreement between the University, LUSU and Stagecoach to set out agreed service levels, operational requirements and give stability and transparency to ticket prices.
- Agreement of a five year plan for improving cycle parking.
- Delivery and operation of the first three electric vehicles operated by Facilities. Carbon emissions from these vehicles are anticipated to be only 25% of those they are replacing.
- Lancaster University won the prestigious 'Green Gown' award in the Carbon Reduction category for its Travel Plan. Implementation of which has resulted in carbon emissions from student and staff commuting falling by 24.5% or 2,500tCO₂e between 2005 and 2012.



Sustainable Procurement

In 2013-14 Procurement have been assessing the environmental impacts relating to procurement activities and, where possible, reducing these and the associated carbon emissions.

Key projects have included:

- Provision of business travel carbon emissions data for all University business travel activity.
- Implementation of projects in order to meet level 4 of the sustainable procurement 'Flexible Framework' requirements.



Sustainable Food

Lancaster University Food Operations has made sustainability a central element of its operations. There have been major changes to the University's food offering, with a renewed focus on high quality, sustainable food and local suppliers.

Key developments for 2013-14 have included:

- Achieving eight Soil Associations 'Food for Life' Catering Mark Standards in summer 2014, two gold, three silver and three bronze. These awards formally recognise the wide range of measures Lancaster University has taken to improve sustainability in the catering supply chain and offering.
- Working closely with Green Lancaster on the Edible Campus project to use site grown foods and teach students cooking skills.



Green Lancaster

Green Lancaster is a collaborative initiative between the University and Students' Union to encourage students and staff to live and work with sustainability in mind. Green Lancaster had a very successful 2013-14, running a wide range of student facing environmental volunteering projects and activities.



Key achievements over the year included:

- **Green Lancaster Week**, in March 2014, included a range of very successful sustainable food themed events, with over 450 students participating during the week.
- **Edible Campus** – over 1400 students and 200 staff have participated in Edible Campus events. Six sites were planted up over the year.
- **The Ecohub** growing area has been significantly developed during 2013-14, with polytunnels and raised beds installed and the pond and chicken run completed.
- **Bike Sales & Dr Bike** repair workshops ran successfully 3 or 4 times each term, offering cheap second hand bikes and free repairs for faulty bikes to encourage cycling.
- **Academic Partnerships** - Projects were completed with Geog 201 module in February 2014 and options for future curriculum partnerships have been explored.
- **Project Exodus**, organised by Green Lancaster, segregated an incredible 45 tonnes of material for reuse by local charities at the end of the summer term.



Sustainable Buildings & Projects

It has been another busy year for Lancaster University Facilities Projects, with over 20 major projects underway. Projects have primarily focused on sustainable building refurbishment, rather than new build.

We aim to achieve the highest levels of sustainability and subscribe to the BREEAM (Building Research Environmental Assessment Methodology) system.

Achievements during 2013-14 have included the following:

- The completion of the refurbishment of Bowland Tower, South and East in 2013, providing refurbished student accommodation which achieved BREEAM 'Very Good' grading for design and post construction.
- Construction started on the new Engineering Building and BLS/LEC teaching labs, refurbishment of the Library and redevelopment of Faraday for the new Chemistry Department .



Grounds and Landscape

Lancaster University is situated in a beautiful parkland and woodland landscape. The Grounds and Landscape team have worked exceptionally hard to keep the estate looking fantastic, whilst improving its biodiversity.

Key sustainability achievements in 2013-14 include:

- Securing a Green Flag award for Lancaster University Grounds for the third year running.
- Royal Horticultural Society 'Britain in Bloom – Its Your Neighbourhood' Award.
- Working with Green Lancaster volunteers on environmental volunteering and the Edible Campus projects.
- Reducing off-site waste disposal with the introduction of on-site chipping and composting.



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