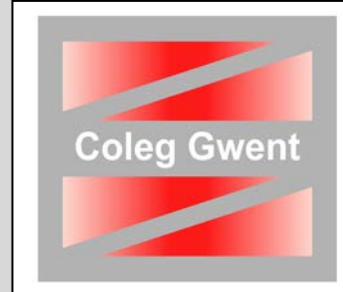


Coleg Gwent Carbon Reduction College 'Eco Footprint'



Profile

- Further Education College
- 1600 staff
- 32000 students

Category supported by



Section 1 About the project

Summary

The aim of the project was simply to produce less waste and use less energy in order to improve the ecological footprint of the college. To achieve this, the college developed an aim to reduce its energy and greenhouse gas emissions and work towards a zero-waste College.

Section 2 The results

The problem

Problem	Solution/Initiative/target
100% of waste sent to landfill sites	Achieve 50% recycle rate
5 separate waste contractors on site	Consolidate waste contract
Total waste produced 733 tonnes	Reduce total quantity of waste produced by 20%
No separation of waste streams	Identify and separate all waste streams
No formal monitoring of energy use	Implement structured energy monitoring, reporting & campaigns
No monitoring of staff business travel	Monitor and reduce staff business travel by 10%
No travel plans available for staff or students	Develop and implement green travel plan and strategy
No consideration of biodiversity	Develop a biodiversity strategy and action plan
No formal environmental awareness training	Develop an environmental awareness programme
Environment and sustainability not formally considered during refurbishment or new building projects	Develop, implement and integrate sustainable design principals and energy efficiency into all construction/development projects
Social responsibility and sustainability not formally considered during the procurement of goods and services	Develop, implement and integrate sustainable procedures and green purchasing strategies

Finalist's case study

The approach

From the very early stages the College identified that to successfully achieve its aim it had to develop initiatives that would be innovative, inspirational and sector leading and make a true impact. To ensure this a clear message was communicated that Sustainability, i.e Waste Management, Energy Management and Carbon Reduction had to be integrated into the day to day management of the college and that it must be given the same priority as all other management decisions affecting the college. This commitment was given by the senior management team and members of the Corporation followed by a series of discussions and workshops with staff, students, contractors and unions, where their views were obtained. The aim of this process was to ensure that from the very start all groups of the college were included and had a sense of ownership and responsibility. As a result a set of challenging but realistic initiatives and targets were agreed.

Performance and results

Waste management

The college prepared a comprehensive tender that would consolidate the waste contract of 5 campuses under one contract. In awarding the contract it was essential that the college core principal of sustainable development was maintained throughout and as a result the college awarded the contract to a Welsh business that was central to the local community of each campus thereby supporting the Welsh Government's strategic plans for a sustainable Wales. Over the period of the contract the college established an excellent working partnership with the contractor that not only improved the college recycle rate but also established a number of student engagement projects. In 2007 the college were sending 100% waste to landfill. In 2013 the college achieved a 87% recycle rate and are currently working on a trial project to send the remainder 13% of waste to a renewable energy plant. It is hoped that this will be implemented by December 2014.

Energy Management

The college identified that one of the main impacts on the environment and its ecological footprint was energy consumption. The college development a number of initiatives;

- Installed voltage optimisation across all 5 campuses
- Departmental/campus energy monitoring campaigns, student engagement and staff awareness training,
- Replaced existing lighting with energy efficient lighting during end of life and refurbishment work.
- Upgrading work implemented to install high efficiency boilers fitted with thermo condensers
- £300K investments in upgrading toilets throughout the college to install waterless urinals, reduced capacity toilet cisterns and automatic water taps which assisted in achieving a reduction of water use by 59%
- Car sharing scheme and Green travel plans developed and implemented across all 5 campuses
- £40k grant invested to provide bicycle shelters and showers at each campus
- £30K grant invested to provide webcams and equipment on PCs to reduce the need for internal staff travelling to meetings
- 90% of all printers removed and replaced with central reprographics and photocopiers
- The college implemented e-tendering process for contractors and service providers, online student handbooks and online payslips for staff reducing the quantity of paper used
- I-pads used by all senior manager and Corporation members at meetings removing need for printing papers
- 82% of all paper purchased is recycled paper

- All building contractors appointed on construction and refurbishment projects are requested to develop a waste management plan (not currently required in Wales) and use waste removal contractors signed up to the Green Compass Scheme for Waste Management Companies. The Scheme operates Publicly Available Specification PAS 402 produced in conjunction with British Standards Institution
- BREEAM standard of excellent achieved for the new campus building at Crosskeys

With the development of departmental/campus energy monitoring campaigns, awareness training, standard tender documentation to include sustainable building techniques, purchase of Green Energy for all campuses, energy efficient systems and the upgrading of services, the following % reductions were achieved

- Electricity consumption = a reduction of some 31%
- Gas consumption = a reduction of some 25%
- Oil consumption = a reduction of some 56%
- Water consumption = a reduction of some 59%
- Total occupied area for the college = 77578.97 m². Therefore the total energy use per m² = 132.7 kWh

Comparison of the CO₂e produced by the college as a result of energy consumption for 07/08 against 13/14.

	<u>2007-2008</u>	<u>2013-2014</u>
Electricity (kWh)	4241593	4540823
Gas (kWh)	11672738	7260793
Heating Oil (kWh)	3460010	0
Total (kWh)	19374341	11801616
Total kg CO₂e	5,414,223	3,805,807

The above information details the reduction in CO₂e achieved by the college since 2007 when the college made its first commitment to sustainability and carbon reduction. This equates to a substantial reduction of some 1608416 kg CO₂e per year on energy consumption alone.

Section 3 The future

Sharing our project

All the initiatives and technologies used to reduce carbon can be used throughout the sector. Even in times of funding cuts and reduced budgets that do not allow other institutions to invest in new technologies/buildings, the initiatives, campaigns and learner engagement programmes implemented can still be used by all.

What has it meant to your institution to be a Green Gown Award finalist?

Recognition of the work that we have done in the area of sustainability would be immensely important to our institution. It would be external validation of the importance that we place on running our business as sustainably as we possibly can. We are a learning organisation and place great value on feedback and praise. Winning this award would be an honour and would rightly celebrate the commitment and high quality of the work of our staff.

Further information

www.colegwent.ac.uk

www.facebook.com/ColegGwent