



Heythrop College
Carbon Management Plan

March, 2010

Introduction

This carbon reduction plan is part of the College's response to the growing concern about the impact of human carbon emissions on climate. This concern has been shared by successive governments who have set targets for the reduction of carbon emissions. Hefce gives a high priority to carbon reduction in higher education, in line with government targets, and has produced a strategy in which all higher education institutions are expected to participate¹. It is part of the College's wider Environmental Policy.

Relationship to College's Mission and Strategic Aims

One of the College's draft Strategic Aims is "To provide appropriate facilities and services to foster social, academic and personal growth, thus enabling students to make the most of their time at the College"². It is essential that the College provide these facilities in a sustainable way, both financially and environmentally for the common good. Furthermore, part of the College's mission, as set out in its Mission Statement³ is "to provide leadership in Catholic thought". Concern for the environment is a feature of contemporary Catholic thought and this might reasonably be expected to be reflected in the College's practice⁴.

History of the Management of the Site

Prior to 2009 the management of the site was in the hands of Maria Assumpta Centre. MAC was concerned to make a contribution to the protection of the environment through campaigns to encourage recycling and efficient energy use and through using a supplier who provide electricity from renewable sources. It should be noted that this last approach does not fit with the strategy of the government or Hefce. The College obtains no reduction in the assessment of its carbon emissions from using such a supplier and it involves a significant cost. The change of ownership and management of the site in 2009 requires the College to produce its own Environmental Policy and Carbon Management Plan. One difficulty faced by the College is that the change on ownership and the split of the Maria Assumpta site between the College and the Convent of the Assumption means that there is no historical data available on which the College is able to base its plans.

Reasons for developing a carbon management plan

There are a number of reasons for the College to develop a Carbon Management Plan.

¹ Hefce 2010/01 Carbon Reduction Target and Strategy for Higher Education in England

² <http://www.heythrop.ac.uk/about-us/official-heythrop/strategy.html>

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⁴ See for example Benedict XVI, Caritas in veritate, Ch 4, para 48ff.

1. The Government has a commitment to reduce carbon emissions by 80% of 1990 levels by 2050 and 34% of 1990 levels by 2020. This was reflected in the Department of Innovation and Skills grant letter to Hefce for 2009-10.

2. Hefce require all HEIs to have a Carbon Management Plan in place as part of the Capital Investment Framework 2. Funding under the framework will be linked to performance under carbon management plans.

3. Energy prices have risen sharply over the past decade and this trend is likely to continue over the long term. The College needs to manage its energy consumption in order to control costs.

4. As part of a collegiate university the College is required to take part in the CRC Energy Efficiency Scheme, even though the College's energy consumption is below the threshold for the scheme. Once the scheme is in operation the College will have to pay a charge for each tonne of CO₂ emitted. This was originally fixed at £12 per tonne, which would mean the College paying around £11,000 per year at the current level of emissions.

4. HEI energy and consumption figures are in the public domain, both through the HESA Estate Management Statistics and through the Display Energy Certificates displayed on the main buildings on the site. There is an expectation on the part of students and the general public that HEIs will make serious efforts to reduce their emissions. Failure to do this will have an impact on the reputation of the institution.

5. As is noted above, the College is an institution dedicated to the teaching of philosophy and theology and recognises a moral obligation to work for the common good, including with regard to its impact on the environment.

Current Consumption and Emissions

Hefce expects carbon management plans to take 2005-06 as their baseline. However, the College only took over management of the site in 2009 and the first full year of operation was 2009-10.

Energy Consumption 2009-10⁵

Source	Consumption kWh	Emissions kg CO ₂	Cost £
Oil	1,481,000	417,109	64,561
Gas	745,927	153,027	78,096
Electricity	628,136	340,198	89,302
Total	2,855,063	910,333	231,959

Oil and gas are classified as World Resources Institute Scope 1 emissions directly produced by the institution. Emissions due to purchase electricity are Scope 2 emissions. The College is required to set targets for these

⁵ Taken from the College's 2009-10 Estates Management Statistics return.

emissions. No account of taken, either by Hefce or by the CRC Energy Efficiency Scheme of any reduction in emissions obtained through acquiring electricity from suppliers using renewable sources.

The Main Building and Alban Hall of Residence/Copleston Wing are required to display Display Energy Certificates which rate the energy efficiency of the building on a scale of A-G, A being the most efficient. The Main Building is rated at F and the Alban Hall/Copleston Wing at D.

Indirect emissions resulting from activities of the College are classed as Scope 3. The main sources of Scope 3 emissions are water supply and treatment, waste management, transport and the procurement of goods and services. Emissions from recycled waste are negative because recycling saves on emissions by avoiding the production of primary materials. Targets for these emissions are optional and there are currently no financial incentives to reduce these emissions.

Scope 3 Indirect emissions⁶

Source	Consumption	Emissions kg CO2
Water (cu m)	4,555	4,692
Recycled waste (tonnes)	149	-106,237
Other waste (tonnes)	287	23,247
Total		-87,682

No attempt has been made to assess the emissions due to transport. The College operates no vehicles and provides very limited parking. The only students coming to the College by car are disabled. A very small number of staff come to the College by car. The vast majority of those using the College come by public transport, on foot or by bicycle or motorcycle. There are only a small number of trips taken by staff on College business.

Hefce is working on producing a baseline for emissions from the procurement of goods and services but this is only at an initial stage.

It should be noted that the above figures are for the whole site, including consumption by tenants and St. Catherine's house.

Targets

Scope 1 and 2 emissions for 2009-10 were 910 tonnes. To meet the required targets this needs to be reduced to 600 tonnes by 2020 (34% reduction) and 182 tonnes by 2050 (80% reduction).

⁶This table has been calculated using the formulae provided by DEFRA.
<http://www.defra.gov.uk/environment/business/reporting/pdf/101006-guidelines-ghg-conversion-factors.xls>

Carbon Reduction Strategy

The following strategy aims to provide Specific, Measureable, Achievable, Realistic and Time bound proposals to achieve carbon savings. They are divided into short term (1-3 years), Medium term (4-9 years) and Long term measures (10 years +). The proposals assume the present buildings are retained. If buildings are replaced they will be with new, energy efficient buildings. Where values are yet not available efforts will be made to obtain estimates of costs and savings.

Short term proposals (1-3 years)

Activity	Budget cost (£)	Payback (years)	Potential Carbon Saving (Tonnes)
Replacement of Main Building boilers and heating controls (already planned for 2011)	183,600	42	28
Replacement of air conditioning system in Theology Library (required by 2013)	22,000	11.5	9
Replacement of old and inefficient lighting with new energy efficient types	40,063	2.4	262
Installation of motion sensors to control lighting in classrooms and corridors	1,650	0.6	13
Installation of additional insulation in Alban Hall of Residence (proposed for 2011/12)	3,000	14.6	1
In conjunction with HSU, launch energy saving campaign among staff and students (eg.closing windows, turning off lights and equipment, avoiding unnecessary printing and photocopying improving recycling,)	n/a	n/a	n/k
Install sub-meters for tenants, make better use of existing meters and adjust service charges according to actual usage to encourage energy efficiency.	300	n/k	n/k
Include energy efficiency in the re-tendering of the catering contract in December 2011	n/a	n/k	n/k
Consider fitting heat recovery system to catering refrigeration system	n/k	n/k	n/k
Fit reflective coating to windows or shading devices to reduce unwanted solar gain in Theology Library	3,000	n/k	n/k

Medium term proposals (4-9 years)

Activity	Budget cost (£)	Payback (years)	Potential Carbon Saving (Tonnes)
Replacement of Alban Hall of Residence boilers and heating controls	24,000	23	7
Replacement of IT equipment with newer more energy efficient equipment	n/k	n/k	n/k
Regular inspections of building fabric to check on condition of insulation and sealing measures and removal of accidental ventilation paths	n/k	n/k	n/k
Fitting secondary glazing and/or under glaze sky lights where appropriate	n/k	n/k	n/k
Move to increased use of distance learning through further development of electronic resources	n/k	n/k	n/k
Ensure any new buildings are energy efficient and that construction methods minimise carbon emissions	n/a	n/a	n/a

Long term proposals (10+ years)

Activity	Budget cost (£)	Payback (years)	Potential Carbon Saving (Tonnes)
Consider installing building mounted solar water heating	n/k	n/k	n/k
Replace or improve glazing	n/k	n/k	n/k
Consider installing ground source heat pump	n/k	n/k	n/k

Governance and Monitoring

Strategic responsibility for the implementation, monitoring and revision of the plan will reside with the Estates Sub-Committee report to the Finance and General Purposes Committee of the Governing Body. The Director of Estates will have operational responsibility. The progress of the Carbon Management Plan will be reviewed, published and progress reported annually.

Feedback on the progress of the carbon management plan to building occupants will encourage them to continue with their behavioural changes, making all staff and students feel responsible for carbon reduction.