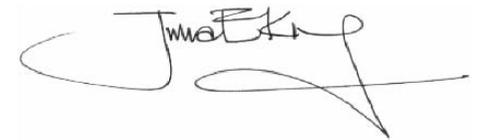


## Sustainable Aston Working Group Annual Report 2009/2010



*"The future of the environment is the responsibility of all of us, both collectively and individually."*



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## Introduction

Aston University is committed to sustainable development and is aiming to become a leader in this field. At the end of 2008/2009 we set ourselves some targets and priorities for the year ahead. In most areas we have made considerable progress:

- Sign up to the 10:10 Campaign, targeting a reduction of 10% in carbon emissions by the end of 2010
  - ✓ *Signed up in September 2009 and currently reviewing progress towards the 10% target. Aston Business School have gone even further by targeting a 15% reduction.*
- Aim to raise our position in the Green League so that we are in the top 10 of all UK Universities.
  - ✓ *This year we were awarded 5<sup>th</sup> place in the Green League, up from 93<sup>rd</sup> only 4 years ago.*
- Plans to focus on waste management in line with our target of zero waste to landfill by 2012.
  - ✓ *We have been working hard at improving waste management and now have a policy in place as well as increased recycling facilities.*
- Development and implementation of a 5-year Biodiversity Action Plan.
  - ✓ *Our 5-year BAP was adopted in June 2010, alongside our Biodiversity Policy.*
- Further targets to reduce the impact of staff and student transport and plans to launch a carbon offsetting scheme for staff business air travel.
  - ✓ *We have increased facilities for cyclists and have introduced guidelines advising staff on sustainable business travel options.*
  - ✗ *However, we have not implemented a carbon offset scheme and we need to redefine our travel targets.*
- Continue to improve on the range of sustainability related modules available and incorporate sustainability into all teaching.
  - ✓ *Specific modules and courses are being developed and integrating sustainability into teaching has become more widespread.*
- Further encourage sustainability related research through the CSI and SERG groups.
  - ✓ *CSI have launched a second round of funding for new projects this year.*

This report expands on these achievements and highlights our progress over the last academic year (2009/2010). It also outlines our priorities and plans for 2010/2011.

## Governance

### ***Sustainable Aston Working Group***

The Sustainable Aston Working Group (SAWG) provides a forum for discussing initiatives and programmes to enhance sustainability within the University environment, curriculum and research as well as within the wider community. The group has continued to support the work of the Sustainability Team, as well as bringing together the work of other groups around the University focused on topics such as 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.



### ***Sustainability Team***

To enable Aston University to deliver its commitment to environmental improvement an Environment and Sustainability Team of three staff is based in the Estates department, where they work together on implementing projects and policies as well as communicating progress to staff and students. They work closely with the rest of the team as well as with SAWG and other departments across the University.



### ***Environmental Management***

Aston University has signed up to take part in EcoCampus, an environmental management system specifically designed for Universities and equivalent to ISO14001. The scheme is a 3 year program designed to help improve our environmental performance. The system is based on 4 tiers - bronze, silver, gold and platinum. Aston received our Bronze award in March 2010, and we are now working towards the Silver award in autumn 2010. We plan to achieve the Platinum award by November 2011

### ***Policies / Documents***

In the last year, to support Aston's Sustainability Policy and other existing policies, SAWG developed a Waste Management policy, Biodiversity policy (both approved June 2010) and Sustainable Procurement policy (approved August 2010). The Carbon Management Plan is also under review, with a new version due for publication in September 2010. All these policies are available for the public to view online, through the Environment and Sustainability web pages <http://www.aston.ac.uk/environment/>.

## Teaching and Learning

Aston has, as one of our targets, committed to ensuring that no student graduates without an insight and understanding of the issues relating to sustainability. To this end, we are working to incorporate some element of sustainability into all subject areas. During 2009/10 we have also made progress on the specific courses we hope to deliver in future.

- An Education for Sustainable Development seminar was held in January 2010, welcoming speakers from the University of Bradford, University of Gloucestershire and University of Plymouth. The event was designed to address the topic of incorporating sustainability into the curriculum.
- The Lifelong Learning Centre Consortium in Sustainable Communities, Regeneration and Environmental Technologies has been launched by the Lifelong Learning Centre (LLC) together with a range of private and third sector partners. Development funding has been secured from FDF and the Birmingham Black Country and Solihull Lifelong Learning Network. The modules available are mainly at level 4 and 5 and so are largely aimed at the continuing professional development market but can be integrated into the negotiated curriculum available via the PT Cert/Dip/BSc Professional Development route run by the LLC. These modules are available from October 2010.
- The development of an MSc Social Responsibility and Sustainability led by Dr Carole Parkes (ABS) and John Blewitt (IDS) with contribution from across the schools. Market research has been undertaken and the results are highly encouraging. New modules have been designed and existing ones updated. Full programme documentation will be submitted later this term with the first cohort of students starting in October 2011.
- The Combined Honours initiative in Sustainability, led by Dr Roy Smith with anticipated contributions from all four Schools, is proceeding and is due to start in 2011.
- Aston University is also a partner in the HEFCE funded LGM project Leading Curriculum Change for Sustainability. Aston's contribution is being led by John Blewitt at the LLC and will largely focus on external engagement, professional development, flexible and e-learning in sustainability.



## **United Nations Principles of Responsible Management Education (UNPRME)**

As early signatories to the UN Global Compact Principles of Responsible Management Education initiative (PRME), Aston was required to submit a report on progress this year. Within this report (available on [www.unprme.org](http://www.unprme.org)) we reported on all six of the Principles as well as providing information on wider university activities.



In June 2010 Carole Parkes, Co-Director Social Responsibility and Sustainability at Aston Business School, addressed a plenary session of the AACSB Sustainability Conference in the US to talk about PRME (Principles of Responsible Management Education) initiatives in the UK. This was followed by attendance at the UN in New York for the 2nd Global Forum for PRME. Immediately after the UN PRME Forum, there was a Global Leaders Summit for Business Leaders (who are signatories to the UN Global Compact) and Carole Parkes was invited to participate in this as a UK Universities representative.

In addition, following the success of last year's event, on 2nd July 2010, Aston hosted the 2nd UK Universities PRME Event with participation and sharing of information on PRME initiatives by Universities from around the UK.

## **Research**

The University has a continuing and growing emphasis on sustainability research including substantial external and internal investments. The most important developments in the past year concern the European Bioenergy Research Institute (EBRI), the Centre for Sustainability and Innovation (CSI) and the activities of the Sustainable Environment Research Group (SERG).

The participation of the Vice-Chancellor, Professor Julia King, in the Committee on Climate Change (<http://www.theccc.org.uk/>) has set the tone for substantial ambitions in sustainability research. Apart from her contribution to a series of reports produced by the Committee on Climate Change, many researchers across the university are actively publishing in a variety of areas related to sustainability including:

- *corporate environmental reporting,*
- *green supply chains,*
- *green operations,*
- *life cycle analysis,*
- *business strategy and the environment,*
- *aspects of sustainability in higher education and lifelong learning,*
- *sustainable transport and low carbon vehicles,*
- *urban ecosystems,*
- *the management of wetlands and desalination.*

The majority of these publications are available through the university's eprints server <http://eprints.aston.ac.uk>.

## ***European Bioenergy Research Institute (EBRI)***

The European Bioenergy Research Institute at Aston University was officially launched in 2008. This past year has seen much research activity as well as the opening of brand new research facilities. With funding from The Royal Society and the Wolfson Foundation, the Royal Society-Wolfson Advanced Biofuels and Bioenergy Laboratory was opened in May 2010. This represents a £650k investment in alternative energy research. The laboratory will be complemented by a further multi-million pound laboratory which will contain a combined heat and power plant powered by alternative fuels, and algae tanks to generate heat and power and which is currently under construction.



Current renewable energy projects being undertaken under the aegis of EBRI include:

- A £6.2m SUPERGEN bioenergy project managed by Aston with 14 research organisations and nine companies delivering a UK centre of excellence in bioenergy and biofuels research and development.
- A €3.73 million research project to develop a renewable biofuel that can reduce reliance on fossil diesel imports in Europe and South America.
- A collaboration with Severn Trent Water company to transform sewage sludge into energy.
- A collaboration with Johnson Matthey to transform pyrolysis gases and synthesis gases into fuels for heat and power engines.
- A £3m project in conjunction with the Indian Institute of Technology in Delhi to develop mini power plants powered by renewable and waste sources in Birmingham and India. The Indian project will help tackle the problem of unreliable energy supplies in rural India and help end fuel poverty.

## ***Centre for Sustainability and Innovation (CSI)***

The Centre for Sustainability and Innovation was launched in spring 2009. CSI has sought to bring researchers from across the university's schools together for collaborative research. In August 2009, several projects were accepted for internal funding across a range of topics:

- Corporate climate change reporting and the media in BRICS;
- Encouraging sustainable behaviours using information processing and behaviour change techniques;
- Engaging different communities with sustainability;
- Tackling Climate Change at the Sub-National Level;
- Green Wash or Green Progress.

These have led to two successful internal workshops presenting results and a further call for projects in the summer of 2010. A series of invited talks and seminars have also been organised with a number of speakers from institutions around the UK and abroad.

## ***Sustainable Environment Research Group (SERG)***



SERG brings together experts from a range of backgrounds; their aim is to develop tools and technologies that conserve and rehabilitate ecosystems while enabling international development. Current research projects include Natural and constructed wetlands; Biodiversity Enhancement and Management; Solar-powered cooling; Brackish water treatment system for villages in India; Tri-generation system for villages in India; Spatial Data Modelling; Micro Combined Heat and Power Systems; Automotive Vehicle Usage and Duty Cycle Development.

In 2009, SERG were successful in receiving funding for both the Coventry and Birmingham Low Emission Demonstrators (CABLED) project focussing on the testing of low carbon cars as a practical alternative to conventional cars in an urban environment, and the Science Bridge Project (in collaboration with EBRI and the Indian Institute of Technology) to build bio-energy power plants promoting renewable energy in the UK and helping to relieve poverty in rural India. In March, SERG also held a successful 2 day international workshop about wetlands, attracting experts from Argentina, India, Germany and Spain.

## ***Aston Centre for Europe (ACE)***

The recently created Aston Centre for Europe held an inaugural even on Green Growth: creating jobs and sustainable prosperity with the participation of a number of eminent speakers. This event was held to try and address the questions of whether a low carbon revolution is possible for Europe's manufacturers; how can governments provide a policy framework that will stimulate innovation in environmental technologies; how can universities contribute to Europe's green growth agenda?

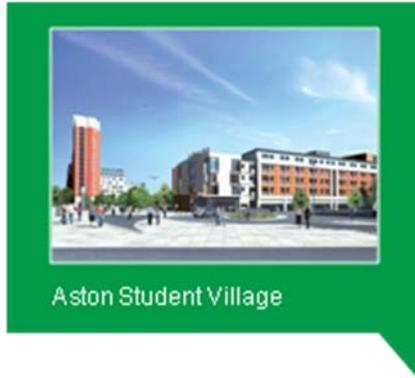
## ***British Science Festival***

This year Aston University hosted the British Science Festival; Aston will now become a regular home for the Festival every 4 years. This year's theme was "Better lives through Science". A number of Aston academics contributed to the events, including many who presented their research into climate change and sustainability. Related events included "Media reporting on Climate change"; "Technologies for Sustainable Transport"; "All aboard the digital Noah's Ark"; "The Bioenergy solution for Birmingham 2026" and many more.



## Estates

### Campus developments



The new residences project, rated BREEAM Excellent, is on schedule, with new students due to move in for the 2010/11 academic year. The second phase of this project will then start, with works due for completion in 2014.

The new residences incorporate a number of energy saving features such as double glazing, automatic lighting and sophisticated heating and mechanical systems as well as various innovative features such as greywater and wastewater recycling, a green roof and a wind turbine on the roof. The new buildings also offer our students improved recycling facilities and cycle parking.

Work has also started on a number of other projects. The library is currently being refurbished, as is the historic Woodcock Sports Centre. The refurbishment of Woodcock is allowing us to greatly improve the mechanical and electrical systems as well as install a pool cover to reduce energy wastage. Construction of the EBRI facility, as an extension of an existing listed building, has begun and work on the new Aston Brain Centre is due to start in October 2010 (finishing by June 2011); both of these new builds will be aiming for a BREEAM Excellent rating.

### Energy

The launch of our on-site Combined Heat and Power plant in October 2009 has meant that we are saving an estimated 4,500 tonnes of CO<sub>2</sub> each year. This will help us to deliver our ambitious carbon reduction targets and will also enable us to sell excess supply onto local organisations as part of a district heating network.

In 2009, we put forward a successful bid for the Salix Revolving Green Fund and received £250,000 of funding for energy efficiency projects. So far, we have spent around half the money on projects to replace inefficient lighting in our library building and some lecture theatres; upgrade boilers on campus; insulate pipework around campus; improve ventilation in the library and install improved fridge controls. These projects are estimated to save us almost £60,000 and 630 tonnes CO<sub>2</sub> every year.



This year, for the second year running, we ran the successful Student Switch Off campaign, encouraging students living in halls of residence to save energy by taking simple actions such as turning lights off and unplugging appliances. The campaign runs throughout the academic year and the average reduction was just over 12%, equivalent to 112 tonnes of CO<sub>2</sub> and over £16,500 of savings.

## **Sustainable Transport**

During 2008/09 we made a lot of progress with transport, which meant that we decided it wouldn't be our top priority in 2009/10. That being said, we did implement a number of new initiatives.

The largest project was the construction of a new showering and changing facilities for cyclists which opened in August 2010. We have also taken on an Electric Smart car which is used by our Vice-Chancellor and other staff members taking local journeys. In addition to this there are plans for 6 electric car charging points to be located in the car park next to the new student residences. We have also increased the opportunities for staff to purchase a discounted public transport pass and we have seen a positive increase in take-up of this scheme.



## **Waste management**



We have now rolled out mini recycling centres across campus, extending the binless office trials that were conducted last year. This means staff and students can now easily recycle plastic bottles, cans and glass. We have also purchased more internal and external recycling bins to allow us to extend this scheme even further. We don't currently receive figures back from our waste contractor so we can't say how far we have gone towards achieving our target of a 20% increase in recycling rates, but feedback has been very positive and we hope to soon have a methodology in place for collecting data so that we can monitor our progress.

We have also extended the recycling facilities in our Lakeside Halls of Residence and the aim is to have recycling facilities in all the flats ready for the new intake in October 2010. The newly opening residences have recycling facilities built in.

As a major step towards achieving our target of zero waste to landfill by 2012 we have also purchased an in-vessel composter which will take all of our catering and garden waste. The Rocket Composter was delivered in July 2010 and we have begun by collecting food waste from our main kitchens and garden waste from our grounds staff. The plan for 2010/11 is to provide staff with compost caddies for the individual kitchen areas so that we can collect even more of our organic waste. The compost will be used on our campus.

## **Biodiversity**

In addition to our Biodiversity Policy and 5-year action plan, which were both approved this year, 2009/2010 has also seen the creation of the Aston Campus Wildlife Group. The Wildlife Group includes staff and students from all areas who have an interest in wildlife and biodiversity. They have

been involved in a number of projects: installing a webcam to monitor the kestrels nesting on campus and ringing the 5 kestrel chicks which were born this year; constructing 2 amphibian hibernacula by our lake to encourage frogs and newts to stay nearby; installing nest boxes around campus and planting a wildflower area to increase biodiversity.

## Community

### *Volunteering*

The staff volunteering scheme has been a great success and has organised a number of different activities for staff to get involved with, including environmental projects such as building an organic allotment and developing a youth centre garden and community projects such as helping children with reading, volunteering at a homeless shelter and providing support for the Dyslexia Association.

Student volunteers also got involved during Student Volunteers week in February 2010. This year's theme was 'Inspiring futures, connecting communities' and students took part in activities such as transforming a nature reserve, helping the homeless and teaching first aid.

### *Fairtrade*

This year was the 3<sup>rd</sup> anniversary of Aston's accreditation as a Fairtrade university and to celebrate we held a cake cutting ceremony and unveiled a new sign promoting Fairtrade in our main reception area. During 2009/2010 the Fairtrade Steering Group also organised a range of events including the annual Fairtrade Fair and a Festive Fairtrade Wine-tasting which was particularly popular! On a more serious note, they also helped to organise the annual MacLaren Memorial lecture in March 2010 which was given this year by Harriet Lamb CBE, Executive Director of the Fairtrade Foundation.



### *Events*

This year we decided to combine a number of our regular events and put our efforts into organising an entire week of events dedicated to sustainability. February 2010 saw Aston's first ever "Go Green Week" with each day themed around one of our campaigns: Meat-free Monday, 10:10 Turn-off Tuesday, Waste-not Wednesday, 10:10 Transport Thursday, Flora & Fauna Friday. During the week we hosted film screenings, presentations and discussions as well as running competitions and activities for our students and staff to get involved.

As in previous years we also hosted events organised by our Fairtrade Group, including our annual Fairtrade Fair and our first Fairtrade Wine-tasting. Continuing on from last year's events we organised a number of second-hand bike sales to support local charity Cycle Chain. During National Bike Week, from 21<sup>st</sup> – 25<sup>th</sup> June, we organised a week of cyclists' breakfasts, information sessions, a self-powered 'smoothie bike' and a bike sale.



## Future plans

SAWG and the Environment Team have developed a number of targets and initiatives for the coming year 2010/11, including:

- Launch our Green MSc through ABS and our Sustainability module through Interdisciplinary studies.
- Conduct further research into the incorporation of sustainability into all teaching and build an action plan to achieve this.
- Further encourage interdisciplinary sustainability related research through the CSI and SERG groups.
- Maintain a top 10 position in the Green League and improve our score in the Universities that Count survey.
- Reach the Gold award phase of EcoCampus, our Environmental Management System.
- Achieve a 10% reduction in our carbon emissions as part of the 10:10 campaign.
- Complete the roll out of recycling across the entire campus, including halls of residence.
- Implement a Business Travel Policy and review targets for staff and students commuting.

These will be reviewed again at the end of the academic year. Our aim is to improve year on year until we reach our goal of being a leading University for sustainable development.