



The University of
Nottingham

Environmental Strategy 2010

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Message from the Vice-Chancellor

"The global imperative to reduce carbon emissions and to improve the sustainability of our activities is compelling. The University clearly must contribute by addressing our own operations, but as a higher education institution we are also ideally placed to influence the future through the education of our students and our world-leading research. This Strategy sets out our objectives in all of these areas. It will require your involvement to deliver the outcomes we seek - I hope you will help us achieve them."

Professor David Greenaway

Vice-Chancellor



Message from the Pro-Vice-Chancellor

"The University recognises the importance to society of Sustainable Development, and the crucial role our environmental performance (and in particular reducing carbon emissions) has to play in achieving sustainability. For that reason we have developed a University Environmental Strategy to help us improve our performance in this area. We know that there are significant environmental issues that require tackling at all levels of society, and our Strategy has identified how we can contribute to, and indeed help lead, this agenda. Delivery against this Strategy cannot be achieved top-down but will require contributions from the whole University community. I encourage all staff, students and other stakeholders to join us in helping to achieve the objectives set out."

Professor Alan Dodson

Pro-Vice-Chancellor for Environment,
Infrastructure and Information Services

Environmental Strategy Statement

The University of Nottingham has a long standing commitment to the environmental agenda and is committed to institution wide environmental excellence. We have significant internationally recognised research strengths and course provision in the environment related field. Our estates operations are built upon a strong environmental ethos and through our adoption of progressive environmental strategies in our capital projects we have embedded sustainability into the heart of our operations. The University has committed itself to becoming a leading green University and will build on both our research and operational excellence to achieve this.

The University recognises that it has a range of roles and interacts with a number of stakeholders. It is an educator of future generations, many of whom will be at the cutting edge of research and captains of industry; it is a significant regional employer whose decisions have a large impact on the regional environment; it is also a part of the local community.

In pursuit of achieving environmental excellence the University of Nottingham is committed to the following aims:

- To facilitate the active participation of the University community in reducing the collective environmental impact of the organisation, through both formal and informal activity; To foster a culture of environmental citizenship within the University Community.
- To meet and, where appropriate, exceed all relevant UK, European and international legislative and regulatory requirements and agreements.
- To engage fully with the student body to ensure the involvement of a key stakeholder in environmental improvements.
- To improve the environmental performance of our buildings and the University's physical infrastructure by moving towards carbon neutral energy performance, adopting environmentally conscious procurement practice, promoting renewable energy systems, reducing water consumption and waste output.
- To systematically reduce resource consumption and progress to zero waste through best practice environmental management and cultural change.
- To ensure that all development and refurbishments go beyond current legislation and utilise environmental best practice where practicable, whilst seeking best value for the University at all times.
- To actively promote and market the University, internally and externally, as a leading 'Green University'; to facilitate dissemination of best practice and ensure that the University gets the recognition it deserves for its endeavours.
- To act in an environmentally responsible way.
- To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector.
- To integrate environmental responsibility into University and School strategies, plans and policies as they are written or revised.
- To sustain and build upon the University's profile in environmental research contributing to the global enhancement of the environmental knowledge base for future generations.
- To actively promote and encourage the use of sustainable modes of transport across the University, acknowledging business needs, the University's research led focus and its internationalisation agenda.
- To promote and encourage the use of technology to reduce the environmental impact of university operations and activities.
- To engage with the University's suppliers and contractors to ensure that goods and services procured meet the University's environmental standards and, in turn, that they demonstrate and progressively improve their own environmental performance.
- To support continuous environmental improvement by establishing challenging and measurable performance targets that are reviewed and reported annually.
- To develop, operate and maintain IT services and facilities in a sustainable manner, meeting and where practicable exceeding industry standards, seeking best value for the University at all times.



Professor Alan Dodson
Pro-Vice-Chancellor

1st February 2010

Environment Strategy Delivery

Context

Over the past twenty years the University of Nottingham has developed significantly and is now established as one of the world's leading research and teaching institutions. Today we have five main UK based campuses, as well as campuses in Malaysia and Ningbo, China, and have a staff of over 7,400 and a student population in excess of 37,000.

As a major regional employer we recognise that our decisions and actions have an impact upon the environmental, economic and social aspects of the region. Increasingly the student body, staff and local community are expecting the University to be a leading advocate of the environmental agenda in its teaching, learning, research, decision making and operations.

In an increasingly competitive student market, environmental performance is likely to become an important element of student choice. We influence our students through our curriculum, teaching and research and also by the environs, the campus experience and through the leadership of the University.

The sector as a whole is embracing the environmental agenda, indeed as early as 2005 HEFCE set out a vision that: 'Within the next 10 years, the higher education sector in this country will be recognised as a major contributor to society's efforts to achieve sustainability – through the skills and knowledge that its graduates learn and put into practice, and through its own strategies and operations.' Nottingham has made progress in recent years and this document outlines some key objectives to assist the University to achieve its vision to become 'a leading green university', in its teaching, learning, research, campus operations and governance.

In January 2010 HEFCE published its carbon reduction strategy for higher education. It links to requirements in the UK's Climate Change Act 2008, which aims to improve carbon management and help the transition towards a low-carbon economy in the UK. It sets the world's first legally binding reduction targets for greenhouse gas emissions of at least 34 per cent by 2020 and at least 80 per cent by 2050, against a 1990 baseline.

Key aspects in HEFCE's strategy include:

- Creating a carbon reduction culture and act to help the sector play its part in meeting national climate change targets.
- Establishing a more demanding approach to delivering carbon reductions via institutions' carbon plans. Targets for the sector are to reduce direct emissions and those caused by electricity purchases (scope 1 and 2) by 34 per cent by 2020 and 80 per cent by 2050 (both against a 1990 baseline).
- Adapting the Capital Investment Framework to establish a link between performance against carbon plans – in effect, carbon reduction – and future capital allocations.
- Setting milestones to measure progress against the sector-level targets.

The strategy aims to focus efforts in areas that offer the greatest potential carbon reduction return, such as: energy use within the estate; transport; water consumption; waste; and procurement, through technical, structural and behavioural solutions. It also aims to identify issues that need further consideration and support.



Structure and Resources

Whilst all staff and students of the University should take personal responsibility for the environmental impact of their actions, formal responsibility within the University is structured thus:

A Pro-Vice-Chancellor has responsibility for the Environment within their portfolio, reporting directly to Management Board, and thereby to Senate and Council as appropriate.

The Environment Committee, which is chaired by the PVC for Environment (and which meets three times a year), reports to Management Board. Its current terms of reference are:

- To advise Management Board on environmental related matters affecting the University.
- To monitor, review and make recommendations to minimise / reduce where practicable the environmental impact of the University's operations, policies and procedures.
- To develop, implement and monitor the University's Environmental Strategy.

Current membership is:

Pro-Vice-Chancellor Environment (Chair)
 Chief Estates and Facilities Officer
 Director of Sustainability
 Environmental Manager (secretariat)
 Energy Management Engineer
 Safety Office Representative
 Students' Union Representative
 Member of University Council
 Campus Representatives
 Information Services Representative
 Commercial Services Representative
 External Relations Group Representative



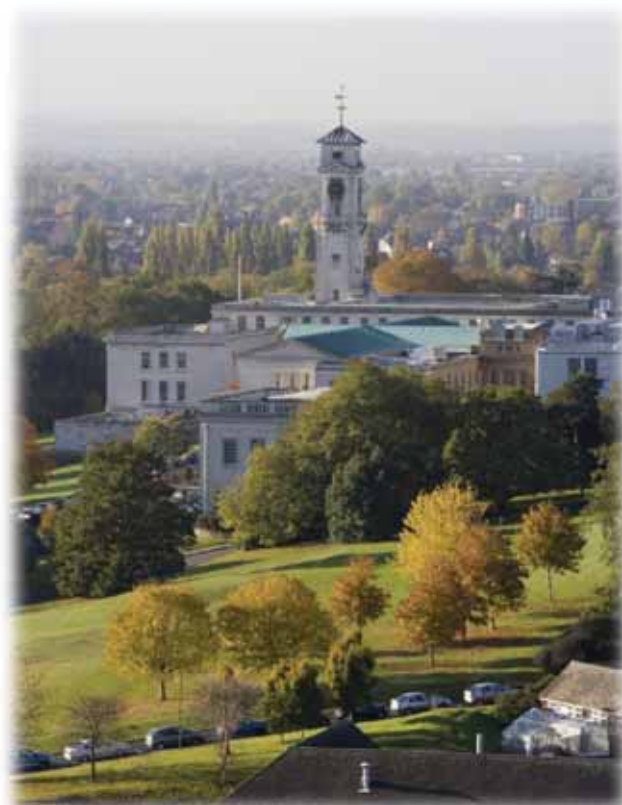
The Sustainability Team, based in the Estate Office, work to bring about the practicable improvements in sustainability and environmental awareness and performance at the University.

They are:

Keith Pitcher, Director of Sustainability
 Gavin Scott, Environmental Manager
 Tim Rudge, Energy Manager
 Emma Kemp, Senior Environment Officer
 Andrew Bryers, Assistant Environment/Energy Manager
 Jason Yarnall, BMS Controls Engineer
 Desmond O'Grady, Grounds Manager
 Martin Lloyd, Grounds Maintenance Manager
 David Parkhouse, Assistant Grounds Maintenance Manager

(Contact information is available on page 17).

Environmental Champions are a group of enthusiastic staff, and **Eco-Warriors** committed students, who help improve the environmental performance of the University by raising awareness of environmental issues within their School, support service (or Hall of Residence). They promote environmental initiatives and run awareness campaigns on topics such as reducing waste, using energy and water efficiently, sustainable travel and sustainable purchasing. This scheme is part of a strategy to create a strong culture of environmental awareness across the University. All Environmental Champions and Eco-Warriors are part of a network that is coordinated and supported by the University's Sustainability team within the Estate Office.



The Strategy in Operation

The following sections outline some of the key operational areas this strategy covers, with information as to why these are important issues, the strategic aim(s) that they are relevant to and some specific operational objectives and key performance indicators.

Waste and Recycling

The limited capacity in landfill sites is well reported and we have seen increasing costs associated with the disposal of waste, landfill tax is increasing year on year. Several pieces of legislation in recent years have meant that there are increasing numbers of items that have to be disposed of via specialist contractors and not via landfill.

Recycling in the home environment is very much the norm, as such both our staff and students expect to be able to recycle at their place of work or study, and currently we offer facilities to be able to recycle a number of waste streams.

The University produces over 3,000 tonnes of waste per year which costs in excess of £300,000 per year in disposal. Over the last few years we have seen significant improvements in our recycling rates, from 4% in 2004/05 to 29% in 2008/09, with a target of 40% set for 2011/12.



Strategic Aim:

- To improve the environmental performance of our buildings and the University's physical infrastructure by moving towards carbon neutral energy performance, adopting environmentally conscious procurement practice, promoting renewable energy systems, reducing water consumption and waste output
- To systematically reduce resource consumption and progress to zero waste through best practice environmental management and cultural change
- To act in an environmentally responsible way
- To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector

Objectives:

- To minimise and actively manage waste through elimination, reduction, reuse and recycling
- To promote management systems which reduce the production of potential waste materials
- To encourage the use of 'recycled' products where appropriate
- To promote purchasing and development processes that give due consideration to the true cost of waste
- Review all waste streams and work to minimise waste generation, maximise recycling and minimise unnecessary consumption
- Work with our building contractors to minimise the amount of construction waste sent to landfill

Key Performance Indicators:

- Waste mass generated per m²
- Recycled waste proportion %

Energy and Water

In recent years there have been frequent sensational headlines regarding world fossil fuel energy reserves, climate change and energy price increases. Over a relatively short period, public awareness and interest has been stimulated on an unprecedented scale.

The University has not been immune to these market issues, experiencing the most volatile price fluctuations in energy costs ever, with increases of 200% in oil, 225% in electricity and 250% in gas prices since August 2007. As such we have seen significant increases in our annual energy and water spend and in financial year 2008/09 this spend was £12.5 million.

We have invested in a number of invest-to-save schemes over recent years. Projects are financed from our Carbon Plan programme. This has secured external funding from Salix and savings made are recycled back into the programme to finance future projects.

Our flexible approach to energy procurement has ensured that we procure our energy in the most effective way. We have seen year-on-year energy reduction against a backdrop of increasing student

numbers, a growing estate and increasingly energy intensive research.

Mindful of the environmental impact of the use of energy we have been actively working to raise the awareness of energy use and have made inroads in reducing energy waste. To reduce our overall environmental impact we actively seek to procure green energy, and as a result we have seen reductions in our energy related CO₂ in recent years.

Whilst water prices have not risen to the same extent as energy, we now pay over £1 million a year for water. Many opportunities for savings have been introduced, including urinal controls – Cisternisers, leakage detection work and grey water harvesting, as well as reviewing whether sites have been charged correctly for clean water, used water and surface water drainage.

Looking forward as the University expands, both in terms of capital, students and research intensity, we will see increasing energy and water demands, and it is vital that the environmental impact of these activities is considered at all opportunities.

We will continue to manage and develop our Carbon Plan to ensure it delivers performance improvements against set targets.



Strategic Aim:

- *To improve the environmental performance of our buildings and the University's physical infrastructure by moving towards carbon neutral energy performance, adopting environmentally conscious procurement practice, promoting renewable energy systems, reducing water consumption and waste output*
- *To ensure that all development and refurbishments go beyond current legislation and utilise environmental best practice where practicable, whilst seeking best value for the University at all times*
- *To act in an environmentally responsible way*
- *To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector*

Objectives:

- *Reduce energy consumption whilst at the same time ensuring the University's activities continue*
- *Raise the awareness of the cost of energy*
- *Reduce the overall cost of energy*
- *Reduce energy waste*
- *Reduce dependence on carbon with a shift towards carbon neutral or low carbon energy sources*
- *Ensure that energy consumption and low carbon energy are considerations in the procurement process*
- *Reduce water costs and consumption*
- *Minimise pollution*

Key Performance Indicators:

- *Energy consumption per m² GIA (Gross Internal Area)*
- *Energy Emissions per m² GIA*
- *Water Consumption per m² GIA*
- *Total emissions for energy – carbon reduction achieved*
- *Percentage of renewable electricity*

Travel and Transport

With a geographical spread across the local region, a staff and student community in excess of 40,000, and campuses in China and Malaysia, travel and transport are a significant environmental aspect of University operations, both in terms of commuting and local and international business travel.

Car parking is a highly emotive issue and across our UK campuses we have in excess of 4,000 parking spaces. We are one of the few Universities that do not currently charge staff or students to park. Our parking policy excludes most students from parking on our campuses, with a concessionary permit provision when appropriate.

For a number of years the University has had travel plans in place which is beneficial as part of the planning and development process. To support our travel planning initiatives we run a number of schemes / projects.

We are one of the few Universities that operate a free inter-campus shuttle bus service for both staff and students. Through strong partnership with Nottingham City Transport we have established the award winning No 34 UniLink service, and more recently the No 31 service, which provide direct links between University Park and Jubilee Campus respectively and the City Centre.

We continue to invest in facilities for cyclists. As well as physical measures we have introduced a number of soft measures, including a tax free cycle purchase scheme, which has had in excess of 200 people join; improved



information available on our website (e.g., a cycle parking facilities map); running a series of promotional / advisory events. Across our campuses we have more than 3,000 cycle parking spaces, which gives amongst the best (4th) FTE staff/student to cycle hoop ratio within the Russell Group of Universities.

The University is a major partner in a £3 million, 2 year cycling partnership project with the main project office based at the University. The overall aim of this project is to increase levels of cycling amongst staff and students and increase awareness of the benefits of cycling amongst students and staff.

On the horizon is a tram route serving University Park and the introduction of the workplace parking levy within the City of Nottingham.

Our internationalisation agenda will ensure that our two overseas campuses are part of core University activity. This will necessitate a degree of

overseas air travel. Our wider international collaborative links (research, U21 etc) also often necessitate considerable travel requirements.

Business travel is a significant contributor to our overall travel footprint, and the revision of the business travel policy has made a step towards reducing the environmental impact of travel, with one of its underlying objectives to be: *'To enable the University to work towards reducing the carbon footprint or environmental impact of business travel where practical.'*

Strategic Aim:

- *To actively promote and encourage the use of sustainable modes of transport across the University, acknowledging business needs, the University's research led focus and its internationalisation agenda*
- *To facilitate the active participation of the University community in reducing the collective environmental impact of the organisation, through both formal and informal activity; To foster a culture of environmental citizenship within the University Community*
- *To act in an environmentally responsible way*
- *To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector*

Objectives:

- *To increase transport choice*
- *To reduce single occupancy car use, promote alternative and non travel options and reduce associated emissions*
- *Minimise the amount of intercampus travel undertaken by car e.g. between Jubilee campus and University Park*
- *To reduce the carbon footprint or environmental impact of business travel where practical*
- *To reduce the amount of domestic flights where practical*

Key Performance Indicators:

- *Staff and student modal split – single occupancy car use / alternative travel*
- *Number of staff taking part in Cyclescheme*
- *Bus patronage on hopper services*

Procurement

The University of Nottingham is committed to sustainable procurement. Purchasing decisions have major socio-economic and environmental implications, both locally, nationally and globally, now and for generations to come. The University aims to ensure that its activities meet the diverse needs of students, the economy and society.

The University has developed a Sustainable Procurement Policy that links to the wider Corporate Social Responsibility Agenda and the objectives below are an integral part of that wider policy.



Strategic Aim:

- *To act in a sustainable environmentally responsible way*
- *To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector*
- *To engage with the University's suppliers and contractors to ensure that goods and services are sustainably procured and meet the University's environmental standards and, in turn, that they demonstrate and progressively improve their own sustainable environmental performance*

Objectives:

- *Specify sustainable environmentally friendly products wherever appropriate*
- *Ensure where appropriate sustainable environmental criteria are used in the award of contracts*
- *Ensure consideration is given to the whole life costs and benefits of environmentally preferable products and services alternatives. Typically;*
 - *Manufacture, delivery, installation*
 - *Operating costs including energy, water usage and maintenance*
 - *End of life costs including decommissioning and disposal*
- *Ensure that suppliers' sustainable environmental credentials are as far as practicable considered in the suppliers' appraisal process*
- *Promote where appropriate and practical sustainable buying principles e.g. Fairtrade*
- *Work with key suppliers to bring about changes and spread sustainability improvements throughout the supply chain; these will include:*
 - *Avoiding products with particularly harmful substances*
 - *Favouring economical products with recycled content or that are biodegradable*
 - *Buying products using recognised labelling schemes e.g. Forestry Stewardship Council or EU Ecolabel*
 - *Encourage suppliers to achieve environmental credentials such as environmental systems for ISO14001 or EMAS (Eco-Management Audit Scheme)*

Key Performance Indicators:

- *Progression on the Government's Sustainable Procurement Flexible Framework*

Campus Development

The design, construction, operation, refurbishment and demolition of buildings can have a significant environmental impact. Well designed and operated buildings can contribute to and enhance the teaching and learning environment as well as improve environmental performance.

Over the last decade the University has invested in extensive capital development which has seen the creation and subsequent expansion of the award-winning Jubilee Campus. Built on a former industrial site this campus incorporates numerous sustainable technologies, including 450 m² of photovoltaic cells, green roofs, a complex system of daylight reflection, intelligent lighting systems and materials from sustainable sources to name but a few.

Our capital developments continue to adopt progressive environmental strategies, the design of the Jubilee Campus expansion incorporates passive design, high thermal massing and utilises geothermal lake-source heat pumps, resulting in significant carbon savings over and above the requirements of legislation. The Nottingham Geospatial Building (including the GRACE development), further builds upon this and the environmental strategy adopted ensures that as a minimum the development meets Building Research Establishment Environmental Assessment Method 2006 (BREEAM) "Very Good" rating (the development actually achieved an "Excellent" rating) and includes a biomass boiler that meets the requirement for 10% on-site renewable energy generation. Both of these approaches result in further CO₂ savings.

Many of our other capital projects similarly adopt environmentally responsible design including the use of rain water harvesting, biomass boilers, passive design and sustainable urban drainage systems, all of which contribute to a reduced environmental footprint.

Increasingly the planning framework and building regulations are moving towards more environmentally responsible development, and the University is expected to display publicly how energy efficient some of its buildings are.

As well as environmentally responsible capital projects, it is imperative that our refurbishment works adopt the same levels of environmental responsibility.

Within the sector we are seeing increasing pressure to ensure that capital projects meet stringent environmental guidelines over and above planning guidelines. As a result BREEAM-HE has been developed specifically for the sector as a way of

benchmarking development.



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- *To systematically reduce resource consumption and progress to zero waste through best practice environmental management and cultural change*
- *To ensure that all development and refurbishments go beyond current legislation and utilise environmental best practice where practicable, whilst seeking best value for the University at all times*

Objectives:

- *Environmental targets will be included in the design, construction and occupation of new buildings and refurbishments*
- *Opportunities to improve environmental performance to be sought as part of the regular maintenance schedules and refurbishments of buildings*
- *Where appropriate all buildings to be designed and constructed to a standard equivalent to BREEAM HE "Excellent" as a minimum*

Key Performance Indicators:

- *Building Display Energy Certificates / Energy Performance Certificates achieved*
- *Awards for sustainable construction / design*

Awareness Raising, Training and Communication

Awareness and effective communication are key to the success of any environmental initiative. In recent years we have carried out a number of activities to increase awareness, both with the student body and staff. There are a number of channels of communication already established.

The establishment of an Environmental Champions Network, which aims to bring together people from a broad spectrum of Schools and Central Support Services to share ideas and act as champions within their own work areas to reduce environmental impacts, has improved our communication network.

As well as our internal audiences, there are significant external audiences that we are accountable to, in a variety of ways including, the local community, funders (e.g. HEFCE), local authorities and potential students.



As well as raising the awareness of operational environmental performance it is imperative that work continues to raise the profile of the cutting edge environmental research carried out at Nottingham.



Within the Students' Union there is an executive position that oversees environmental and social justice issues, and this has provided an excellent link with the student body. Also, Nottingham has a number of student societies with strong environmental interest including the People & Planet Group.



Strategic Aim:

- To facilitate the active participation of the University community in reducing the collective environmental impact of the organisation, through both formal and informal activity; To foster a culture of environmental citizenship within the University Community
- To engage fully with the student body to ensure the involvement of a key stakeholder in environmental improvements
- To actively promote and market the University, internally and externally, as a leading 'Green University'; to facilitate dissemination of best practice and ensure that the University gets the recognition it deserves for its endeavours
- To act in an environmentally responsible way
- To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector

Objectives:

- To raise awareness of sustainability issues and to communicate environmental achievements to all stakeholders, both internal and external
- To train staff, students and others such as contractors to ensure awareness of environmental issues and how they relate to their own personal circumstance
- Foster a culture of responsible citizenship with all staff and students

Corporate Governance

For an organisation to show that it is truly committed to improving its environmental performance, it must ensure that the environment is fully considered within its operation and decision making processes.

The University has clearly demonstrated its commitment to the environmental agenda through its capital investments, a formal Environment Committee, a ring fenced environment fund and the establishment of a separate PVC portfolio for environment. Within the University Plan there is clear commitment to 'Increase our efforts to protect the environment and ensure those efforts get the recognition they deserve'.

As part of the East Midlands Universities Association (EMUA), the University completed Business in the Community's (BITC) Environmental Index in 2008 and the wider 'Universities that Count' – BITC Environmental Index in 2009. The University is a corporate member of BITC.

One of our greatest challenges will be to ensure that environment is embedded within our policies and strategies. As we do further work on the environmental agenda, it will be appropriate to ensure that it is clearly within our mission and values. The development of an Environmental Management System will provide the framework for ensuring our operations and activities are assessed, targets set, progress monitored and continual improvements achieved.



Strategic Aim:

- *To support continuous environmental improvement by establishing challenging and measurable performance targets that are reviewed and reported annually*
- *To act in an environmentally responsible way*
- *To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector*
- *To integrate environmental responsibility into University and School strategies, plans and policies as they are written or revised*

Objectives:

- *University planning cycle to give due consideration to environmental agenda*
- *University to adopt where practical the principles of Business in the Community*
- *To work towards integrating sustainability into all strategies, plans and policies as they come up for renewal*

Key Performance Indicators:

- *Rating in BITC Environmental Index and Universities that Count assessments*

Information Services

Information Services provides and supports the IT infrastructure for the University. The ongoing and increasing demand for complex systems and services has a significant impact on the environment, in terms of energy consumption and sustainability. We are committed to minimising this impact wherever practical, working in partnership with Faculties, the Students' Union and Central Support Services to improve performance in a sustainable way.

Information Services has already implemented some energy saving measures, in the data centres and in provision of services and facilities, and is starting to embed sustainable



practice into normal operations, but more can be done in the short, medium and long term to green the provision of IT services and facilities. Technologies which facilitate collaboration and communication and therefore reduce the need for University members to travel will be deployed wherever appropriate.

Strategic Aim:

- *To ensure that all development and refurbishments go beyond current legislation and utilise environmental best practice where practicable, whilst seeking best value for the University at all times*
- *To promote and encourage the use of technology to reduce the environmental impact of university operations and activities*
- *To develop, operate and maintain IT services and facilities in a sustainable manner, meeting and where practicable exceeding industry standards, seeking best value for the University at all times*

Objectives:

- *To reduce energy consumption by encouraging and enabling improved and efficient power down of computers and other IT equipment*
- *To reduce the replacement frequency of IT equipment, thereby reducing resource usage and disposal costs*
- *To raise awareness of Green IT throughout the University community and offer advice and solutions for improved performance*
- *To harness existing and developing technologies in the pursuit of Green IT*
- *To ensure that sustainability is a consideration in the IT procurement process*
- *To enable proactive use of individual and group video conferencing to cut travel where appropriate*
- *To make best use of the University's environmentally-efficient data centres by consolidating servers and systems in them*
- *To maintain and where possible improve the robust disposal procedures for IT equipment*
- *To continue and extend server virtualisation where appropriate, for resilience and reduced energy consumption*
- *To deploy communication and collaboration technologies which reduce the need for members of the University to travel*

Key Performance Indicators:

- *Members of the University adopting green practice in everyday use of IT*
- *Successful server-hosting service and reduction in number of inefficient server rooms scattered throughout campuses*

Landscape

Nottingham has some of the most prestigious grounds in the sector, documented by our numerous awards; they include successive Civic Trust Green Flag Awards since 2003, the Britain in Bloom Public Park Award 2005, and Nottingham in Bloom and East Midlands in Bloom awards for horticultural excellence, Civic Trust and British Association of Landscape Industry awards for the Millennium Garden on University Park. Our grounds are central to the University experience and contribute to the overall Nottingham experience.

Over the last decade we have seen significant improvements in the standard of our landscape, creating and enhancing to create the high quality landscape we see today. Our planting very much reflects the diversity of our student body, using both exotic and native species. Our landscape covers a variety of styles including heritage areas, courtyard gardens, display gardens, water features, sculpture, more than 3,000 trees, woodlands, wildlife and grass lands, all of which contribute to a rich diversity.

Our campuses have very many different landscapes and they are in keeping with the urban environment in which they sit. University Park is very much an old 'classic English landscape' with numerous gardens. In contrast both Jubilee Campus and Kings Meadow Campus are much newer, the former features more natural, environmentally sensitive native plantings with lakes and wildlife and the latter being an oasis for staff who work there. Our Sutton Bonington campus has been thoroughly overhauled over the last decade, and the arboretum remains a small but almost unknown jewel.

Our campuses as well as having their own intrinsic value are key elements of a larger network of open spaces and we have built up strong



relationships with other organisations to ensure they are managed effectively.

What makes us very different to many other University campuses is the openness of our sites; many thousands of people visit our campuses each year and enjoy their splendour and beauty. In 2004 the University established a Friends of University Park group to encourage the local community to visit University Park and to enjoy its gardens and grounds.



Our grounds are managed with a strong environmental bias including composting all horticultural waste for reuse on site, minimising the use of pesticides, eliminating the use of peat for soil amelioration, reducing the need for water by mulching, leaving areas of scrubland and felled trees for wildlife habitat, all of which

contribute to the rich diversity we have.

Strategic Aim:

- *To improve the environmental performance of our buildings and the University's physical infrastructure by moving towards carbon neutral energy performance, adopting environmentally conscious procurement practice, reducing water consumption and waste output*
- *To act in an environmentally responsible way*
- *To continue the University's contribution to advancing the environmental agenda within both the region and the Higher Education sector*

Objectives:

- *To continue to manage our grounds with due regard to the environment*
- *To increase the bio-diversity of our sites*
- *To foster greater partnership with other organisations to promote sustainable grounds practice, including Nottinghamshire Wildlife Trust*

Key Performance Indicators:

- *Awards*
- *Numbers attending events*
- *Recycling of grounds waste*

Teaching and Learning

The University has a strong portfolio within traditional environmental fields and a number of both undergraduate and postgraduate courses explicitly deal with environmental issues. Increasingly the principles of environmental responsibility and sustainability are becoming intertwined within teaching in a number of non environmental areas.

The University attracts the very best students, many of whom will become leaders of industry and commerce, as such equipping them with the knowledge and skills of the environmental agenda will contribute to society in the future.



As well as formal environmental education there are significant opportunities for our students to engage in informal education through social activities, within the local community and through volunteering.

Increasingly many professional bodies require their members to be aware of the environmental agenda and understand how as professionals they can contribute to this through their professional activity.

As well as the content of teaching and learning there are opportunities to enhance the delivery of our teaching through greater use of ICT. This has happened in a number of areas including the School of Veterinary Science and Medicine, which has for example significantly reduced the use of paper within its teaching.

Strategic Aim:

- *To facilitate the active participation of the University community in reducing the collective environmental impact of the organisation, through both formal and informal activity*
- *To foster a culture of environmental citizenship within the University Community*

Objectives:

- *Understand more fully sustainability / environment within current programmes and curriculum*
- *Encourage the active participation in non formal education with an environmental bias*
- *Encourage and support the development of sustainability within teaching and learning*
- *Where appropriate, sustainability to be taken into account in discussions leading to course approval*

Key Performance Indicators:

- *The numbers of students on environmentally relevant modules and courses*

Research

The University is widely recognised as having a strong research portfolio looking at the fields of environment and sustainability, both in the UK and at our overseas campuses including for example, the Creative Energy Dwellings project, Energy Technologies Research Institute (and a partner in ETI), DICE, Green Chemistry, and the Centre for Sustainable Energy Technology (CSET), as well as many other interdisciplinary research institutes, groups and centres.

The University has been awarded significant research grants in the environmental field and this is projected to be a growing research field.



Strategic Aim:

- *To sustain and build upon the University's profile in environmental research contributing to the global enhancement of the environmental knowledge base for future generations*

Objectives:

- *Encourage postgraduate research and innovation in the sustainability area*
- *Promote dissemination of research*
- *Create stronger links between campus operations and research*
- *Make greater use of our own infrastructure for research*

Key Performance Indicators:

- *Research funding for environmental / energy / sustainability related research*

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