The University of Nottingham

Britain’s Global University

Andy Nolan, Director of Sustainability
### Nottingham in Numbers...

- **5 campuses** across **3 countries** and **2 continents**
- **43,893** high-calibre students worldwide
  - **11,000** students studying for University of Nottingham degrees in Asia
  - **24,455** UK Undergraduates **8,743** UK Postgraduates
- **9000** staff world-wide
- **£1.1bn** of annual economic impact in the UK
  - **18,000** jobs supported by University activity
- **£600m** annual income 2014/15
- **£186m** in research awards 2014/15
  - **60%** of research income linked to industry
- **£500m** total research portfolio
Nobel Prize Winner, Prof Sir Peter Mansfield, invents the MRI scanner
/Global reputation

TOP 1% of universities worldwide
QS World University Rankings 2015

2 Nobel Prizes
Sir Clive Granger (2003 – Economic Science)
Sir Peter Mansfield (2003 – Medicine)

Teaching standards at the University received the highest possible commendation in the latest QAA (Quality Assurance Agency) audit (2009)

TOP UNIVERSITY IN THE UK FOR JOB PROSPECTS
WhatUni Student Choice Awards 2015

16 Green Flag Awards
green flag awards since 2003 across University Park and Jubilee Campuses

Winner of the Times Higher Education Awards 2014
Research Project of the Year
International reach

Across our UK, China and Malaysia campuses, we have over 43,000 students from more than 150 different countries. Of these, over 9,000 are engaged in postgraduate study.

- 5 campuses across 3 countries
- Almost 9,000 staff across our campuses
- Links with more than 300 universities in over 40 countries
- An alumni community of over 250,000 members across the globe
University locations

Our global campuses
Raleigh Chopper – Launched in Nottingham 1969
Ningbo Campus - China
Malaysia Campus – Kuala Lumpur
Sustainability – 10 key areas

- Waste & recycling
- Carbon and energy management
- Research
- Travel & transport
- Teaching & learning
- Community engagement
- Information Technology
- Procurement
- Awareness raising, training, communication
- Campus development
• Environment Committee
• University Executive Board
• University Council

• Major investments through University Executive Board and Finance Committee
Management

• Director of Sustainability leads Sustainability Directorate
• 10 office based staff
• 50 operational staff
# Sustainability Operational Budget (14/15)

<table>
<thead>
<tr>
<th>Category</th>
<th>Pay</th>
<th>Non-Pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy (Gas &amp; Elec +)</td>
<td></td>
<td>9,788,969</td>
</tr>
<tr>
<td>Grounds/ Landscape</td>
<td>1,419,001</td>
<td>646,515</td>
</tr>
<tr>
<td>Transport</td>
<td>318,101</td>
<td>237,082</td>
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<tr>
<td>Environmental</td>
<td>2,883</td>
<td>153,476</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,739,985</td>
<td>10,826,042</td>
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1.00 GBP = 5.62876 ILS
How are We Performing?

• 1st place in Greenmetric Ranking of World Universities 2015
• People & Planet 2015 2:1
• Guardian Higher Education Awards - Best sustainability initiative 2015.
• Times Higher Education award for ‘Outstanding contribution to sustainable development’ in 2012
• NOOC shortlisted for Guardian University Award 2014
• Highly Commended Green Gown commendation for ‘Sustainability in Teaching & Learning’ in 2014
• 1 Winner and 2 Highly Commended Awards at 2015 Green Gown Awards
The £26m Malaysian Government-funded Crops for the Future Research Centre was completed on our Malaysian Campus in 2015, and puts the University at the forefront of global food security and nutrition research.
World-Class research

In the latest Research Excellence Framework (REF) 2014

8th in the UK in terms of research power

more than 97% of research at the University is internationally recognised

more than 80% of research is ranked as 'world leading' or 'internationally excellent'

2nd in the UK for funding across both Knowledge Transfer Partnerships and Research and Development

Research Councils UK, 2015
Sustainability Research

- Environmental Technologies Research Institute
- Sustainable chemistry
- Crops for the future
- International Centre for Corporate Social Responsibility
- Energy, environmental and sustainability research portfolio worth over £20m per year
- Creative Energy Homes
Teaching & learning

- Professional institutions - require graduates to have sustainability and corporate social responsibility knowledge

- ‘Sustainability’ increasingly part of curricula across the University

- Careers events focused on sustainability sector – we’re working with IEMA

- Students - believe sustainability skills are important to their future employers
  - Employers - anticipate a need to employ staff with sustainability skills
  - Education for Sustainable Development
  - Perspectives on Sustainability NOOC
  - Sustainability, Society and You MOOC
  - Nottingham Advantage Award
FREE ONLINE COURSE

Sustainability, Society and You

Join us for an introduction to the major global issue of sustainability and discover how you can have a real impact on our future.

Register interest
Sustainable Construction

- All new buildings to achieve BREEAM ‘excellent' standard
- Green design principles - low embodied energy, passive design, maximise natural daylight, green roofs, lake source heating/cooling
- Gateway Building at Sutton Bonington uses straw bale construction
Carbon Management Plan

• £10m annual energy costs

• University carbon targets
  - baseline of 68,000 tonnes (2009/10)
  - reduce to 54,000 tonnes/yr by 2015
  - reduce to 41,000 tonnes/yr by 2020

• 57,596 tonnes in 2014/15
  - Like for like comparison 2010 – 2015 Total CO₂ emissions -21%

• £20m new investment programme
  - £5.8m already invested
  - predicted annual savings of 7,600 tonnes/yr
In 2014/2015 our carbon emissions from energy use were 65,366 tonnes.

1 tonne of CO2 weighs as much as 10 baby elephants...

...and would take up the same space as a 10m wide, 25m long and 2m deep swimming pool.
Carbon emissions have reduced by 4.5% since 2008/2009... 

...whilst the amount of buildings have increased by 12%
We spend more than **£11.5 million per year** on ENERGY...

That's **£349 per student**
57kWp PV cells – Lincon Hall student residence
Medical School

- Energy Intensive & Expensive
- Aging Building
- 24/7 Operation
- Electrical £650K
- Steam £1.3m
- Linked to QMC
Salix RGF4 (Large) Medical School

- Installation of high efficiency chilled water plant to replace steam absorption units.
- 3 off units will give an total installed duty of 2MW.
- Total installed cost of £1.45m
- Annual fuel cost saving £276K
- Annual Carbon saving 933 t CO2
Sutton Bonington Campus
Main Boiler House CHP Plant

• 800kW Combined heat and power plant.

• Total installed cost of £1.35m

• Annual fuel cost saving £275K

• Annual Carbon saving 1,250 t CO2
Vets School 1000m² Photo
Voltaic Array

- Maximum output of 145kW with estimated annual yield of 127,115kW.
- Total installed cost of £200K
- Annual fuel cost saving of £23K including the Gov’t feed in tariff.
- Annual Carbon saving 68 t CO2
Sutton Bonington 500kW Wind Turbine

• Proposed installation adjacent to our dairy farm, subject to planning.
• Annual yield of 1,600,000kWh or approx’ 15% of the site electrical consumption.
• Installed cost £1.8m
• Annual fuel saving £289K included Gov’t feed in tariff.
• Annual Carbon savings 807t CO2
In 2014/15 we generated more than 4,300 tonnes of waste... with less than 8% going to landfill.
Mixed Recycling

- Plastic sandwich containers
- Plastic bottles
- Plastic cutlery
- Yoghurt pots
- Paper coffee cups
- Paper
- Magazines
- Cardboard
- Drink cans
- Foil
- Cling film

No food or liquid please
Since 2009 we’ve seen a reduction in the amount of waste generated per student.

2009

2015

More than 120 tonnes of food waste is generated each year and is used to generate electricity through anaerobic digestion.
Travel & transport

• Cycle mileage allowance
• Bike to work schemes
• Ucycle Nottingham
• Intercampus hopper buses
• Improved public transport links including new tram link since Sept 2015
• Staff travel schemes – car share, season tickets
• Video conferencing
Cycle Parking on our campuses has increased by 39% since 2006.

More than 1.2 Million People use our HOPPER BUSES each year.

This has grown from 500,000 in 2006.
Investment in cycling facilities

- Covered/secure cycle parking
- Showers
- Staff lockers
- Drying cabinets
- Puncture repair kits
- Bike pumps in cycle sheds
- Fix-It repair stands
Every day there are more than 2,200 push bikes on campus.

In recent years we have seen a decrease in the number of people driving to our campuses and an increase in those travelling to our campuses by bike.

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<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2015</th>
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<tbody>
<tr>
<td>Cars</td>
<td>57%</td>
<td>48%</td>
</tr>
<tr>
<td>Bikes</td>
<td>8%</td>
<td>13%</td>
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Grounds & Landscaping

Active approach to biodiversity
Green waste used for mulching and compost
Wildflower meadows
Bee hives at King’s Meadow
Diamond Wood planting

Sutton Bonington arboretum
13th consecutive Green Flag award for University Park in 2015
Green Flag for Jubilee Campus from 2013 - Present
Arboretum development across University Park
Communication & Engagement

- Go Greener Halls Competition
- Joint working with SU
- Roadshows
- Environmental Champions
- Posters, guidance documents and staff training
- Website, social media and e-bulletin
Mixed recycling facilities are available on campus for plastic, paper, card, tins and cans. Please recycle.

Wastecycle
Delivering a sustainable future
The University of Nottingham

Instead of putting that in the bin, could it be reused or sent back to the supplier?

www.nottingham.ac.uk/sustainability

Food waste bins are provided in cafés. Please recycle.

www.nottingham.ac.uk/sustainability
Launch of WARPit reuse network

The three Rs are a well-known concept in waste management, but all too often we tend to concentrate on the third of these - recycle. To help address the reuse issue the University has teamed up with WARPit to launch an online exchange system. University of Nottingham staff can use WARPit to redistribute their school’s or department’s unwanted furniture, fixtures, fittings and office equipment.

So why have we signed up to use WARPit?

- It’s easy to use
- Reduces our purchasing and disposal costs
- Increases our recycling and reuse capabilities
- Encourages increased cross-campus and interdepartmental collaboration
- Helps to reduce carbon emissions

The scheme has been running for a couple of months and we have over 100 members already. In the first two months we have seen £39,000 savings, avoided eight tonnes of waste going to landfill and saved 17 tonnes of carbon by reusing furniture and equipment.
Secretary of State for Transport visits world’s greenest university

The University of Nottingham hosted the Secretary of State for Transport on Monday 25 January following the announcement that Nottingham City Council had won £6.1m to fund environmentally-friendly transport to reduce carbon emissions and improve air quality.

During the event, The Rt Hon Patrick McLoughlin MP visited Innovation Park on Jubilee campus to meet with Sir David Greenaway, Vice-Chancellor at The University of Nottingham, which has just been voted the greenest higher education institution in the world.

“Our new GSK carbon neutral laboratory building is the first in higher education to be rated outstanding in its sustainability credentials. And our geo-energy arm at Jubilee is leading the development of the next generation of carbon capture technology, energy storage and solar power,” said the Vice-Chancellor.

Recent investment on campus has included a fleet of electric vans for hospitality services and new electric vehicle charge points, free to use, to encourage more hybrid car commuters.

The University has a clear sustainability strategy, supporting a pledge to reduce its carbon footprint, which dovetails with the wider vision of Nottingham becoming the UK’s greenest transport city.

Andy Nolan, Sustainability Director at The University of Nottingham added that it was excellent news that Government has "chosen to back Nottingham’s ambitious plans for investment in low emission vehicles"
Nottingham campuses are among the greenest spaces in Britain

The University of Nottingham has secured a prestigious Green Flag award for both its Jubilee and University Park campuses — for the third year in a row.

Nottingham was the first university to be awarded a Green Flag in 2003 for University Park, and it has continued to rack them up every year since. This is the third year that Jubilee has also received the accolade.

The University is among a record-breaking 1,582 parks and green spaces that will receive a prestigious Green Flag Award today — the mark of a quality park or green space.
January 22, 2016, by Charlotte Anscombe

Nottingham is number one in the world for sustainability for the fourth time

The University of Nottingham has been ranked number one in the world for FOURTH time in in a list of the most sustainable universities in the world.
Emerging Trends – Challenges & Opportunities

- Student Experience – Linking to Employability
- Smart Campus / Smart Cities & Living laboratories
- Fossil Fuel Divestment
SHOULD THE UNIVERSITY OF NOTTINGHAM DIVEST FROM FOSSIL FUELS?

Chair: Dr. James Corah

In Favour: Tessa Tennant, Tom Parker, Peter Mullard

Against: Timothy Devinney, Dr. Matthew Rendall, Luke Wenman
This is Sustainable Nottingham – a monthly bulletin all about some of the key activities happening across UoN to make the University a more sustainable place to work and study. If you want to receive the bulletin at the start of every month then please subscribe and circulate it to your colleagues. And if you’re involved in any “green” initiatives, then tell us about them via sustainability@nottingham.ac.uk.

£2 million investment in medical school to save carbon and improve thermal comfort

The University has recently started phase two of improvements to the medical school, which will result in both lower carbon emissions and improve the thermal comfort for users of the building.

Read more...
Environmental Association for Universities and Colleges

- 215 Universities and Colleges
- 130 UK and International sector bodies
- 48 Companies
- 5116 active contacts

www.eauc.org.uk
Founded 1996

www.eauc.org.uk
Top Tips

• Focus on how a sustainability programme aligns with your corporate objectives, e.g. student experience, employability, financial drivers
• Ensure strong governance and embed it into the ‘university machine’
• Build evidence-based business cases
• Measure it and report it
• Tell people, tell people, tell people
/Questions?