



Vice-Chancellor's introduction

The University is committed to minimising the environmental impacts of its activities and we are keen to share our progress with you. This is the University's first stand-alone Environmental Sustainability Report, compiled by the University's Sustainability Team. It is our starting point, and we plan to report annually from now on. The information in the report covers our performance in the areas of **carbon emissions, business travel emissions, water consumption, sustainable buildings, waste, biodiversity and sustainable procurement**. In addition, the report highlights the diverse sustainability initiatives in progress across our estate and looks ahead to those planned for 2012 onwards.

Currently we don't have targets in place for every area in the report, however we are working to address this as we gather more accurate baseline data.

The report highlights the diverse sustainability initiatives in progress across our estate

We hope this report will help to communicate the environmental sustainability message across the University to staff, students, visitors and stakeholders and encourage people to do their bit to help the University continually improve its environmental performance.

From providing videoconferencing facilities to funding departmental energy saving projects, many of the sustainability

initiatives you will find profiled in this report have additional social and economic benefits. For example, the University's in-house Swap Shop saves departments and colleges thousands of pounds a year from not having to buy new furniture and stationery.

As you read the report, you may come up with your own ideas about how we can do things differently. We encourage you to share your thoughts and any feedback you may have on this report using the Sustainability Team contact details on the back page.

Thank you to everyone who contributed to this report. Together we can help transform the University into an example of sustainability best practice.



Professor Andrew Hamilton FRS

"The University of Oxford's role as a beacon of knowledge is recognized internationally, and we have a duty to future generations to ensure that it continues its work of illumination long after we have gone. In order to ensure that it continues its outstanding work sustainably, we need to consider how its operations consume the resources of the world, and how it can contribute to replenishing and conserving them. I welcome this first comprehensive report on the environmental sustainability of the University's operations, and hope it will serve as a benchmark for our future efforts to improve our performance."

**Professor William James, Chair,
Sustainability Steering Group**

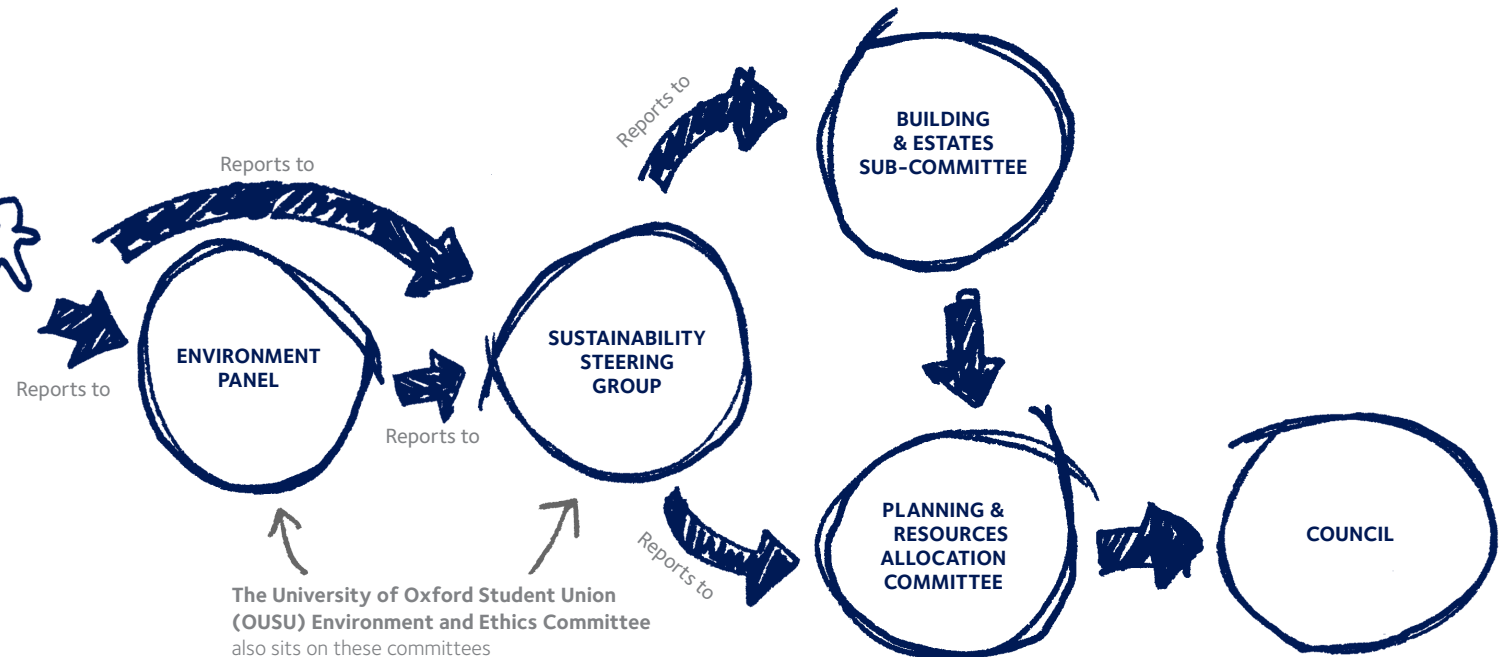


How does the University make decisions about sustainability?

IT STARTS HERE



The **SUSTAINABILITY TEAM** is made up of six officers working specifically in sustainability-related areas



The University Council approved the University's Environmental Sustainability Policy in 2008 and will review it again in 2012. The policy is driven through several strategies including the **Carbon Management Strategy**, the **Waste Management Strategy**, the **Water Management Strategy** and the **Travel Plan**.

There isn't an overarching Sustainability Strategy that sets out objectives and targets – however there are targets for carbon, water and travel. From 2012 onwards the University will aim to set targets for all the areas in the Environmental Sustainability Policy.

You can see the University's Environmental Sustainability Policy here:
www.admin.ox.ac.uk/estates/environment



Carbon reduction

HOW DID WE DO IN 2010/11?

The University increased its absolute buildings-related emissions by 2.2% (from 79,612tCO₂ in 2009/10 to 81,362tCO₂ in 2010/11). However, emissions per square metre floor space fell by 2.9%. The emissions increase was due to the

29,500m² expansion of the University estate (Earth Sciences building, Swindon Book Store and Oxford Molecular Pathology Institute). Total building-related energy costs were £12,040,000.

We set carbon reduction targets

In 2011 the University agreed the following carbon reduction targets:

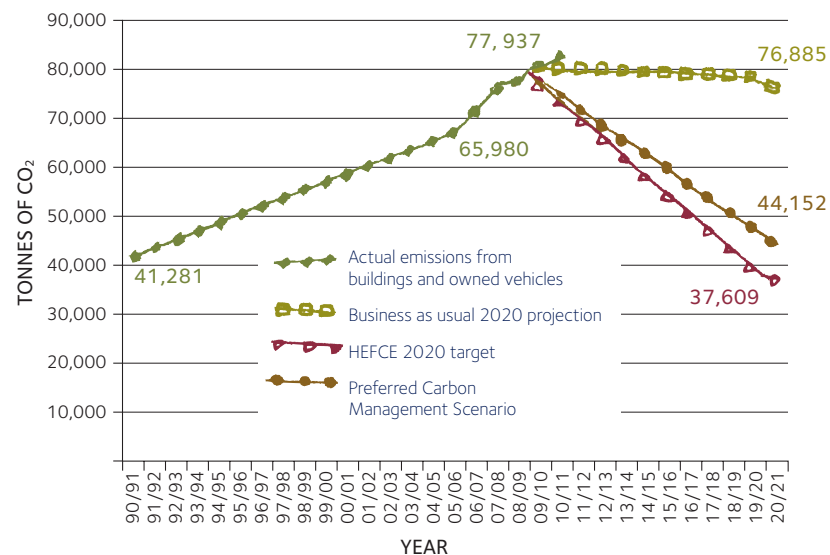
- reduce carbon emissions by 11% below the 2005/6 baseline by 2015/16
- reduce carbon emissions by 33% below the 2005/6 baseline by 2020/21

We created an online Energy Toolkit

The Energy Toolkit contains top tips for staff and students on how to use energy more efficiently:

www.ox.ac.uk/staff/news/energy_toolkit.html

Graph showing how much the University needs to reduce its emissions by 2020:



We published a Carbon Management Strategy

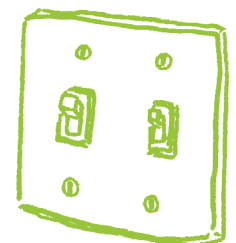
Based on current trends, University emissions are likely to reach 76,885tCO₂ by 2020. To meet our targets, we must reduce emissions to 58,722tCO₂ by 2015/16 and 44,152tCO₂ by 2020/21. The Carbon Management Strategy outlines how the University can meet its targets by using energy more efficiently, investing in energy saving equipment and energy efficient buildings.

We produced our own electricity

The Biochemistry building's solar photovoltaic installation generated 5,700 kWh of electricity compared to 3,500 kWh last year – an increase of 63%. FAI Farms – tenants on the University owned Wytham Estate – installed photovoltaics on the farm's roofs to generate renewable electricity.

WHAT WILL WE DO IN 2012?

In 2012 the University will finalise its carbon reduction plan and continue to reduce carbon as part of its 10:10 Campaign.





Water consumption

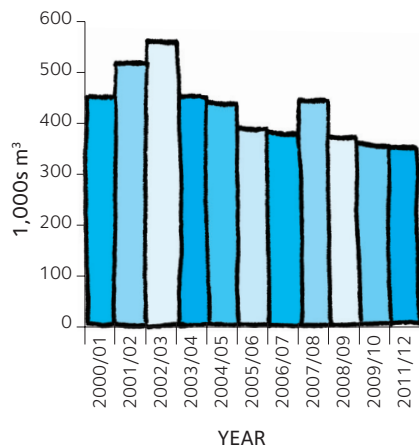
HOW DID WE DO IN 2010/11?

In 2010/11 the University consumed 349,490m³ water compared to 347,364m³ in 2009/10 – an increase of 0.6%.

We set a water reduction target

The University set a water target to reduce water by 11% (38,210m³) by 2015 compared to 2009/10 levels (347,364m³). This means the maximum amount of water that the University can consume in 2015 is 309,154m³. While this is a challenging target, the University's water consumption has been slowly decreasing over the last decade.

Graph showing University water consumption 2001-2011:



We published a Water Management Strategy

The University published a Water Management Strategy which provides a road map for reducing water consumption in the University: www.admin.ox.ac.uk/estates/environment/water

We installed rainwater harvesting in our buildings

The University installed rainwater harvesting systems in four locations, to flush WCs:

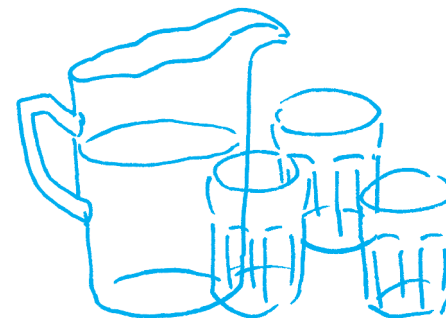
- Biochemistry building has rainwater capacity of 18m³ and used 176m³ (1.9% of total building's water use)
- Earth Sciences has rainwater capacity of 6m³ – no water data available
- Old Road Cancer Research Building has rainwater capacity of 18m³ and used 366m³ (2.6% of total water used)
- Oxford Molecular Pathology Institute has rainwater capacity of 16m³ – and used 100m³ of water

How much did we pay for our water?

In 2010/11 the University's total water costs were £601,173 compared to £592,886 in 2009/10 – an increase of 1.4%. The University pays over £1 per m³ water and a further £0.53 per m³ to treat waste water (a cubic metre is equivalent to 2,000 half litre bottles of mineral water). The cost of water will continue to rise due to water scarcity, maintenance and treatment, so we must use water more efficiently.

CASE STUDY

The Clarendon Physics Laboratory cut water consumption between 2006 and 2011 by expanding their process cooling system. A water audit showed their water consumption reduced 23,600,000 litres per year over a 5 year period (42%).



WHAT WILL WE DO IN 2012?

We'll measure and report our carbon (CO₂) emissions generated from water consumption, as required by HEFCE. In 2009/10 the University generated 367 tonnes of 'indirect' CO₂ from water consumption due to the abstraction, transportation and processing of water (water's carbon footprint is 1.05kg CO₂ per m³).

In 2012 the University will implement its Water Management Strategy and reduce water consumption:

- prioritise water efficiency in buildings that use lots of water
- increase rainwater recycling
- fit low flow taps and showers and WC water saving devices
- calibrate taps and showers for shorter run times
- fit smart meters on supplies to identify leaks
- rationalise the use of purified water and increase the prevention of limescale build-up



Travel

HOW DID WE DO IN 2010/11?

Carbon emissions from business flights

In 2010/11 the University's carbon emissions from business air travel increased by 13% (from 6,100 tCO₂ in 2009/10 to 6,981 tCO₂ in 2010/11 (accounting for 7% of the University's total carbon emissions).

Carbon emissions from fleet vehicles

In 2010/11, emissions from the University's fleet vehicles increased by 3.5% (from 398 tCO₂ in 2009/10, to 412 tCO₂ in 2010/11), due to the University increasing its vehicles from 111 to 115.

Travel target

Our travel target is to reduce the % of staff who usually travel to and from work by car from 23% to 18% by 2012.

We published a Business Travel Toolkit

To encourage our staff and students to reduce their travel-related carbon emissions we published an online Business Travel Toolkit with information on walking, cycling, public transport and car sharing in Oxfordshire:

www.admin.ox.ac.uk/estates/travel

We set up videoconferencing

The University set up a fully-serviced video and teleconferencing suite for staff and students at the Media Productions Unit.

We set up a Journeyshare scheme

The University teamed up with Journeyshare – the largest car share network in the UK to enable staff to car share, walk or cycle together in Oxfordshire, for free.

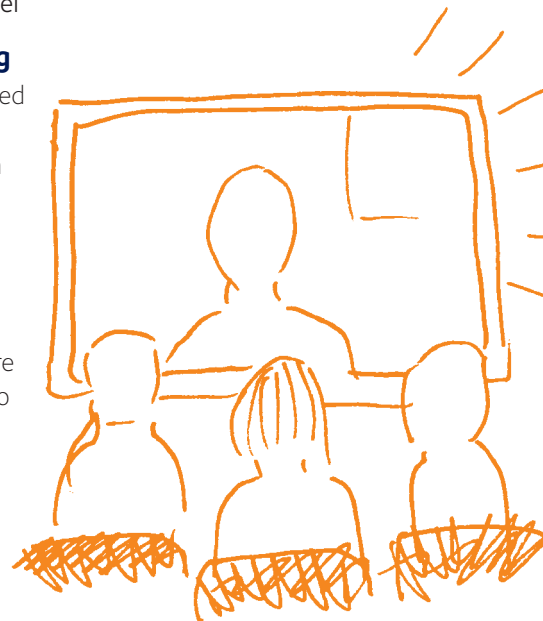
"I just want to pass on my sincere and heartfelt thanks to the Estates Directorate. I have really appreciated all the cycle-friendly perks that the University provides, such as the Mobile Mechanic, the Cycle Scheme and cycle safety initiatives."

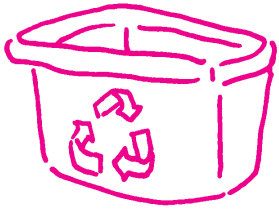
Research Midwife, National Perinatal Epidemiology Unit

WHAT WILL WE DO IN 2012?

In 2012 the University will improve its sustainable travel facilities for staff and students:

- set up a more efficient mobile cycle repair scheme
- improve cycle and pedestrian facilities
- run safe cycling workshops for staff and students
- provide staff training for video conferencing and web based online meeting services
- conduct a staff and student travel survey



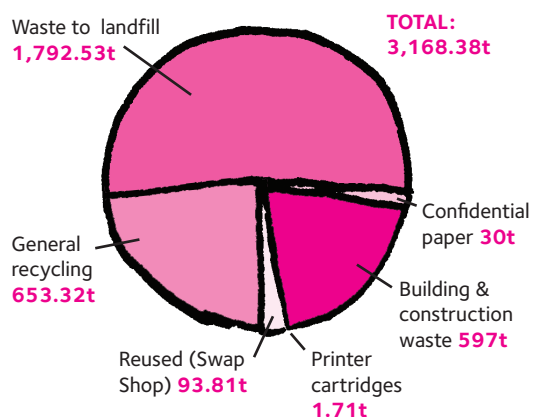


Waste, recycling and reuse

HOW DID WE DO IN 2010/11?

In 2010/11 the University's preferred waste contractors collected a total 3,168.38 tonnes of non-hazardous waste. Of this, 1,792.53t went to landfill and 653.32t was recycled, which included mixed recycling (543.87t); baled cardboard (59.53t); separate glass collections (29.12t) and separate food waste collections (20.8t). In addition to the general recycling, various unwanted materials were collected for reuse or recycling (outlined in the following paragraphs).

Pie chart showing total waste collected in 2010/11



Printer cartridges and confidential paper

In addition to general waste and recycling, 1,834 printer and toner cartridges (1.71t) were recycled through the University's preferred printer cartridge recyclers (1.398t were reused; 307kg were recycled and 12kg were landfilled). In addition to general waste and recycling, the University recycled 30t of its confidential shredded paper waste.

Building and construction waste

In addition to general waste and recycling, the John Radcliffe Hospital refurbishment for teaching and administration diverted 597t of building and construction waste from landfill in 2010/11 – recycling plasterboard, timber and metal (100%); cardboard and paper (98%) and plastic (96%).

We published a Waste Management Strategy

The University will implement its recently published Waste Management Strategy from 2012 onwards. The strategy aims to reduce, reuse and recycle unwanted materials generated by the University and minimise waste to landfill.

Virtual Swap Shop

In 2010/11 the University reused 93.81t of furniture, stationery and laboratory equipment in-house through its virtual Swap Shop (this saved the University an estimated £37,000 from not having to buy new items). www.admin.ox.ac.uk/estates/environment/ecofinanceandswapshop

We set up a virtual Plant Swap

Due to the success of Swap Shop, we set up a virtual Plant Swap – a give and take scheme for college gardeners, University grounds management staff and students who are looking for free seeds, plants, garden tools and equipment.

We set up free book recycling

The University set up a free book reuse scheme with Oxfam Bookshop (Oxfam resells the books).



WHAT WILL WE DO IN 2012?

We'll improve our data capture

The University will improve its waste data capture so that it can report on all of its waste, recycling and reuse more accurately.

We'll implement the Waste Management Strategy

The University will implement its Waste Management Strategy across the University departments.

We'll expand our reuse schemes

The popularity of the University Swap Shop and Plant Swap shows that there is lots of potential to reuse more items in the University – we'll aim to expand on these in 2012.



Biodiversity

HOW DID WE DO IN 2010/11?

We developed a University Biodiversity Toolkit

The University's online Biodiversity Toolkit provides practical advice such as using alternatives to peat and encouraging more pollinating insects into the University's grounds and gardens:

www.admin.ox.ac.uk/estates/environment/biodiversity/biodiversitytoolkit

We set up a virtual Plant Swap

Plant Swap is the University's virtual 'give and take' for gardening equipment, seeds and plants, set up to prevent waste going to landfill and to help students, staff and head gardeners to get items for free: www.admin.ox.ac.uk/estates/environment/biodiversity

OxGrow planted an edible garden

OxGrow is an edible garden project managed by staff, students and the local community. It provides the Oxford Hub's Turl Street Kitchens with fruit, vegetables and herbs and volunteering opportunities for staff and students who want to learn how to grow food sustainably: <http://oxgrow.org>

Oxford Botanic Garden planted an organic fruit and vegetable garden

The University Botanic Garden developed a large organic fruit and vegetable plot to demonstrate local food growing without the use of synthetic pesticides or fertilisers. The fresh produce is donated to three local charities in Oxford.

Wytham Woods mapped all the veteran trees in Wytham Woods

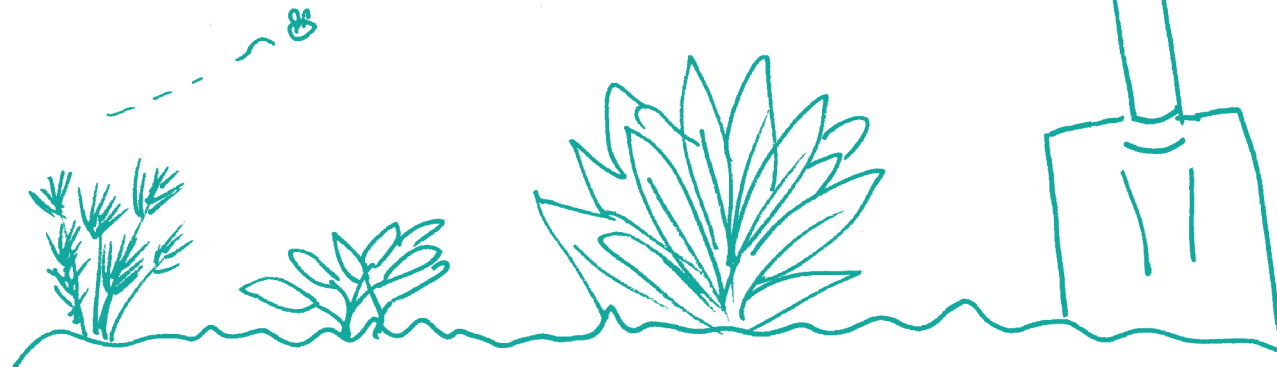
The Woods management team also restructured the woods to allow native tree regeneration; coppiced a hectare of hazel woodland and removed scrub from a hectare of calcareous grassland (traditional grazing will be resumed). They continue to monitor Marley Fen – a 10,000 year old peat bog – and conduct oak tree surveys to assess their health and formulate a management plan.

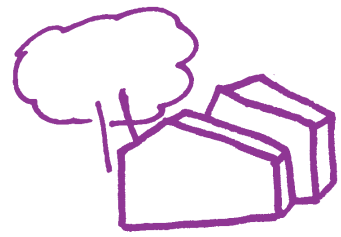
University FAI Farm planted new wildlife habitat

FAI Farms, tenants on the University-owned Wytham Estate, has Soil Association accreditation and gained a Higher Level Stewardship certificate for creating wildlife friendly areas. They planted hedgerows for dormice, wild fruit and nut bushes, wildlife-friendly trees, food and shelter for birds and insect-loving pollen and nectar-rich grasses alongside Wytham Wood. They also created damp hollows in land near the river for winter birds such as snipe, curlew and redshank. New plans include building a hide for viewing over-wintering wading birds and additional nest boxes for owls and kestrels.

WHAT WILL WE DO IN 2012?

The University will develop a Biodiversity Strategy aimed at improving the local wildlife habitat across the University estate and protecting wildlife globally through sustainable purchasing. We'll continue to develop the online Biodiversity Toolkit so staff and students can access practical tools for helping wildlife and sustainable gardening practices.





Sustainable buildings

HOW DID WE DO IN 2010/11?

We achieved BREEAM ratings on four of our buildings

The University aims to achieve BREEAM Excellent rating for all new buildings and major refurbishments costing more than £1 million. In 2010/11 the University completed four building projects that achieved a BREEAM (Building Research Establishment Environmental Assessment Method) rating:

- OMPI – BREEAM ‘Excellent’
- Swindon Bookstore – BREEAM ‘Very Good’
- Tinsley Building refurbishment – BREEAM ‘Very Good’
- Rex Richards Doctoral Training Centre refurbishment – BREEAM ‘Very Good’

We installed a ground source heat pump in Earth Sciences

The University installed a ground source heat pump in the new Earth Sciences building. A second installation is due in 2012 in the Said Business School Phase 2.

We installed combined heat and power (CHP) in the OMPI building

In 2011 the University installed a combined heat and power (CHP) system in the Oxford Molecular Pathology Institute (OMPI).

We installed rainwater harvesting systems

See ‘Water’ section.

What is our sustainable building policy?

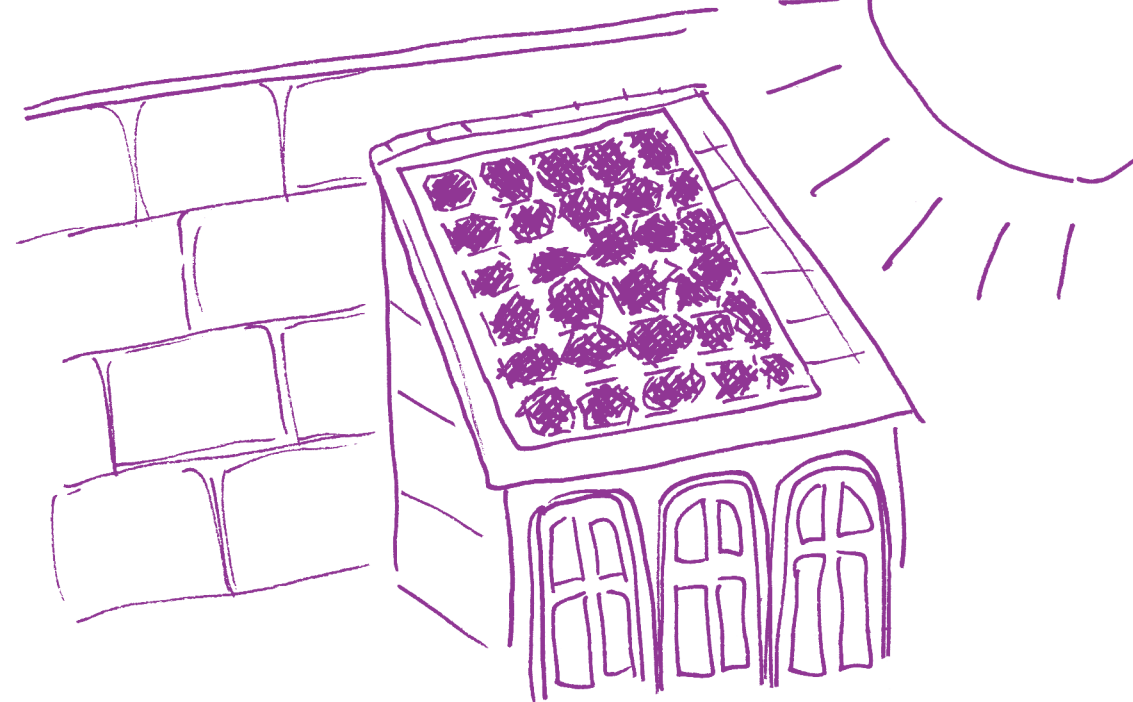
The University of Oxford Sustainable Buildings Policy is to ‘build environmentally sustainable buildings and embed sustainable building best practice into the management of the Estate. The University will ensure that any new building or refurbishment is planned, built and occupied to ensure the greatest energy and water efficiency and lowest carbon emissions that are reasonable in the circumstances. The University is committed to making full use of its existing buildings and wherever possible when expansion is necessary, to the development of sites within walking or cycling distance of the remainder of the University.’

We developed a University Sustainable Buildings Philosophy

In 2010/11 the University published a Sustainable Buildings Philosophy. The philosophy document is a guide for project managers to ensure our new buildings and major refurbishments meet the highest environmental sustainability standards.

WHAT WILL WE DO IN 2012?

The University will implement the Sustainable Buildings Philosophy for all new buildings and major refurbishments and install a ground source heat pump in the Said Business School Phase 2.





Sustainable purchasing

HOW DID WE DO IN 2010/11?

We reviewed sustainable purchasing opportunities

The Sustainability Team and the Purchasing Department worked together to identify opportunities for sustainable food, ecologically friendly cleaning products and reducing packaging waste by including 'take-back' schemes in our suppliers' contracts.

The Purchasing Department included environmental factors in contract reviews

The Purchasing Department asked suppliers to provide information on environmental performance and initiatives to improve sustainability and is developing key performance indicators for inclusion into next year's supplier contract review meetings.

We consolidated storage

The Purchasing Department reviewed opportunities for consolidating storage at University sites and reducing the frequency of deliveries from suppliers.

We increased our electronic purchase orders

The Purchasing department worked to ensure the 20% of suppliers that account for 80% of purchase orders now receive them electronically, which saves paper.

What's the University's policy on Sustainable Purchasing?

The University's Sustainable Purchasing Policy was approved by Council in 2008: www.admin.ox.ac.uk/finance/oxonly/purchasing/sustainablepurchasingpolicy



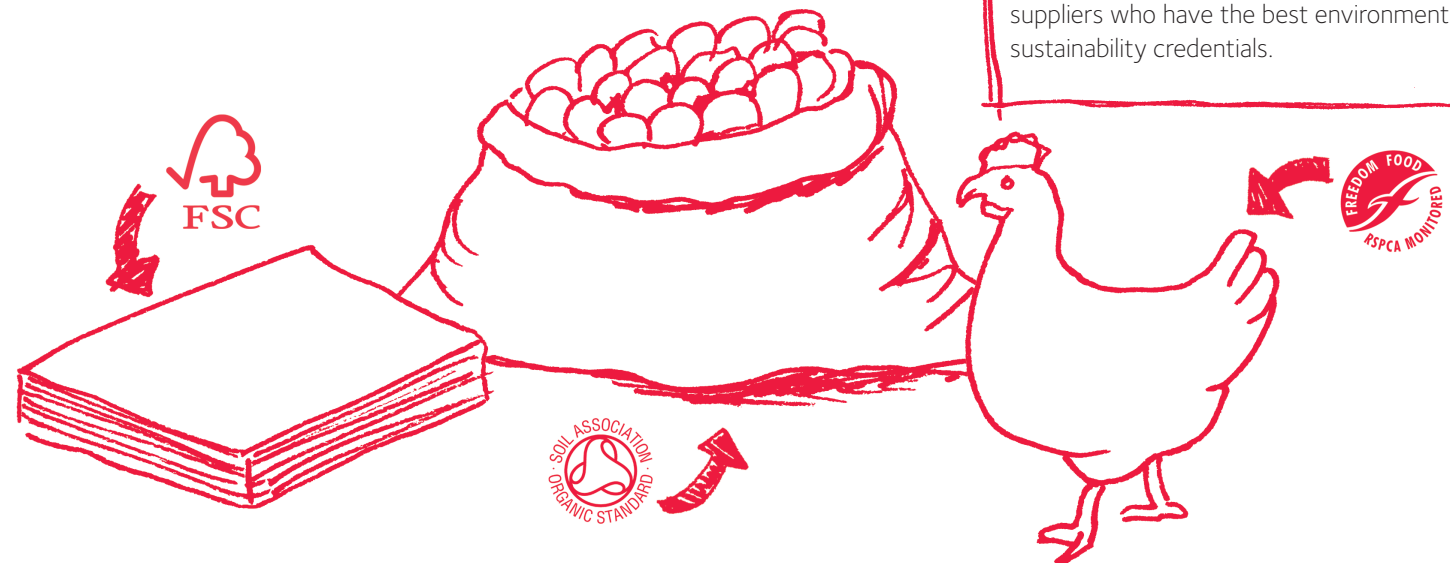
In 2011, the University Shop agreed to stock **local honey** made by a staff member – encouraging local business and sustainably-sourced food.

WHAT WILL WE DO IN 2012?

The University will review its Sustainable Purchasing Policy which will underpin future work.

The University will report on the indirect carbon emissions arising from purchasing, in advance of HEFCE's 2013 requirement for all institutions to measure and report on the carbon emissions produced through the procurement of goods and services.

We will highlight on our web pages the suppliers who have the best environmental sustainability credentials.





Sharing the knowledge

HOW DID WE DO IN 2010/11?

The University Sustainability Team aims to share practical knowledge of rolling out sustainability in a large organisation. One of the University's Sustainability Team members taught on the following Department of Continuing Education courses:

- MSc in Sustainable Urban Development (in association with the Prince's Foundation)
- Advanced and Diploma courses in Environmental Conservation

Contribution from the University's Sustainability Team helps students gain a practical understanding of the challenges of working in sustainability in a large organisation, as well as showcasing the University's sustainability projects.



"Students on the MSc Sustainable Urban Development programme are keen to continue the theoretical and practical knowledge gained from the course to lead sustainable initiatives in their own organisations and to make a positive impact on the variety of urban environments in which they work across the world."

MSc Course Director, Dr David Howard



We provided sustainability internships

The Sustainability Team provides an internship for students each year as part of the IARU (International Alliance of Research Universities) campus sustainability initiative, which promotes collaboration between member institutions and developing best practice strategies in environmental management and building an ecologically literate community:

www.iaruni.org/sustainability

We investigated how much 'Midnight Oil' we burn

As part of HEFCE's Leadership Governance and Management fund, HEFCE funded the University's 'Midnight Oil' project – a study targeting the University's energy use in 24-hour buildings, conducted by the Environmental Change Institute and the Sustainability Team. The study showed that overnight there were often less than ten occupants out of a daytime population of over 400.

WHAT WILL WE DO IN 2012?

We'll provide a sustainability internship to an Oxford student

The Sustainability Team will provide an internship for one Oxford student via the Ethical Internship scheme, managed by the Oxford Hub.

We'll provide IARU sustainability internships to international students

The Sustainability Team will provide two internships for international students through the IARU sustainability internship scheme.

Sustainability in colleges

While this Environmental Sustainability Report doesn't include data for colleges, which are managed separately from the University departments, we think it's good to highlight the work they've been doing to become more sustainable in 2010/11:



Kellogg College set up bee hives in its garden. Other achievements include promoting Fairtrade products, showing environmentally themed films, lectures and dinners with a Fairtrade focus and a sustainable fashion show (this year the college hopes to receive Fairtrade Foundation certification). After a survey revealed some houses weren't recycling, the college put in place formal recycling systems in Bradmore Road residential houses – all of which are now recycling. In 2012 the focus will be on optimising sustainable food consumption and surveying the college to find out what people prefer to eat (local, organic, seasonal, etc); what the Rewley House procurement procedures are, and working with the kitchen to identify areas of improvement.



Lady Margaret Hall has an allotment, incorporated wildlife habitat into its garden design and produced a Biodiversity Fact Sheet for its gardens.



Linacre College published a carbon reduction strategy with a target to reduce CO₂ emissions by 40% by 2020. It installed solar panels which generate 15 KWh a day. The college is investing in a rolling programme of replacing old windows with high-performance double glazing. Students and supporters have raised funds for a green scholarship to fund a student to assist the college in improving sustainability.



Magdalen College grew lots of different types of herbs in its gardens for use in its kitchens.



Merton College Head Gardener arranged for a plot of college land to be used as an Edible Garden and supplied leaf mould and compost. The student support committee allocated tools and a shed. The students organised gardening sessions and sourced seeds and plants via the University's virtual Plant Swap. The college will install raised beds in 2012.



Rhodes House produced a Biodiversity Fact Sheet for its gardens.



Worcester College incorporated wildlife habitat into its garden design. They have an allotment and apple orchard (the apples are used to make apple juice that is sold at Waterperry Garden Centre in Oxfordshire).



Queen's College opened its new auditorium which has ground source heat pumps and has also gained planning permission to put photovoltaics on its St Aldate's 90 room accommodation building. It has also commissioned a sustainability audit.

And finally...

Several colleges recycled their old mattresses via a local recycler (they are made into new mattresses and pet bedding).

All colleges can now recycle unwanted books for free, via the Oxfam bookshop in Oxford.

Contact the Sustainability Team

To find out more about the University's environmental sustainability or to give us feedback on the report, contact: sustainability@oued.ox.ac.uk

