

Finalist's case study

Loughborough University Continuous Improvement Loughborough's Environmental Decathlon



Profile

- University
- 16,200 students
- 3,100 staff
- Urban
- 7 Queen's Anniversary Prizes

Section 1 About the project

Summary

Loughborough's Environmental Decathlon is a portfolio of ten activities which have been introduced to tackle the problem of Waste & Recycling where it was clear that one activity would not achieve the required results.

Project partners

The project involved working with a number of key Stakeholders including:

- Our accommodation department (Campus Living) and external partners (UPP and Unite)
- Charnwood Borough Council and their waste contractor (Serco)
- The University's main waste contractor – Wastecycle
- WRAP
- Leicestershire County Council
- Local Charities
- Our bin suppliers Wybone and Amberol
- Numerous internal departments but particularly the Accommodation, Catering and Domestic Services Teams

Section 2 The results

The problem

Increasing recycling rates across a 400 acre site with 5000+ student bedrooms in a systematic and consistent manner for multiple waste streams poses many challenges.

The approach

It was clear that to increase recycling there would not be one simple solution. A decathlon of activities were therefore identified, they were:

1. Inter-hall Environment League: Initially launched as an Energy League in 2005/6 this competition was extended to include recycling and environmental proactivity in 2011. The competition runs across all 16 halls (5000+ bedrooms) run and owned by the University, Unite and UPP ensuring a consistent message to students. Funded by each partner on a per bedroom cost the league has a £7.5K budget for marketing and prizes but saves £5K/pa on average in energy costs.

2. External Waste & Recycling bins: This involved sourcing a double external bin which was both sustainable and fitted the aesthetic requirements of our green campus. Working with a UK supplier, an existing single bin was adapted to our design to provide a bespoke solution offering both a recycling and

general waste option. With a 400 acre campus there are in the region of 150 existing litter bins which need to be replaced and to date we have installed 80 of the new dual bins.

3. Internal Waste & Recycling bins: With the aim of standardising bins and their message across the whole campus, we again worked with a local supplier to develop a cost effective, aesthetically pleasing, sustainable bin which worked operationally but also allowed for source segregation. To date over 500 bins have been installed.

4. Food waste segregation in catering operations: As a heavily catered University (35,000 meals per week in catered halls alone) food waste is a significant challenge. Having tried composting some food waste 5 years ago the volumes were just too great and therefore segregation for AD was introduced in 2010.

5. Food waste segregation in self-catered halls: 2013/14 saw a trial implementation of food waste segregation in some halls and over 6 tonnes has already been diverted from landfill. As a result of the trial all self-catered halls now have food waste segregation. Apart from the cost of the caddies and the bags there is little cost to this but the segregated food waste costs less to dispose of than general waste and it is hoped it will improve recycling levels/reduce contamination.

6. Charity Reuse: In an effort to further the implementation of reuse we have been developing stronger links with both local and national charities. As part of this we have visited 6 local charities to review how the items donated are being used and discussed their needs. In addition we now have 8 British Heart Foundation bins on campus.

7. Love Food Hate Waste and the HaFSA: As part of our commitment to reduce waste in our catering operations we signed up to WRAP's Hospitality and Food Service Agreement (HaFSA) in 2012 which included an audit of our operations. Food waste was identified as a significant area of opportunity and as a result we have implemented a Love Food Hate Waste Campaign across all catered halls working in conjunction with Leicestershire County Council and WRAP.

8. Contractor/Financial Management: A key aspect in funding many of the above activities was a need to carefully manage and monitor contractor activities and operations. The joint tender with the University of Leicester in 2010 resulted in the selection of a principle contractor who could provide us with better data, work with and for us on further diversion from landfill and help us achieve the required cost savings.

9. EMS – Operational Controls: The development of our waste and recycling solutions has worked hand in hand with the development of our Environmental Management System (EMS) through the EcoCampus Scheme from Bronze in 2010 to Platinum and ISO14001 this year. This has included a suite of Waste Guidance Notes providing continuity across the campus for waste management.

10. Marketing and messaging – WRAP/IBO recycle campaign: A consistent message has been a key part of all the above developments and this has been achieved through the use of standard WRAP imagery, the Love Food Hate Waste Campaign and our own award winning It's Better OFF campaign.

Our goals

Our goal was to achieve a recycling rate of 75% by 2020. This was achieved by 2012/13 and new targets are now in place. Other goals included:

- reducing waste through increased reuse
- reducing our food waste
- maintaining the waste management budgets at an acceptable level
- improved aesthetics (internally and externally)
- improving town and gown and our CSR relationships
- implementing an EMS (although not solely as part of this project)

Obstacles and solutions

Obstacle:	Solution:
Approval for the aesthetics of the bins	Perseverance! Design your own bins. Show people enough bins and sooner or later they will come round to your way of thinking.
New students each year	Means you are starting from scratch at the beginning of each year and there is no solution to this other than to keep going.
Cost of new bins	Keep asking for money and eventually you get some. Engage with other budget holders to match fund costs but also ensure bins are included in new building budgets.
Contractors	Keep badgering them for support and to deliver on sustainable solutions

Performance and results

The key benefit from our decathlon of activities is the reduction of waste to landfill as demonstrated by the following table:

	Total Waste*	On-site** Recycling %	Overall*** site Recycling %	Energy Recovery**** %	Landfill %
2012/2013	1,840	52%	77%	18%	5%
2011/2012	2,100	49%	72%	11%	17%
2010/2011	1,809	48%	56%	11%	33%
2009/2010	1,799	29%	29%	N/A	71%
2008/2009	2,199	26%	26%	N/A	74%
2007/2008	2,411	35%	35%	N/A	65%
2006/2007	2,097	20%	20%	N/A	80%
2005/2006	2,092	9%	9%	N/A	91%

* Excludes Construction Waste – figures in tonnes

** Waste and Recycling segregated on site by staff and students

*** Includes Waste and Recycling segregated by our contractors but this costs the University

**** Waste is incinerated and energy recovered for use in cement manufacture.

Other intangible benefits include:

- A better customer experience for our students
- Improved working relationship with the council and joined up system and messaging which ensures that students leaving campus are familiar with how to recycle and the University and Local Authority systems are the same
- Financial efficiencies/savings in waste management costs
- Financial savings in food purchasing – the disposal cost of food waste is a bit like the tip of an iceberg, so much more is saved in purchase and preparation costs
- The Environmental Management System (EMS) requires continual improvement and this includes waste management as one of our significant environmental impacts. Internal stakeholders also expect a reduction in costs and waste volumes as well as minimising carbon emissions from waste management
- The establishing of working relationships with a number of local and national charities in order to develop the reuse of resources from the campus

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The positive, but unexpected, outcomes of these activities include:

- Enhanced reputation of the University within the community for how it manages its waste and how it is supporting local charities.
- The opportunity to employ a graduate of the university in the field of Environmental Sustainability and to provide them with a stepping stone into a career or further education in this area.
- Improvements in the Town and Gown relationship through the work with local charities. This has also led to partnerships that support our social responsibility initiatives, such as the Ethos Project, which seeks to support individuals, who have been homeless, back into work.
- Understanding the needs of charities, promoting better partnership working rather than just offering them what we no longer need.

Section 3 The future

Lessons learned

The project shows how a university can deliver best practice by engaging stakeholders in a multi-faceted approach to tackle waste and increase reuse and recycling. All aspects which make up the decathlon could be replicated within similar institutions, and some aspects could be replicated across all institutions. To maintain focus and buy in to this aspect of Environmental Management an original approach to day to day operations was required, notwithstanding culture, student interests and overall performance targets.

The challenges faced (and lessons learnt) included trying to work with national campaigns which did not always fit with student lifestyles and the size of our university (e.g. the HaFSA agreement is not really designed for businesses serving 35,000-50,000 meals/week), but also in trying to find bins which worked operationally, were sustainable, aesthetically pleasing, and conveyed a recycling message.

Sharing our project

Dissemination to date has been both proactive, for example sharing with collaborating Universities in the East Midlands with whom we meet regularly, and reactive where we have enthusiastically discussed our approach with people who ask about it. In the future, a case study will be prepared to further disseminate this to a wider audience after the Green Gown Awards.

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

We are proud to be shortlisted as a finalist and know the competition is tough.

Further information

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