

ENERGY AWARENESS DAY

The Estates Department organised an **Energy Awareness Day** on Tuesday 24 October as part of National Energy Saving Week, 23 - 30 October. The aim of the day was to raise awareness among staff and students of the damaging effect on the climate of wasting energy.

The major focus of the day was an exhibition in the Black and White Hall, when a number of utilities and energy efficiency companies were on hand to offer some energy saving tips. Among those attending were representatives from NIE, Phoenix Gas, Energia, The Carbon Trust, Energy Saving Trust, the Institute of Energy, Action Renewables, and members of staff from the Estates Department. Energy saving tips were not restricted to computers, laboratories and lecture theatres - there was also advice on how to reduce home energy bills and information on renewable technologies and grants for business and the home.

Phoenix, Energia and NIE also provided prizes - a laptop; i Pod and digital camera - for a special online 'Energy Quiz', which was designed to test staff and student energy awareness.

Last year the University consumed over **73,000,000 kWh** of energy at a cost of almost **£4m**. Electricity equates to approximately 34% of total energy consumption, but accounts for 59% of total emissions and 72% of total energy cost. The Energy Awareness



Queen's Energy Manager, Tony Schmidt, and staff from the Energy Saving Trust



event sought to demonstrate that through simple actions, such as switching off lights and office equipment, staff and students can make a difference.

Energy is an issue that affects us all - climate change and soaring energy prices (150% in the last five years) are constantly in the headlines. As a major employer and educator, Queen's has been working to reduce the carbon footprint of its 18,000 students and 3,500 staff through an energy management program. Tony Schmidt, the University's Energy Manager, explains "Through audits and impact assessments we have changed the way we manage our energy needs and its delivery. Introducing energy suppliers who can provide the majority of our electricity from renewable technology such as wind turbines has cut our CO₂ emissions by 40%. Switching to natural gas has reduced carbon dioxide emissions by a further 16%."

The majority of the University's energy is now generated from renewable energy sources, with a subsequent reduction of 60% in carbon emissions. Use of renewable technologies in the University's current building and refurbishment programme is expected to further reduce CO₂ emissions. For example, the installation of a combined Heat and Power Plant in the newly refurbished Physical Education Centre is expected to reduce emissions in 2006/07 by some 250 tonnes.

Much more needs to be done, however, as there is still a significant amount of energy being needlessly wasted - most of the University's electricity is being consumed outside normal working hours. Staff and students need to get into the habit of switching off lights and equipment at the end of the day. This is particularly important during the Winter Peak Period (WPP), November to February, when electricity prices can increase eightfold between the hours of 1600 and 1900, Monday to Friday.

CAPITAL DEVELOPMENT PROGRAMME

The £170m capital development programme is continuing with a number of major projects currently on site, including the new **Library** in College Park East which has been designed to accommodate 1.5m volumes and 2,000 reader spaces. As the project necessitated demolition of the existing David Bates building in College Park East, a replacement **Mathematics** building is being constructed on the site as part of the overall scheme.



Library Project Estates Team
(From l to r: Bill Annesley, Dean Corry, Isaac Skates, Isabel Bell, Brian Martin, Irene Smith, Joe Scullion)

The Mathematics building is due for completion in early Spring 2007, while phase 1 of the Library building has reached first roof level. Project completion is expected in September 2009.

The development of the **Health Sciences campuses**, to accommodate the expansion of the School of Medicine and Dentistry as well as to consolidate Queen's position as a major player in international research, is continuing to make good progress. The development programme includes refurbishment of teaching and learning facilities, upgrading of services and IT infrastructure, and upgrading of the external fabric of buildings (**MBC and Whitla Medical**). In the case of teaching and learning facilities, a new Clinical Skills facility has been created on the second floor of the MBC, while a refurbishment and extension



Biomedical Library, MBC



IT Facility, MBC

programme on the ground floor has provided a new Bio-medical Library and IT facility.

Developments also include the refurbishment and expansion of teaching laboratories for Physiology and Anatomy on the ground and first floors.

The University's ongoing programme for the development of core technology facilities and generic research accommodation to facilitate world class research has seen the refurbishment of the third floor of the MBC for



Generic lab accommodation, MBC

Biomedical research. The development of the fourth and sixth floors is planned for 2007.

Generic laboratory accommodation allows a seamless expansion and contraction of research groups as their needs change, ensuring optimum use of the existing space. This is in contrast to the traditional laboratory layout characterised by discrete offices and linked labs designed for specific research groups, which necessitated the provision of like facilities in a number of locations, sometimes in a single building.

Also designed on the generic principle, the 4,600m² four-storey **Centre for Cancer Research and Cell Biology** is currently on site and is scheduled for completion in May 2007.

Further projects on the MBC site will include construction

CAPITAL DEVELOPMENT PROGRAMME



Proposed new Health Sciences building

of a new **Health Sciences building** on a site (leased from BCH Trust) close to the MBC and Whitla buildings. This is currently at detailed design stage, with construction programmed to begin in May 2007 and completion scheduled for September 2008 prior to the start of the 2008-09 academic year.

The proposed new four-storey 4,000m² building comprises two separate, and functionally different, blocks of accommodation joined by an internal street. The street is an extension of the current axial circulation route which runs from the main entrance to the Health Sciences campus at the MBC, through to the Whitla Medical building and past the Centre for Cancer Research and Cell Biology.

The south block accommodation is designed to provide cellular office space and small meeting rooms, which will be predominantly low tech and naturally ventilated. The north block will provide larger spaces such as teaching accommodation, generic research labs, equipment areas,

and open plan office/write-up space for research staff.

On the **Royal** site, projects include the refurbishment of part of the **Mulhouse** building, for teaching and academic office accommodation; and refurbishment of part of the Institute of **Pathology** and **Clinical Sciences A** for Biomedical research laboratory and support accommodation. A new 400m² lab in the Institute of Pathology has facilitated the relocation of lab-based research from the Mulhouse building, which was not the most appropriate location. The released accommodation in Mulhouse is being refurbished for teaching and postgraduate use, which will complement the existing and adjacent teaching, library and open access study provision.

Phase 1 of a two phase project to refurbish part of the **David Keir Building** is currently underway. This includes a very significant reorganisation and rationalisation of space in order to bring Architecture into the building to join Planning and Civil Engineering. A further project, although still at the planning and design stage, is a rooftop extension to the building to provide additional studio space for the new School of Planning, Architecture and Civil Engineering.

The School of Chemistry and Chemical Engineering accommodation is also being refurbished to provide additional plant and laboratory space for QUILL and Questor and to upgrade teaching accommodation.

Work is continuing on the upper floors of **1 College Gardens** to create the Student Guidance Centre, a one stop centre for the majority of the services (Admissions, Finance, Student Accommodation, Careers, Disability Services and Counselling) likely to be needed by students during their time at Queen's. Completion is scheduled for summer 2007.

Major capital projects recently completed include:

- Refurbishment of the **Students' Union**
- **Physical Education Centre extension** and new training area
- Refurbishment and extension of 12 - 24 College Green for the **Institute of Lifelong Learning**, as well as for a **Postgraduate Research Centre** for the Faculty of Arts, Humanities and Social Sciences
- Refurbishment and extension of 4-6 College Park East for the **School of Sociology, Social Policy and Social Work**
- Refurbishment and extension of 46 Fitzwilliam Street for the new **Centre for Climate, the Environment and Chronology (Chrono)**



Extension to Physical Education Centre



Student's Union, University Road frontage

The Arena Network survey is Northern Ireland's main corporate environmental benchmark covering 200 leading firms, 26 local authorities, the 19 health trusts, 5 education and library boards and the 2 universities.



The University first entered the survey in 2003 and was placed in the second of the three ranking quintiles. This year Queen's moved up to the first quintile for the first time and is now among the top ranking band of fifty companies and organisations in the province recognised for their effective management of environmental sustainability. This achievement is in no little part due to the University's introduction and implementation of far-sighted policies on waste management, sustainable travel and energy conservation.

Top Award for Environmental Manager

The University's Environmental Manager, Adrian Davis, based in the Estates Department, won a highly prestigious award at the recent Sustainable Ireland Magazine's **Energy, Environmental and Waste Management Awards 2006**. The awards celebrate industry excellence within the island of Ireland in both the public and private sector.

The Award for Best Waste Recycling Manager was presented to Adrian in a ceremony in the Ramada Hotel in Belfast in September attended by over 300 guests. The ceremony was hosted by UTV Live's Environment Correspondent Brian Black and featured Energy Minister, Maria Eagle MP, as the keynote speaker.

Adrian received the award in recognition of his development of the University's Sustainable Waste Management Strategy. One of the main elements of this, the introduction of a highly detailed waste management contract which will result in considerable cost savings, particularly impressed the judging panel.

The new strategy will significantly reduce the amount of waste



L-R: Compere, Brian Black, Adrian Davis, John Gillespie, MD AMI Ltd and Hostess Joanne Crawford

Queen's sends to landfill. Initially formulated to decrease the amount of waste generated across the University, the strategy involves upgrading recycling capacity and an investment in new equipment such as a portable waste compactor and a cardboard baler. Dedicated waste recycling receptacles for waste paper and fluorescent tubes have also been introduced to service the University's 250 buildings.

In the coming year a University-wide waste management program will introduce recycling of plastic bottles, aluminium cans, glass and additional volumes of waste cardboard.

Speaking about the initiative, the Environmental Manager Adrian Davis said:

"A lot of the strategy is about educating people and encouraging individual responsibility for waste and recycling issues. Raising awareness and providing equipment such as recycling stations aim to make recycling habit-forming. Although considerable improvements have been achieved there is still a lot of work to be done. It is important to note the contribution made by the University's Cleaning, Portering and Maintenance staff as without them the improvements to date would not have been as significant."

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