



The University of  
**Nottingham**

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# Sustainability Report 2012/13

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 UoNSustainability

 @Uonsustain

## **Waste and Recycling**

In 2012/13 the University generated 3,520 tonnes of waste from Campuses and Halls of Residence, with less than 8 % of this being sent to landfill. This year saw further expansion of food waste collection which has enabled some of the previously classed as 'general waste' to go through a material recycling facility resulting in further recovery of materials.

### **Key achievements in 2012/13**

- Our computer recycling scheme run with Stone computers resulted in more than 18 tonnes of IT equipment (2,000 pieces of equipment) being returned to them with more than 90% of it being reused.
- Working with the Vineyard church we redistributed **more than 1,000** used duvets to members of the community.
- When students move out of halls at the end of term, many leave items behind to be cleared up, This year, rather than leave behind or throw away unwanted belongings we joined forces with the **British Heart Foundation** and set up donation points in student halls. A total of 165 bags were collected from halls over a three week period.
- The expansion of food waste collection has resulted in **22 tonnes of food waste** being collected and through a process of anaerobic digestion turned into energy.
- New recycling bins have been installed in key areas, including building foyers and catering outlets – this has helped to increase our onsite recycling rate to an all-time high of **54%**.



Indicator	2011/12	2012/13
Waste mass generated per m <sup>2</sup>	6.2kg	5.6 kg
Proportion of waste recycled on site	45 %	54 %

## **Carbon Management**

Carbon reduction continues to be one of our priority work areas with significant investment of resource into this over the last year. Across the UK there has been an increase in energy consumption due to unusually cold weather. Our absolute carbon emissions reported in our Carbon Management Plan reduced by some 4,581 tonnes, a third consecutive year of absolute reductions. This increased reduction was aided by new emission conversion factors introduced by DEFRA in 2013.

### **Key achievements in 2012/13**

- The University secured £142K from **HEFCE's Revolving Green Fund** to invest in specific carbon saving projects.
- **Energy costs**, including taxes, rose 16% to £11.8 million in 2012/13, or £13.7 million including taxes.
- **Energy consumption** rose by 7.3%, largely as a result of increased gas usage caused by the unusually cold weather. Our energy consumption is now 1.6% lower than 2005/6 if new buildings are excluded.
- Our **on-site renewables** generated more than 400,000 kWh of energy.
- £2.8 million was invested explicitly in **carbon reduction projects**, generating predicted savings of 1,522 tonnes CO<sub>2</sub> and £220k per year. Projects have included:
  - Boiler and Chiller plant replacement
  - Lighting control projects to reduce the amount of lights left on when spaces are unattended
  - Continuation of a program of insulation projects including roof, cavity and plant rooms.



- Overall emissions of **carbon dioxide** from all energy sources were down by 5.6%, aided by the introduction of new emission factors this year.
- **Water usage** decreased by 2% to 823,703 cubic metres; our consumption peaked at 925,520 cubic metres per annum back in 2004/5.
- The planting of the **Diamond Woodland** at Sutton Bonington will offset over 10,000 tonnes of carbon over its lifetime.

## KPIs

Indicator	2011/12	2012/13
Total Energy Consumption pa	199 GWh	214 GWh
Energy consumption per m <sup>2</sup>	330 kWh	342 kWh
Energy emissions per m <sup>2</sup>	111 kg CO <sub>2</sub>	101 kg CO <sub>2</sub>
Water consumption per m <sup>2</sup>	1.38 m <sup>3</sup>	1.31 m <sup>3</sup>
Total carbon emissions from energy	65,901 t CO <sub>2</sub>	61,320 t CO <sub>2</sub>

## Information Services

### Key achievements in 2012/13

- Since 1<sup>st</sup> October 2012 the University adopted a single standard office paper supplied by Xerox, this new paper is made from **80% recycled** post-consumer waste, de-inked and bleached in a Totally Chlorine Free (TCF) process to achieve a high white recycled paper, with the remaining 20% content made up from Forest Stewardship Council (FSC) sourced virgin paper.
- The roll-out of the Sustainable Print Service continues at pace, one feature of the new service is that jobs are purged from the system after a period of time if they are not collected, so far **1.3 million sheets and 17,278KG CO<sub>2</sub> have been saved** in 2013 as a result of requiring end-users to release their print. The duplex facility has increased the University's ratio of duplex printing from 11% to 76% resulting in approximately **5 million less sheets of paper used** in 2013
- Since the start of the Sustainable Print Service **1,107 desktop printers** have so far been removed.

### KPIs

Indicator	2011/12	2012/13
Members of the University adopting green practice in everyday use of IT	97%	97%
Successful server-hosting service and reduction localised rooms	72	72

## **Travel and Transport**

Over recent years the University has made significant progress in increasing transport choice for staff and students and year on year we have seen increasing investment in facilities and services in this area.

### **Key achievements in 2012/13**

- Continued investment in facilities for people who **travel to the University by bike and on foot**, including:
  - new secure cycle storage facilities at jubilee campus
  - new shower facilities
  - Installation of Fix it stands on all campuses
  - Continued investment in covering cycle parking spaces
- Building on the success of the U cycle student bike hire scheme the University purchased an **additional 100** bikes to bring the cycle hire fleet to over 300.

- On an average day **more than 2,300 bikes** can be found at the University



- Our free intercampus hopper bus use continues to grow with a **16% increase** in passenger journeys compared to 2011/12.

- More than 510 staff members benefited from the **discount travel schemes** that the University operates through payroll deduction.
- Building on the establishment of a hydrogen refuelling station at Jubilee the Faculty of Engineering purchased a **hydrogen van**.

- Joint working with local bus operators has continued to increase **bus patronage**. 2012 saw the introduction of the No 34 service all year round, with a 5 minute frequency during term time.
- More than 480 members of the University Community access our free Dr Bike Service.

### KPIs

Indicator	2011/12	2012/13
No of cycle parking spaces	4,544	4,592
Number of staff taking part in Cyclescheme's	128	195
Bus patronage on hopper bus services (number of trips)	1,060,287	1,173,800

## **Procurement**

Our central procurement team continue to champion sustainability with our main suppliers and ensure that it is embedded within our major contracts, which have included our main contracts.

### **Key achievements in 2011/12**

- To allow end-users to make **informed purchasing decisions** regarding computers, the manufactures environmental reports have been added to the suppliers portal (Jigsaw24) and the IS Workspace.
- Through our framework contracts for laboratory supplies more than:
  - 582 kg of cardboard packaging has been returned and reused
  - 2150 kg of plastics have been returned and recycled
  - 8,300 Winchester bottles have been collected, rewashed and reused
  - 240 polystyrene boxes have been collected and reused
  - 75kg of Wet Ice packs have been collected and reused
- 8 trees have been planted on behalf of the University at Pengu Wood, Botany Bay, Leicestershire in partnership with the Woodland Trust, who also receive donations from the suppliers on behalf of the University for polystyrene boxes collected.
- The final stage of the Agresso purchasing system transforms the way things are bought and paid for. It has introduced **e-requisitioning via web** and integrates Agresso and SciQuest. This means it takes out the paper trails and makes everything electronic,

Indicator	2011/12	2012/2013
Progression on the Government's sustainable Procurement flexible framework	Level one	Level one

## **Teaching and learning**

The major achievement this year has been to successfully create and run the 'NOOC' as this has provided a vehicle for the ESD agenda to be rolled out to UNNC and UNMC too. The 2 student-led events/networks also indicate the way in which the ESD agenda is now being taken up by the student community. Academic year 2012-3 saw Sustainability 'come of age' as a concern to all stakeholders at the University.

### **Key Achievements in 2012/13:**

- **Highly Commended** at the Green Gown Awards in the category of 'Learning and Skills' for the work of the Grand Challenge on Education for Sustainable Development.
- Launch of the **Sustainability Research Network (SRN)**, set up by a group of PhD students, to bring together postgraduate and postdoctoral researchers from different disciplines across the University of Nottingham (UK, UNNC and UNMC), who are working on sustainability focussed projects.
- First 'Nottingham Open Online Course' (NOOC) ran, attracting 850 enrolments from students and staff across the 3 campuses: UoN UK, UNNC, UNMC. The course, **'Perspectives on Sustainability'**, engaged participants in debates and activities including waste audits, a SWOT analysis of the University's Environmental Strategy, and Poster Presentations. Over 120 students achieved credit towards the Nottingham Advantage Award or 'Certificates of Achievement' for completing at least one of the assessed activities within the course.
- UNMC hosted a student-led initiative: the **Sustainable Development Conference**. Conference sessions explored marine sustainability, alternative energy, and agriculture. (students organising the event produced a promotional video which captures the views of UNMC students and staff on sustainability:  
<http://www.youtube.com/watch?v=BtH4-XOxDs>)

### **KPIs**

Indicator	2011/12	2012/13
Number of courses related to environment and sustainability	230	478

## **Research**

The University has established a number of Research Priority Groups to grow and deliver an influential amount of world-class research and knowledge transfer addressing global issues and challenges. Priority Groups include: Energy; Global Food Security; Integrating Global Society; Science, Technology and Society.

### **Key achievements in 2012/13:**

The University enjoys a world leading research programme across the following themes:

- carbon abatement in clean fossil energy
- energy vectors and storage
- renewable energy
- low-energy buildings
- electrical grids, environment, policy and society

### KPIs

Indicator	2011/12	2012/13
Research funding for environmental / energy / sustainability related research	£19.4m	£21.8m

## Landscape

Our award winning landscape is very much a part of the Nottingham experience. We continually work to improve the attractiveness and bio-diversity of our campuses, to ensure that our practices are exemplary and they reflect the international nature of our University.



### **Key achievements in 2012/13**

- The major achievement of 2013 was the attainment of a **first Green Flag for Jubilee Campus** recognising the sustainable environmental achievements on this campus and its availability as a community resource.
- University Park campus was awarded a twelfth consecutive **Green Flag award** yet again acknowledging it is a well-managed, high-quality green space, open to the community, and with sustainability integrated into our operations.
- **Biodiversity**, sustainability and carbon reduction have all been massively enhanced by the creation of the **Diamond Jubilee Woods at Sutton Bonington** transforming 26 hectares, of what was formerly arable land, into native woodland habitats. The Willow whips planted on Soar Lane have already exceeded 2metres whilst an oak sapling on Pasture Lane has already provided its first crop of acorns. Wild flower meadow mixes have been sown and been extremely successful. The University is currently looking into the possibility of designating part of the woodland areas a Coronation Meadow



- **Additional 6.0 hectare of Meadow Grassland** created predominantly at Diamond Jubilee Woods with some smaller additional areas at Jubilee Campus as part of our on-going BREEAM accreditations.
- The increased use of mulches, both bark and gravels & stone chippings have enabled a reduction in use of pesticides and whilst at this stage the differences are nominal the process is being incorporated into all new plantings as well as landscape renewals. Apart from the obvious reduction in chemicals the mulches also help to conserve

moisture reducing the need for irrigation. The now routine use of biological predators in the greenhouses have similarly enabled a reduction in pesticides usage

- An additional 3 hectares of land has been given from the School of Agriculture to Sport and Recreation as part of the overall development and **expansion of Sports facilities at Grove Farm.**
- Community events and activities have continued to be well supported by the Friends group and there is scope for the expansion of these activities onto the Sutton Bonington Campus and new Diamond Jubilee Woods.

### KPIs

Indicator	2011/12	2012/13
Awards	2012 Green Flag Award  2012 Nottingham in Bloom Garden Competition, 'Best Commercial Premises' Category - for University Park North and West Entrance displays and the new landscaping at the Djanogly Gallery.	2013 University Park Green Flag Award  2013 Jubilee Campus Green Flag Award  ???? Nottingham in Bloom Garden Competition, 'Best Commercial Premises' Category - for University Park North and West Entrance displays.
Numbers attending events	Picnic in the Park – 500  National Gardens Scheme Open Gardens – University Park – 450 Sutton Bonington - 170	Picnic in the Park – 400  National Gardens Scheme Open Gardens – University Park – 250 Sutton Bonington – 220 Community Tours - 200
Recycling of garden waste	1,050 tonnes	1,050 tonnes

## **Corporate governance**

The University continues to ensure that Sustainability is embedded within its teaching, research and operations. The current review of the Strategic plan will further enhance this and set a framework for sustainability until 2020.

### **Key achievements in 2012/13**

- The University was awarded the Time Higher Education Award for **Outstanding Contribution to Sustainable development**
- The University continues to be placed in the top two of the **UI Green Metric World University Ranking** carried out by the University of Indonesia.
- The University was awarded a 2.1 in the annual **People and Planet Green League**.
- Retained **Bronze level** in the EcoCampus programme to develop an environmental management system

### **KPIs**

Indicator	2011/12	2012/13
Eco Campus Environmental management System Award	Bronze	Bronze