

## **Sustainability and the Estate**

The Institute of Education recognises the importance of good environmental practice in both current day-to-day business and the future development of the Institute. It is committed to minimizing this impact wherever practicable and recognises that all staff, students, visitors, service providers and contractors have a responsibility to contribute towards achieving this goal. The Institute has introduced a number of strategic and operational measures to ensure that all aspects of infrastructure planning include measures arising from our environmental and sustainability strategy.

The strategy is designed to meet environmental legislation and approved codes of practice and to minimise environmental impact as far as is practicable. As part of this strategy, the Institute endeavours to practise responsible energy management throughout its estate, commensurate with the requirements of staff and students. More specifically, the Institute of Education continues efforts to achieve the following objectives:

- To reduce its water consumption.
- To promote energy awareness amongst staff and students.
- To identify and implement energy saving measures and practice energy efficiency throughout all our premises, plant and equipment where it is cost effective to so do.
- To incorporate environmentally sensitive designs into both new and refurbished buildings complying with relevant standards and references.
- To target a reduction in energy consumption in line with the Government's goal of cutting carbon dioxide emissions.
- To promote good energy management practices to other organisations.
- To promote recycling of waste products

The Institute of Education is committed to developing energy efficient, sustainable buildings. The new development on the Thornhaugh Mews site will use ground source heat pumps, supplemented by the CHP scheme. All new projects are subject to demands arising from the sustainability and environmental strategy, including a 'very good' BREAM rating for projects over £1m, ensuring that the 'U value' of the external envelope is improved wherever possible, a demand for 80% recovery of redundant materials from major projects and a demand for green roofs for all new build projects. All internal refurbishment projects also include lighting with daylight corrected lamp output and movement sensor switching.

The Institute is part of the Bloomsbury CHP scheme with other local colleges and over 80% of energy consumption of the Institute's estate comes from the CHP scheme. The efficiency of the system has been recently improved through the

installation of heat exchangers. Data is provided on a six monthly basis from the Bloomsbury CHP scheme to show the reduction in carbon footprint resulting from the scheme, compared to other energy sources. The Institute shares an Energy Manager with neighbouring colleges. The manager, who also acts as Contract Manager for the CHP scheme, is actively pursuing a shared collaborative campus initiative for environmental management.

The Institute's Carbon Reduction Management Plan, approved by the Institute's Estates Committee in June 2010 sets out an organisation-wide strategy for managing carbon emissions until 2015, including key carbon reduction targets and specific actions through which these targets can be met. The Institute's key carbon reduction target is to reduce its annual CO<sub>2</sub> emissions by 30% by the end of 2015 academic year, compared to its 2005 Scope 1 and Scope 2 emissions baseline of 2,673 tonnes of CO<sub>2</sub>.

The plan gives strategic ownership of the carbon reduction programme to the Carbon Reduction Committee, a sub-committee of the Estates Committee. The sub-committee oversees the implementation of the programme and reports on progress to the Estates Committee on an annual basis. The sub-committee, under the chair of the Head of Estates and Facilities comprises members of academic and support staff, the SU and members of the Institute's Sustainability Network.

The Institute has an agreed 2005 baseline of 2,667 tCO<sub>2</sub> and an estimated baseline for 1990 of 1,965 tCO<sub>2</sub> for the non-residential estate. Comparisons of 2005 and 2010 show a significant trend in reducing carbon emissions. Comparisons in relation to unit of income shows a marked decline from 0.0437 (kgCO<sub>2</sub>/£1) to 0.0293 ((kgCO<sub>2</sub>/£1). A similar comparison of emissions per student/staff numbers shows a decline from 718 (kgCO<sub>2</sub>/total staff and student) to 527 ((kgCO<sub>2</sub>/total staff and student). Although these results should be treated with some caution as they show some volatility over the four years, the trend is in the right direction.

To meet the Institute's carbon reduction target, a series of carbon saving projects are underway and will be completed by March 2011. The projects include the introduction of heat exchangers, the extension of trend BMS management system, using networked software to shut down computers out-of-hours, introducing automatic half-hourly sub-metering of utilities in buildings, upgrading lighting and installing automatic sensors and controls, undertaking boiler upgrades, improving the insulation in buildings and installing voltage optimisation equipment in electricity sub-stations.

Since 2007, the Institute has been successful in reducing its water consumption and waste /recycling materials per student FTE and per m<sup>2</sup>. Water consumption

has fallen from 7.40 m<sup>3</sup> to 6.29 m<sup>3</sup> per student FTE (HEI mean of 11.43m<sup>3</sup>) and our proportion of recycled waste has increased by 20% to a level (35%) that exceeds the HEI mean (33%)

The Institute is using its best endeavours to fulfil the requirement to reduce energy and water consumption and to promote sustainability across the campus. despite a number of locational, structural and strategic challenges:

- Situated in inner London, the Institute has no external areas, except a concourse which leads to the main building. It has no grassed areas or external planting. The nature of the estate is therefore challenging in terms of encouraging bio-diversity. A roof garden has been created and there are plans for a number of sedum terraces. However, the listed nature of the buildings makes this problematic. The Institute's location does, however, have benefits in restricting all use of student cars and there is only very limited staff car parking. Cycling and public transport are encouraged in the Institute's travel plan. The Institute has no transport of its own, sharing use of a LPG van with an adjacent college.
- Over 90% of the Institute's estate consists of grade II or grade II\* listed buildings. The ability to make these buildings more energy efficient is particularly difficult because of their heritage status.
- The Institute, unlike many other HEIs, has terms which extend throughout most of the year. The buildings are used from 9am to 9pm Monday to Friday and are usually open during the weekends for external customers. This gives little latitude to restrict usage or reduce the temperature in the buildings.

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