

Clare Environment Committee Annual Report 2014-15

May 2015

The Environment Committee was set up in Michaelmas Term 2011 and aims to bring together expertise, energy and ideas from staff, students and fellows to help reduce the College's environmental footprint. We've made substantial progress this year on several fronts, with suggestions from staff and students and investments in infrastructure all starting to yield significant dividends. These achievements have been recognized by an important University award, and by a spectacular leap up the inter-college Green League Table.

Energy

1. Based on data for 2013-14 Clare rose an astonishing 16 places (to 2nd) in the Green League Table for CO₂ emissions. This year has seen the development of many new initiatives aimed at sustaining that progress.

2. After disappointing results from participating in the national Student Switchoff campaign, Clare has withdrawn from the scheme and instead developed its own awareness-raising activities led by UCS rep Jamie Osborn. These have included the deployment in gyp rooms and staircases of witty posters, designed by Johnny Tam, encouraging students to switch off lights, turn down heating and avoid over-filling their kettles. Meanwhile MCR rep David Williams developed a set of "House Rules" for lowering energy and water consumption in graduate accommodation.

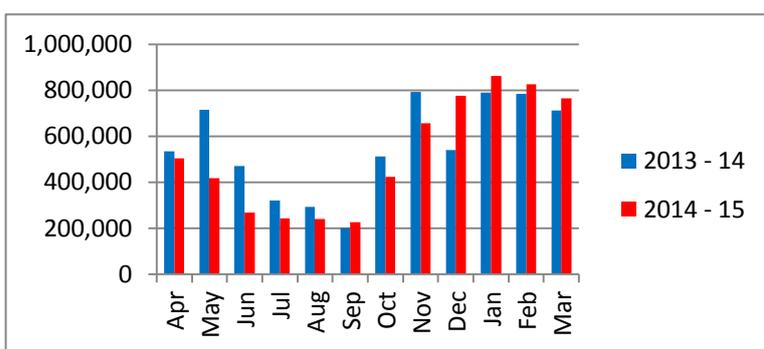


3. Alongside these efforts Jamie and Accommodation Manager Jackie Searle piloted an energy-saving competition for first-year undergraduates living in Memorial Court. During late October and November bedders kept a log of lights and appliances left on unnecessarily and of heating left on with the windows open, and the staircase that had the best record of not wasting energy won free tickets to the Michaelmas Green Formal Hall (as a result of which one of the winners became vegetarian!). The results were encouraging - with a 10% reduction (compared to 2012-13) in Memorial Court electricity use in October and November. Across Michaelmas and Easter terms combined the reduction was 4% - a saving worth ~£2000 - but the benefits evidently declined after the competition ended. We therefore plan to extend the competition to run throughout the next academic year.

4. Buildings Manager Deborah Hoy and her team have overseen several improvements to the College's heating infrastructure, including the installation of boiler optimisation for seven staircases in Memorial and Thirkill Courts, insulation in Castle Brae, programmable radiator valves in St Andrews and Castle Brae, and Automatic Meter Readers (AMRs) for monitoring gas use across the estate. Installation of AMRs for tracking electricity consumption will begin in July.

5. Over the last year Deborah has also changed the heating settings dramatically. The college used to be heated for 365 days of the year. This changed in May 2014, when the heating was turned off until October. There has since been an early mornings and evenings regime (October-November, and Easter-May), with a winter regime (0600-2330) from November to Easter. There have been almost no complaints, but several thank-you messages from previously overheated students.

6. Together these changes to how Clare is heated have led to a fall in the overall gas consumption of the College buildings of 6.9%. May and June consumption was an astonishing 40% less in 2014 than in 2013. These reductions in gas use have saved the College over £27,000 this year.



Monthly College gas consumption (in kWh), 2013-15.

7. Staff representative Sam Ludford has worked with the IT and other departments on several promising ideas, including introducing a power-saving policy on staff PCs, and testing the use of timer switches for office equipment. Both initiatives will be rolled-out over the next year.

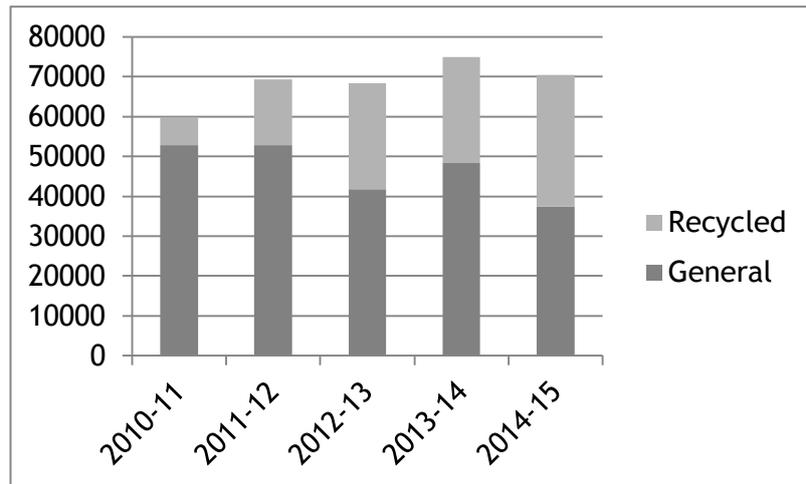
8. Jackie Searle has this year overseen lowering temperature settings for washing machines and begun reducing the provision of tumble driers. Alongside this David Williams has produced an easy-to-use spreadsheet for calculating payback times of energy-saving appliances.

Waste

9. Jackie Searle and her team have done a tremendous job of continuing to improve the College's waste management. Based on data for 2013-14 Clare was ranked first equal in the Green League table for access to recycling facilities.

10. There have been further improvements over 2014-15. Provision of recycling facilities in graduate accommodation has been increased over the year, and all undergraduate rooms now have recycling bins which are emptied three times each week (compared with only twice a week for general waste).

11. As a result this year the College produced its lowest recorded volume of general waste, and recycled 47% of its overall waste - a higher proportion than ever before. Because collection charges for recycled waste are lower, this effort saved College approximately £7200 this year (compared with the cost if we had produced our 2014-15 level of waste but recycled at 2010-11 levels).



Waste (in litres) produced each week in College.

12. Over Easter 2015 Head Gardener Steve Elstub switched from using skips to green bins for non-compostable waste. This has already saved College over £800, with potential for much greater savings into the future.

13. As well as looking at new ways of further improving recycling rates, next year Jackie will switch the College's sanitary bin contract to a company with both lower costs and a lower carbon footprint.

Catering

14. Catering manager Lee Corke has worked with the UCS and MCR reps this year to host two Green Formal Halls. The events included talks by outside speakers on links between food and the environment, offered vegetarian- or vegan-only food, and proved extremely popular.

15. The Committee continues to be concerned about consumption of meat and dairy products - which have a far greater environmental footprint than other food items. The academic year 2013-14 (the last with full data) saw a 15% rise in meat purchases over the previous year. Growth now seems to be slowing, but over the first seven months of 2014-15 purchases still rose by a further 1%. Understanding and addressing this increase will be a priority for the Committee next year.

16. Working with Lee, Jamie Osborn has made quite a bit of progress towards achieving Fairtrade accreditation for the College. Clare now sources more Fairtrade products than ever before. We hope for full accreditation in 2015-16.

External recognition

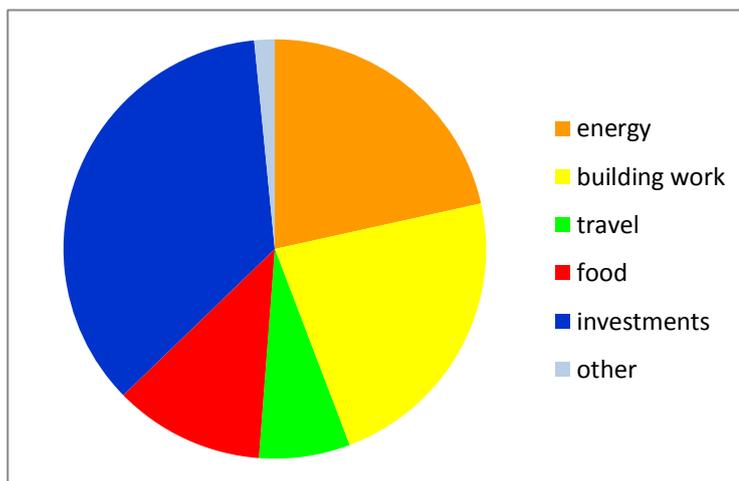
17. Recognition of the College's efforts to reduce its footprint came with the tremendous news of Clare's success in the 2014 round of Green Impact - the University's environmental accreditation scheme. This is focused on the level of all-round engagement in improving environmental performance. The Clare team, led by Deborah Hoy, succeeded in winning a Gold Award - a really impressive

achievement, and remarkable given that this is their first application to the scheme.

18. The latest Green League Table (announced in April 2015) rated Clare as the second-best performing college (out of 21, up from 18th the previous year). The ranking is based on the systems each college has in place to reduce its footprint, and its record on emissions, water use and recycling.

A wider context

19. Andrew Friend has produced a first overview of the entire greenhouse gas footprint of the College and the work-related activities of the staff, students and fellows, which provides extremely useful context for all of our efforts. The figures are still very preliminary, and many are only rough estimates, but the broad patterns are interesting. Based on the most recent available data, only ~22% of all our emissions come from our direct consumption of gas and electricity. Construction and building maintenance are responsible for ~23%, and travel to and for work ~7%. Strikingly, food consumption accounts for 12% and emissions arising from our investments (not yet addressed at all by the Committee) a further 36%.



First estimated breakdown of the College's entire greenhouse gas footprint, based on the most recent figures available. Energy is calculated from annual gas and electricity consumption in College buildings; building work covers maintenance, and 2012/13 work on the Newnham Road development; travel comprises staff and fellows commuting to College, work-related flights by fellows and staff, and prospective candidates' journeys to Open Days; emissions from food are based on spending of £0.6M/y, and those from investments on a return of £7M/y. Emissions from Clare's farm are not yet included. Total emissions are estimated at ~9400 tonnes CO₂ e/y.

During the coming year we will explore the implications of this important assessment for the future work of the Committee.

Committee members, 2014-15

- Andrew Balmford (Chair)
- Lee Corke (Catering Manager)
- Steve Elstub (Head Gardener)
- Andrew Friend (Fellow)
- Deborah Hoy (Buildings Manager, supported by Paula Yardy)
- Sam Ludford (Staff Representative)
- Jamie Osborn (UCS Green Officer)
- Mick Petty (Steward, and Committee Secretary)
- Jackie Searle (Accommodation Manager)
- David Williams (MCR Representative)
- Nigel Woodcock (Fellow)