

## **Environmental Baseline Review**

**March 2008**

### **Introduction**

Aston University is committed to environmental improvement, and is aiming to become a leading establishment for sustainability and environmental management, a commitment which is clearly spelt out in the strategy document Aston 2012. To facilitate this goal the Environmental Policy was adopted in December in 2007, a new post of Environment and Sustainability Manager was filled in January 2008 and the People and Planet Green Education Declaration was signed in February 2008.

The University joined the Environmental Association of Universities and Colleges (EAUC) in February 2008 and is learning from best practice achieved by other Higher Education Institutions.

The main environmental aspects of Aston University are common with other institutions in the Higher Education sector and are outlined in the remainder of this report.

### **Environmental Reporting and Management Systems**

Environment and Sustainability activity is co-ordinated by the Sustainable Aston Working Group, an interdisciplinary group of academic, support staff and students. A network of satellite groups to the Sustainable Aston Working Group is evolving. There are currently sustainability groups focusing on Procurement, the School of Life and Health Sciences and Aston Business School. At Aston University there is also a Fairtrade Steering Group, a Bicycle Users Group and a student People and Planet Group.

There is no environmental management system (EMS) in place at present, but the University has committed itself to the autumn 2008 cohort of the EcoCampus ([www.ecocampus.co.uk](http://www.ecocampus.co.uk)) award. EcoCampus is a national EMS developed by the Higher Education Funding Council for England (HEFCE) specifically for the Higher Education Sector. The Platinum level of the award is equivalent to the international standard ISO14001.

### **Energy Consumption**

In 2006/7, using Estates Management Statistics data, the University emitted 16,410 tonnes of CO<sub>2</sub> through electricity, gas and oil use. This energy consumption cost the University over £2.38 million.

At present none of the University's energy is generated from renewable sources, either on or off site, and no electricity is generated from on-site Combined Heat and Power (CHP). However, a project to install a gas fired CHP plant on site has completed its first stage of planning and is due come on stream in early 2009. It is projected to save 4,416 tonnes of CO<sub>2</sub> per year. As it stands, the first-stage CHP will

reduce Aston's carbon consumption by 25% and reduce unit electricity costs by at least 5%.

This project has the potential to be extended, with additional CHP capacity being powered by pyrolysis of biomass and solid wastes, led by the BioEnergy Research Group (BERG) at Aston University. The BERG is one of the largest University based research groups in thermal biomass conversion in the world.

A rolling programme of refurbishment in learning space, laboratories and office accommodation is underway. As a matter of course, when spaces are refurbished, inefficient lighting is replaced with low energy lighting linked to motion and daylight sensors and better heating controls are installed.

### **Water Consumption**

In 2006/7, using Estates Management Statistics data, the University used 186,192 cubic litres of water, at a cost of £206,599.

Estates and Facilities are currently working to identify opportunities to minimise water consumption. These ideas will inform an action plan and help set targets to reduce water consumption on campus.

Grey or rain water is not currently collected for reuse on campus, but new student residences, which are currently being constructed and will be available for occupation by students from 2010, will have grey and rain water harvesting schemes.

### **Staff and Student Travel**

A staff and student travel survey was undertaken for two weeks in November and December 2005. The modal shares of staff and students are shown separately in the table below.

<b>Mode of Transport</b>	<b>Staff modal share</b>	<b>Student modal share</b>
Car Driver	53.6%	18.6%
Train	20.5%	15.3%
Public Bus	15.7%	37.5%
Bicycle	3.2%	2.8%
Car Passenger	2.7%	1.4%
Walk	1.9%	21.2%
Metro	0.5%	2.1%
Taxi	0.3%	0.2%
Motorbike/Scooter	0.0%	0.7%
Other	1.6%	0.0%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Targets for modal shift, away from single car use and towards sustainable transport, for the period 2008 - 2012 have been set.

297 discounted annual season tickets for bus, train and metro use are currently issued to staff by Personnel. This equates to 27% of staff, but this is likely to under represent the numbers of staff using public transport, as many buy tickets on a pay as you go or monthly basis. It is likely to be closer to the 36.7% of staff identified in the 2005 survey. Plans to increase the uptake of the discounted annual season tickets through a salary sacrifice scheme are underway.

There are 500 car parking spaces on campus, 22 of which are designated for pay and display visitors. There are no student parking spaces (with the exception of a small number individual cases assigned for medical or welfare needs). 575 staff car parking permits, at a cost of £240 per annum, are currently issued and 31 staff are on a waiting list. The allocation and cost of parking permits is under review and a new equitable scheme will be launched in August 2008.

There are 57 cycle parking spaces, but there are plans in place to increase this to 100 in 2008. A salary sacrifice scheme for discounted cycle purchase is being made available to staff from April 2008.

#### **Waste Reduction, Reuse, Recycling, Storage and Disposal**

According to Estates Management Statistics data, in 2006/7 the University sent 380 tonnes of trade waste to landfill and recycled 84 tonnes, including construction waste, paper, card, metal and wood. It has a recycling rate of 22%. This data is based on estimated figures. Accurate tonnages, taking into account all waste contracts on campus, are likely to be higher.

There are currently 183 paper and cardboard recycling stations across the campus.

Domestic waste and recycling from the residences is collected by Birmingham City Council. On campus, there are limited facilities for students to recycle glass, metal and paper in recycling banks located outside student accommodation.

Glass waste produced by licensed premises in the Student Guild and Aston Business School is collected for recycling by Birmingham City Council.

A range of collection mechanisms for specialist waste streams, including electrical equipment, light bulbs, inkjet/toner cartridges, chemical, hazardous, radioactive, clinical, confidential paper, sanitary and green waste also exist.

The University has made a commitment to reduce waste to landfill by 20% in 2008/9, through the introduction of a bin less office system with mini recycling centres for source segregation of waste streams. It is also investigating the on-site composting and treatment of food and organic garden waste.

Waste minimisation is being managed through the procurement process.

### **Sustainable Procurement**

In January 2008 a Sustainable Procurement Working Group was set up. This Group is made up of procurement professionals, academics and support staff. The Group is currently looking at the University's use of paper, from initial purchase through to disposal, waste management contracts, IT equipment, car hire and car clubs.

Fairtrade University status was achieved in June 2007. There is an active Fairtrade Steering Group of staff and students committed to maintaining and expanding the range of Fairtrade goods available on and off campus.

### **Biodiversity**

A Phase 1 habitat survey for a large section of the campus was carried out in January 2007. This was followed up by a more detailed survey of nesting birds and roosting bats in March 2008. These surveys identified the ecological value of the Aston University campus as a green space and an important wildlife corridor in Birmingham City Centre. The surveys propose actions to improve the ecological value of the campus, and an action plan to build on these recommendations will be developed in due course.

### **Sustainable Construction**

There is a visible commitment to Sustainable Construction, evidenced by plans for the new Aston Student Villages project, which is currently underway, and includes a number of practical environmental measures already outlined in this report. Plans for development of the Aston Brain Centre, which is aiming for BREEAM Excellent accreditation, also support this view. These and future projects have been informed by the Estates and Facilities Sustainable Construction Brief for Project Design and Development.

### **Teaching and Research**

Not all environmental aspects are as generic as those listed above. The most critical environmental aspects of a University are those arising from its core business, teaching and research. In 2007, academic working groups were established to drive forward the skills for sustainability agenda at Aston University.

### **Next Steps**

This initial environmental baseline review highlights a number of priorities for environmental action. It is by no means an exhaustive list, and the baseline will be reviewed on an annual basis.

**Lynnette Jones, BSc (Hons), MA, AIEMA**  
**Environment and Sustainability Manager**