

Fulcrum should be considered for the best 100 days campaign not just because of our efforts to reduce carbon emissions as a company but also for the awareness we've raised as a result of publicising our endeavours.

At the start of the campaign we set ourselves the imaginative target of reducing our annual carbon emissions by the volume of our building (approx 6 tonnes CO<sub>2</sub>) and produced a graphic to illustrate our progress (Fig1). As our building is naturally ventilated with no mechanical air conditioning or lifts we have had to be more creative in our search for carbon savings. Therefore our campaign concentrated not only on reducing our energy consumption but also on wider issues which also have an environmental impact. For example we switched to using 100% recycled paper, producing calculated CO<sub>2</sub> savings of around 2.3 tonnes per year. Savings were also made by increasing the amount of double-sided rather than single-sided printing by making it the default setting on all computers.

We also focused on recycling our waste. We initially had very poor recycling rates (See Figure 2), but are now recycling a significant percentage of paper, card, magazines, glass, cans, plastic bottles, and juice cartons. Despite searching the internet for figures, we were unable to quantify CO<sub>2</sub> savings but are confident that our efforts in this area have not been wasted as there are of course wider environmental benefits from recycling.

In a bid to get all employees thinking about their personal actions we asked everyone to complete the 'Edge Pledge' which calculates a household's carbon footprint. Although only just over half the office completed the form, when the results were publicised on the intranet they generated a lot of interest and debate as the average Fulcrum employee has a carbon footprint of 8.9 tonnesCO<sub>2</sub>/year, with almost 75% of this from transport (see Figure 3).

More conventional aspects of our campaign focused on reducing our energy usage. Examples included putting time switches on all our hot water boilers, DID's (printers) and the plotter; increasing the temperature of the small air conditioning unit in the server room from 22°C to 24°C; raising awareness within the office so that people would turn off their desk fans and computer monitors when not required; and not turning the main lights on unless absolutely necessary (and turning them off when no longer needed). Our IT department joined in and researched the power consumption of new PC's before deciding which model to purchase, meaning that the latest consignment are 16% more efficient than the old ones they replace.

We purchased a number of 'energy monitors' into which you can plug any electrical item to see how much power it uses (see Figure 4). As well as allowing us to calculate the CO<sub>2</sub> savings of individual initiatives, this helped to raise awareness within the office about the amount of electricity everyday items used. People were encouraged to take the monitors home to check out the energy usage of their TV's, stereo's, kitchen appliances, phone chargers, etc. We have collated the results and published them on our intranet to share this knowledge amongst all employees.

Our campaign achievements also include a shift in purchasing policy. Not only do we now purchase 100% recycled copier and toilet paper but also Ecover cleaning products and fair trade tea and coffee. We have also sourced the fruit in the office fruit bowl more locally. Although some of these items do not have quantifiable CO<sub>2</sub> savings, they reduce the environmental impact of our workplace and hence are another positive outcome from our varied '100 days' campaign. We are also in the process of switching our electricity contract over to a 'green' tariff, although this won't happen until our present contract runs out in November and so couldn't be included in our totals.

The CIBSE TM22 reporting method only looks at yearly electricity and gas use, so we came up with a calculation methodology to be able to quantify savings from other aspects of our campaign (e.g. switching to recycled paper) as well as taking proper account of our energy savings. Comparing our meter readings over the 100 days with those over a similar period last year we discovered a 30% reduction in electricity use. Overall we calculate that we have saved 6.5tonnes/year of CO<sub>2</sub>, which also means that we managed to exceed our target of saving our building's worth of CO<sub>2</sub>! See Figure 5 for a breakdown of these savings.

All the way through our 100 days we kept a blog on our progress. This has been available through the Science and Nature section of the BBC News website: <http://news.bbc.co.uk/1/hi/sci/tech/5057334.stm> (Figure 6). We have had a lot of positive feedback and encouragement as a result of this diary which gives a very honest account of our 100 days and the successes and failures of our campaign. It has been a great platform for us to share our experiences and make them accessible to a wider audience.

In order to take these efforts forward we undertook a BREEAM assessment for our building. This showed that we currently achieve a rating of Good. We have already identified a number of measures which should enable us to reach a rating of Very Good within a year and Excellent by the end of 2008 and have management by-in to do this.

Our 100 days campaign has not just been a short-term gimmick, we have used the allotted days to educate ourselves and others and to drive long-term changes to our company policy. The core team of three Fulcrum employees (Susie, Tessa and Andrew) deserve to be recognised for their enthusiasm and achievement by winning this award.

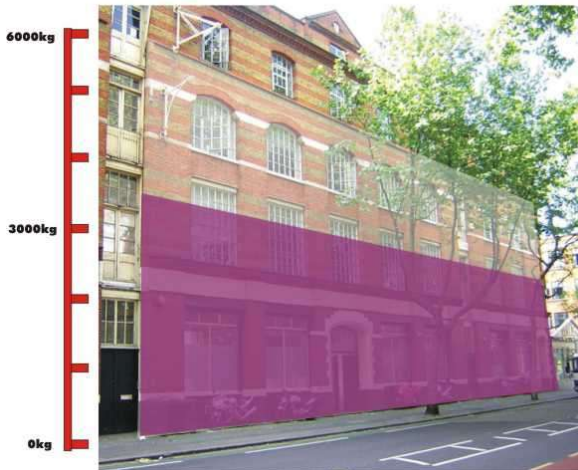


Figure 1: Build-o-meter showing carbon savings part way through the 100 days campaign

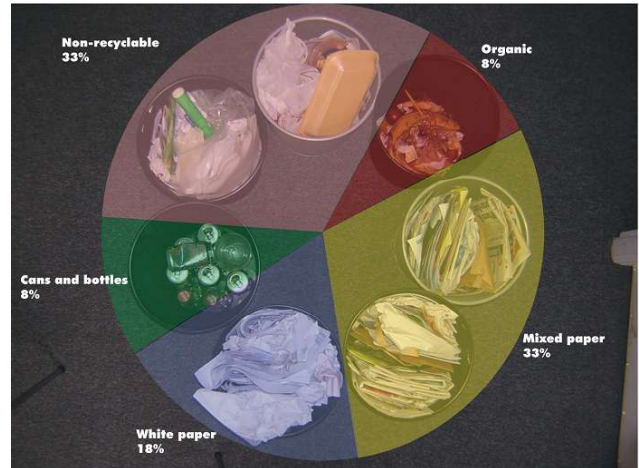


Figure 2: Results of waste survey showing that we could recycle up to 59% of the waste which usually ends up in the back of a refuse lorry

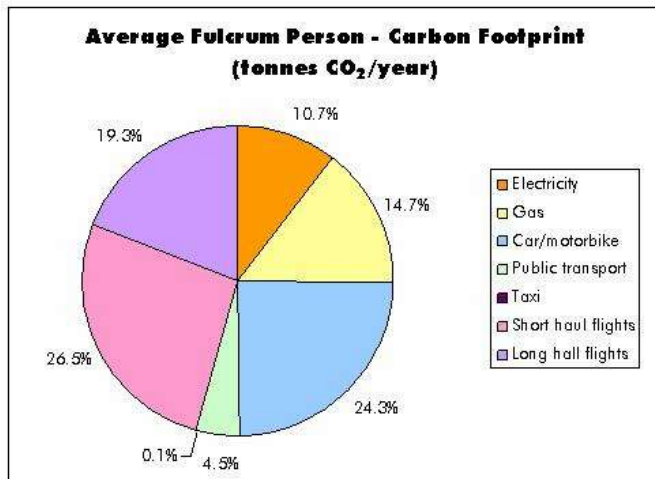


Figure 3: Breakdown of average Fulcrum employee's carbon footprint (8.9 tonnes CO<sub>2</sub> per year)



Figure 4: Energy monitor

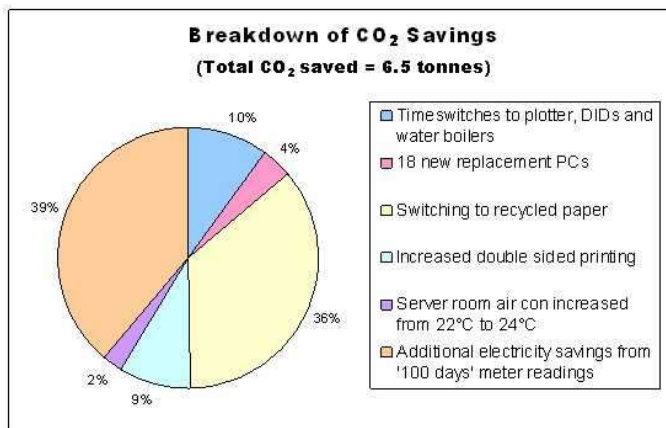


Figure 5: Breakdown of calculated CO<sub>2</sub> savings as a result of our 100 days campaign

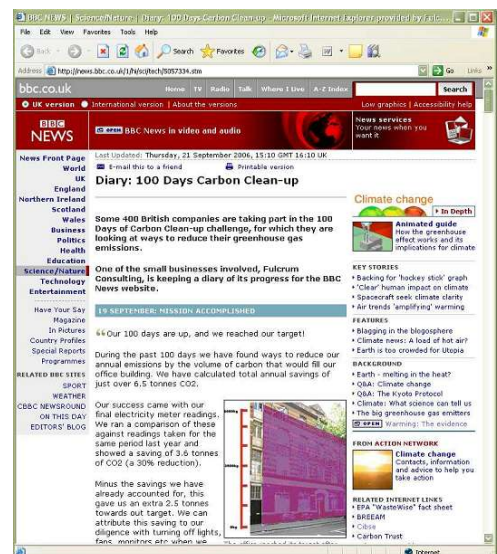


Figure 6: BBC Blog