

The Environment Committee works to bring together expertise, energy and ideas from across the College to help reduce Clare’s environmental footprint.

Headline achievements for the year:

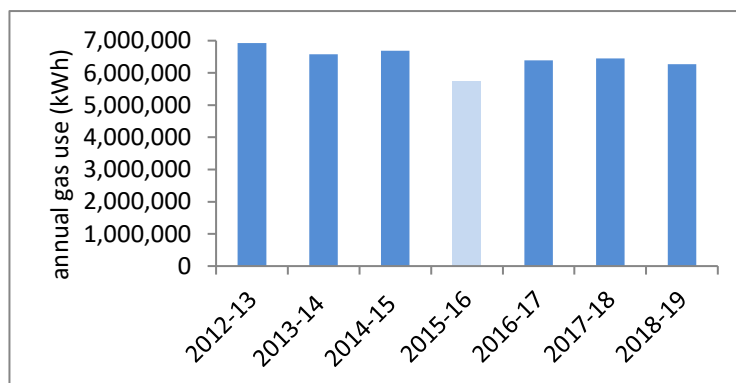
- Platinum award in University’s Green Impact competition
- sustained reductions in gas and electricity consumption
- ground-breaking plan to greatly reduce embodied emissions of St Regis building work
- successful pilot for composting student kitchen waste
- removing most single-use plastics from Buttery

Green Impact competition

1. Led by Jo Costin, Clare’s Green Impact team carried out an exceptional 86 out of 92 assessed actions, were the joint highest-scoring of all colleges, and will soon receive a Platinum award for the second time in three years. Clare has now won the highest award possible in the competition in four of the five years it has entered. Clare’s Green Impact trophies are on display in Old Court Porters’ Lodge.

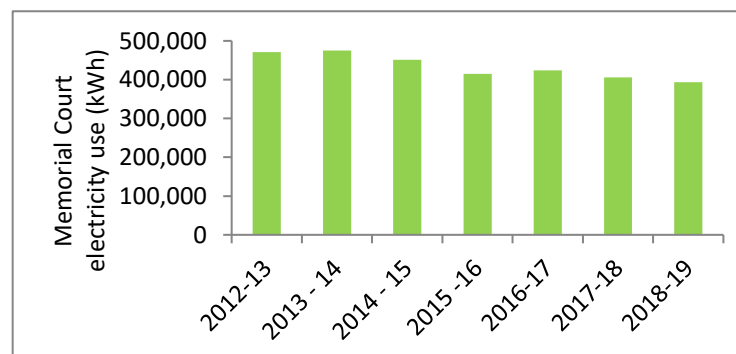
Buildings

2. Close monitoring and control of gas consumption has seen a further fall in gas use this year - now 9.4% down on 2012-13 levels. As a result the College-wide gas bill is over £12,000 per year lower than it would have been (applying current prices to our 2012-13 consumption). Boiler replacement at 190 Chesterton Road saw a 15.8% drop in consumption compared with 2017-18.



Annual College-wide gas consumption since 2012-13, when energy-saving initiatives began. Note that metering problems mean the figure for 2015-16 is probably underestimated.

3. College-wide electricity use was 6.4% lower than in 2017-18. In Memorial Court, for which we have the longest run of data, this year’s consumption was 16.5% lower than our 2012-13 baseline.



Annual Memorial Court electricity use 2012-19 (in kWh).

4. Reducing our footprint has been key to several elements of work on the new building at St Regis. The furniture and fridges we are replacing have been re-used, largely through Emmaus, and the boilers deployed elsewhere in College. Thanks to greatly improved insulation and more efficient heating and lighting systems powered by a Combined Heat and Power (CHP) plant the new building will have considerably lower gas and electricity consumption than its predecessor.



Artist's impression of the new St Regis.

Deborah Hoy's buildings team has also worked closely with the designers to identify an innovative way of reducing the embodied emissions in the construction materials themselves. These are often overlooked in building projects, yet at Clare these have at times probably matched all the College's emissions from direct energy use. For St Regis we have opted to replace 50% of the Portland cement used in the construction with blast furnace slag - a waste product from steel production which, without affecting costs, provides the same mechanical properties while avoiding the extremely high greenhouse gas emissions of conventional cement manufacture. Clare CRA and industrial ecologist André Cabrera Serrenho estimates this single initiative will reduce the embodied emissions of the entire project by around 25%.

Waste

5. This year has seen trials of an initiative led by third-year undergraduate Izzy Rudd to turn food waste in student kitchens into compost (via the Amey waste plant at Waterbeach), rather than continuing to send it to landfill (where it decomposes to produce methane, a powerful greenhouse gas). The project has been successful on all three trial staircases in Memorial Court, with close communication between staircase volunteers and Jackie's Searle's team ensuring bins have stayed clean and tidy. Incoming UCS Green Officer Abby Glaze-Reynolds hopes to roll out the programme more widely next year.



photo: Izzy Rudd

6. MCR Rep Dan Whitaker has produced a guide for departing students explaining how to find good homes for unwanted clothes and household items that are not suitable for the British Hearth Foundation's end-of-term collection scheme - including duvets, pillows and even clean underwear.

Catering

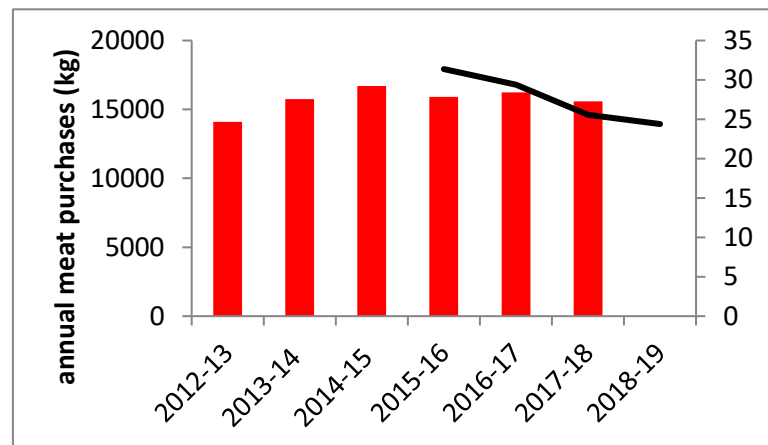
7. Data from Lee Corke continues to show high uptake of vegetarian and vegan food among student using the Buttery. These options now account for around 40% of all meals sold, which is substantially above typical figures for other colleges, which run at 20-30%.



Uptake of meat vs vegetarian main courses in Clare Buttery. Note that figures for 2016-17 and 2018-19 are based on incomplete data.

8. Dr Moore has organised two vegan high table events over the year - one in each of Lent and Easter term - and Lee has recently introduced veggie Mondays for lunch and dinner in the Buttery.

9. Despite this, college-wide consumption of meat and dairy products continues to be a concern to the Committee, given the far higher footprint of animal-derived protein. As one example, a recent review estimates meat from ruminants (cows, sheep, goats) has over 40 times the greenhouse gas footprint of legumes (Clune *et al.* 2017 *J. Clean. Prod.* 140: 766).



College purchases of meat, 2012-19. Bars show total purchases (left-hand axis) while the line shows the % (by mass) made up of ruminant meat (right-hand axis). Note that the ruminant data for 2018-19 are incomplete.

Careful tracking of Clare's purchases suggest that meat use has declined in recent years - last year it was 6.7% lower than in 2014-15 - but it is still 11% higher than our 2012-13 baseline.

10. More encouraging is the recent fall in relative use of ruminant meat (which has a far higher footprint than pig products or poultry): this has declined from 31.4% of meat purchases in 2015-16 (when data gathering began) to 24.4% in 2018-19. Interestingly over this same period the University Catering Service has almost entirely eliminated ruminant meat from its meals, as part of its award-winning Sustainable Food Policy. This has enabled it to cut its greenhouse gas footprint (per kg of food purchased) by an extraordinary 33%, while at the same time increasing overall sales. It seems changing the sorts of meat offered may present as much scope for cutting Clare's food footprint as working to reduce overall meat consumption.

11. Lee's team have successfully removed most single-use plastic items from the Buttery - a move which has received strong student support.

Gardens

12. Steve Elstub and his team have continued to enhance the value of the gardens for wildlife, putting up several new bird and bat boxes, nurturing the “wild border” that runs along the mixed shrub line of the Fellows Lawn, and supporting the ecological survey work involved in the update of the Backs Master Plan. The gardens department is also working to increase its use of peat-free compost.

13. One particular highlight of the year was a biodiversity walk and talk, led by Ed Turner, which focused in particular on the pond and the wild border and proved extremely popular with students, staff and fellows. We hope to run similar events in future years.



photo: Deborah Hoy

Committee members, 2018-19

Andrew Balmford (Chair)

André Cabrera Serrenho (CRA Rep)

Lee Corke (Catering Manager)

Jo Costin (Secretary)

Steve Elstub (Head Gardener)

William Foster (Fellow and Acting Chair for Michaelmas term)

Andrew Friend (Fellow)

Deborah Hoy (Buildings Manager)

Gepetto Price (Staff Rep)

Izzy Rudd (UCS)

Jackie Searle (Accommodation Manager)

Ed Turner (Fellow)

Dan Whittaker (MCR Rep)

Carl Young (Senior Conference Administrator)