

Introduction

BioRegional were awarded funding by Defra's Community Energy Efficiency Fund to develop an implementation plan to assist Sutton households in increasing their energy efficiency, reduce fuel poverty and enable domestic ecological and carbon footprint reductions. The ultimate aim is to enable households in Sutton to minimise carbon emissions and work towards creating the UK's first zero carbon borough as well as reducing household's ecological footprint from three planets to one whilst enhancing quality of life. This project is part of the overarching One Planet Living in Sutton Programme.

The project ran from September 2007 – March 2008. The aim was to launch the programme in March 2008 running until at least 2012 and to assist at least 300 homes per year including 150 vulnerable households.

The project focussed on the following key areas:

- Options Analysis
- Insulation Promotion
- Community Engagement
- Hackbridge Sustainability Home Visits
- Hackbridge and Sutton Housing Stock Analysis

We've included information about the Sustainability Home Visits below, but if you would like to read the full report please contact anna@oneplanetsutton.org

Hackbridge Sustainability Audits

While fuel poverty and assisting priority groups was and will remain a key area of our work, we wanted to offer all households holistic sustainability audits, focussing on energy efficiency and identifying free and subsidised measures for each household but also looking at other key impacts such as waste, transport, food, materials and water. We decided to develop and trial our approach in Hackbridge throughout March.

Questionnaire

A questionnaire was developed, focussing on Energy efficiency and sensitively asking questions about benefits and income levels in order to identify priority groups and any free measures and income maximisation opportunities. The questionnaire was also designed to work with an ecological and footprint calculator (<http://footprint.wwf.org.uk/>) in order to give households an idea of their overall footprint and strategies for reducing costs and impact. Advice on energy efficiency and other aspects such as recycling was also given during the audit.

Tailored report and supporting resources

A Hackbridge specific sustainability report template was developed (see Appendix C) focussing on energy efficiency, free and discounted measures and other key elements such as waste, sustainable transport and local food options. A range of supporting resources were also acquired. Every visited household received an energy efficient light bulb (courtesy of Philips). Each report was tailored to highlight the households individual carbon emissions and footprint and key impacts and a range of resources were provided, these included: energy saving leaflets, green tariff comparisons, information on renewables, an Inconvenient Truth DVD, cycle lights, cycle and walking maps, information on car clubs, real nappies, information on water saving and water saving devices.

Auditors

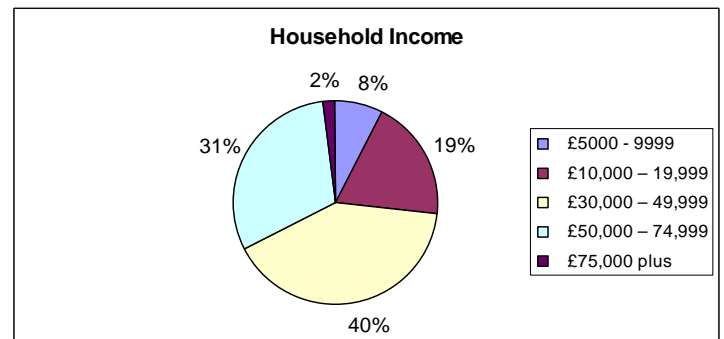
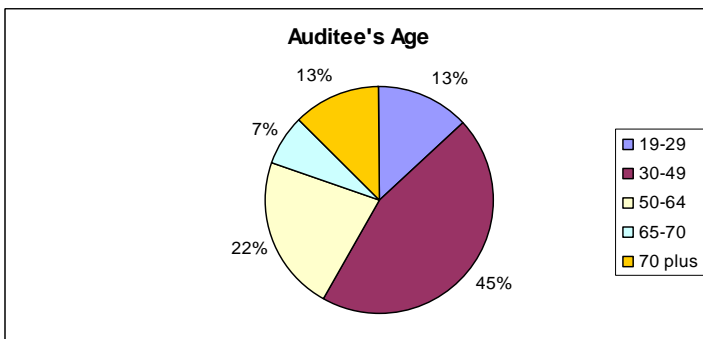
The aim of the audit trial was to assist around 150 households in increasing their energy efficiency. Initially there was some debate as to whether to use voluntary or paid assessors. It was felt that using volunteers could provide an opportunity for local residents, college students and others to engage with the local community and gain experience working in energy efficiency / sustainability. However, it was decided that, given the scope and detail required, it would be better to pay experienced assessors to conduct the work. A team of four auditors and a part time admin officer were therefore recruited, primarily via www.environmentjob.co.uk. The auditors all had previous community engagement and sustainability experience and formed a great team.

Hackbridge Audit Results

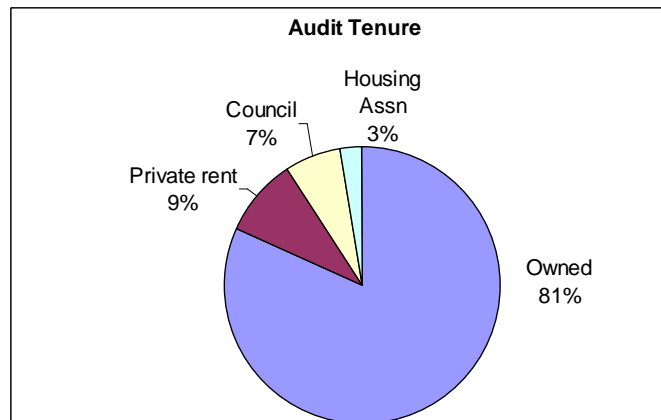
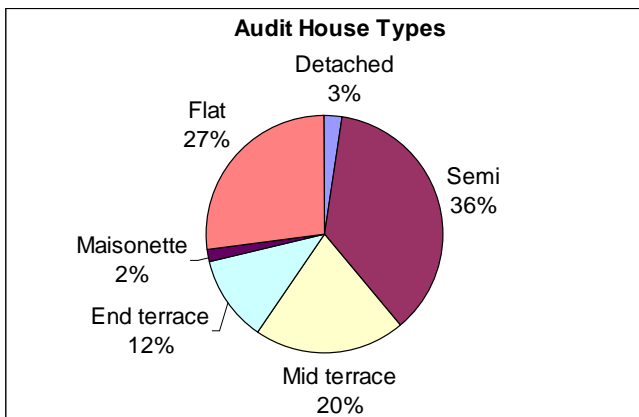
Generally we found that the audits were very well received and while some residents initially were hesitant to do the full questionnaire due to time constraints, 99% of participants were keen to do the whole questionnaire once the process had started.

Socio Economic Profile of Auditees:

- 63% female, 7% couples, 30% male
- 42% answered income question
- 25% were currently receiving benefits
- Average occupancy = 1.8 people per household



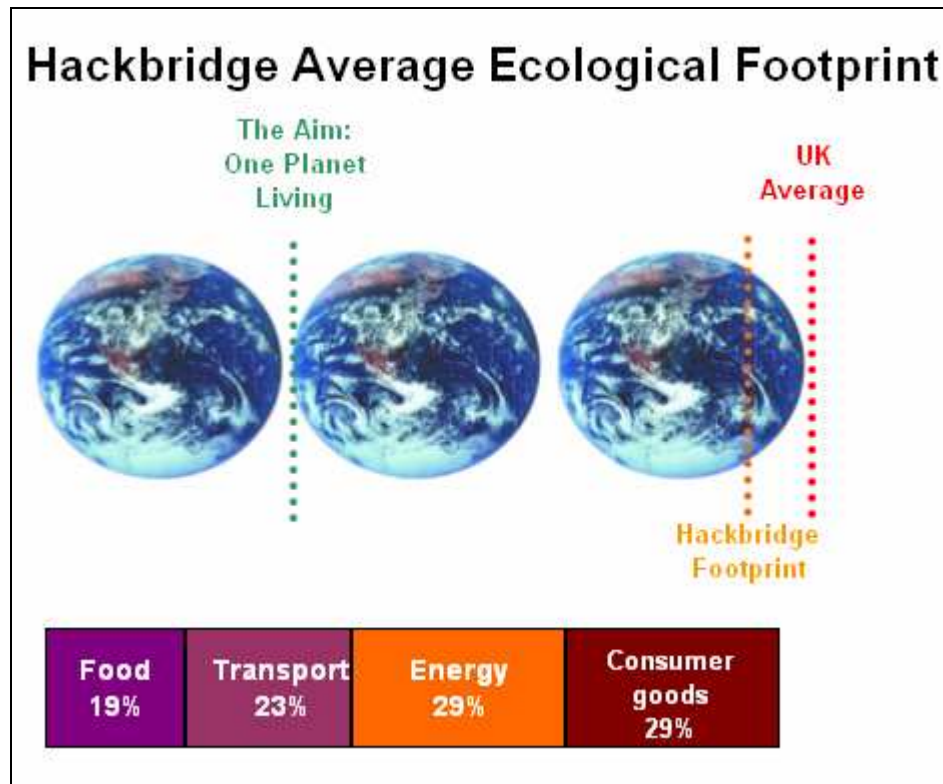
Housing Stock of Audited Properties



55% of audited homes were built 1930 or before (therefore have solid walls).

Average Ecological Footprint

A footprint analysis was undertaken for each participating household. From this the average footprints for all Hackbridge participants was calculated.



The analysis found that the average footprint was slightly lower than the UK average at 2.8 Planets (compared to 3) or 5 global hectares. The average CO₂ emissions were 11.8 tonnes CO₂, which again are slightly lower than the UK average of 12 tonnes.

Energy

All auditees were asked to provide information from their energy bills and a range of questions about their energy use. The results are summarised below:

- Approximately 40% of participants may need cavity wall insulation
- Average Annual Gas Bill: £484
- Average Annual Electricity Bill: £369
- 68% have changed energy supplier
- 80% interested in green tariffs
- 67% have 50% or more efficient white goods
- 49% have 50% or more low energy lightbulbs
- 69% wanted info on renewables (7% n/a)
- Average boiler age = 8 years
- Average temperature set at 20
- 25% of homes do not have gas and heat their homes using electricity

Waste

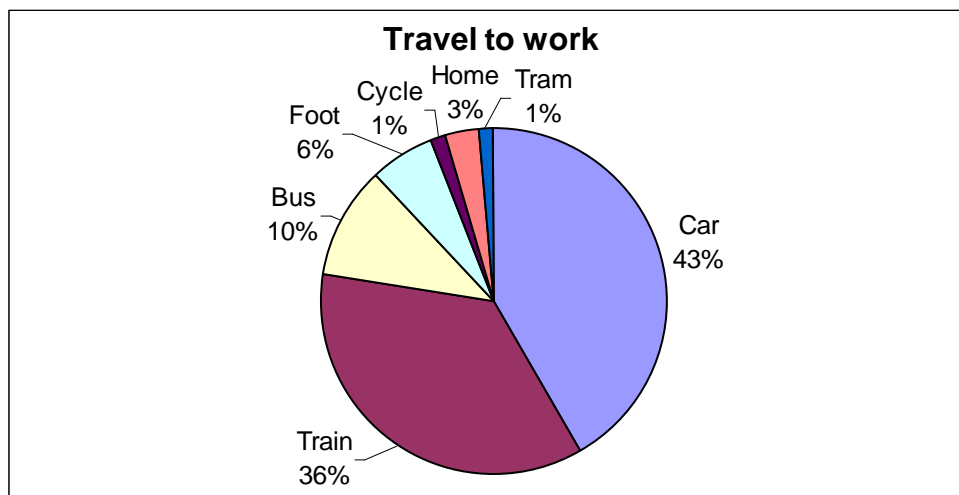
After energy waste was one of the areas which most people were interested in and where there was a big impact almost immediately, for example, 30% didn't realise they could recycle cans in their green recycling bin! Contamination was also an issue and most auditees were recycling items such as yogurt pots and plastic food trays that Sutton do not collect for recycling. The audit also found that:

- 40% don't recycle glass
- 48% with gardens are not currently composting
- 50% wanted more information on composting
- 39% filled their brown bin less than half each week and so could have a smaller bin
- 42% are filling their green recycling bins each week and so could have a larger recycling bin
- 41% try to avoid overly packaged goods and would like to reduce waste more
- 88% are not disposing of batteries correctly
- 87% are not currently recycling tetrapaks

Transport

The questionnaire found that:

- 84% of participants were car owners
- 43% drive to work
- On average households took 1.2 flights per year
- There was significant interest in car clubs and cycle resources



Consumer Goods

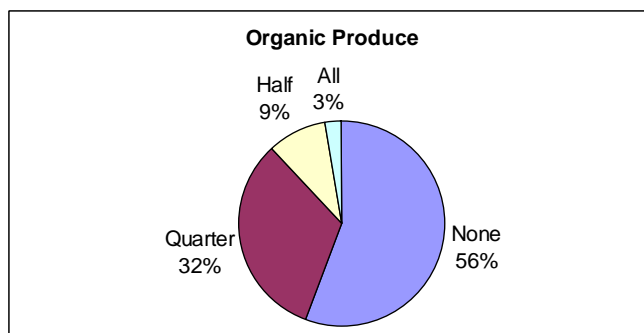
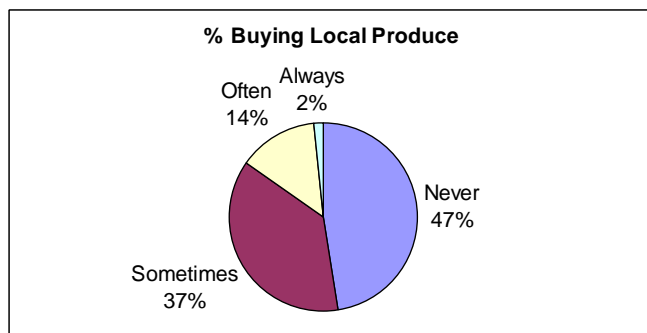
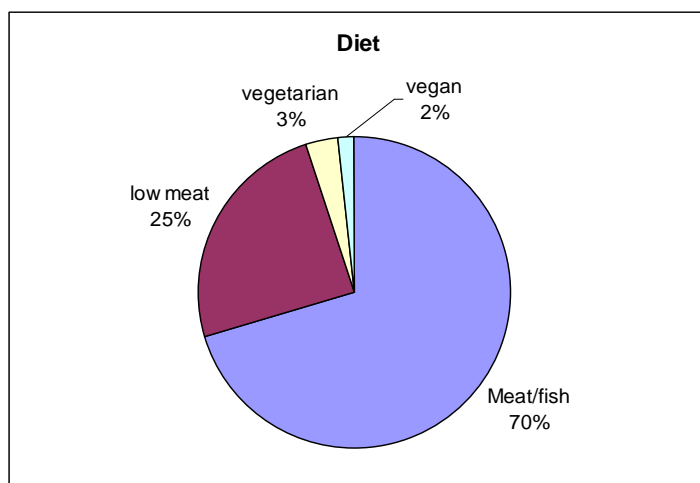
Consumer goods have a big impact on a household's ecological impact. The audits found that:

- 37% have pets (8% spend £10-40 a week)
- 15% spend money on jewellery each year
- 10% spend money on power tools each year

Food

Food, like consumer goods, has a big impact on a household's ecological and carbon footprint but is an element that is often overlooked. Meat and dairy consumption are responsible for the majority of the UK's food impact. The audits asked questions about diet, local and organic produce. The audits found that:

- Most households are meat eaters and on average eat meat 5 times a week
- 46% grow some of their own food
- Less than half the participants regularly buy local and / or organic produce.



Water

Water is another important impact, particularly in the South East of England. The audits revealed that:

- 22% of participants are on water meters
- On average households shower 10 times a week and have 3 baths
- 31% have power showers
- 43% have dual or low flush toilets
- Some households, such as Wandle Meadows could save 17 litres a day by removing the small plastic button in their toilet to turn it into a dual flush system (the Wandle Meadows block could save 3568 cubic metres a year!)
- 32% have water butts
- There is significant interest in water saving devices

Natural Habitats and Wildlife

- 83% have gardens
- 42% attract wildlife

Health and Happiness

In creating sustainable communities health and happiness is the overarching element. We therefore asked participants a range of questions including the number of neighbours they know by name and an estimate (out of 10) of how happy they currently are. The audits found that:

- In general there is a good sense of community in Hackbridge
- Participants know an average of 8 neighbours, some know 35!
- 23% do voluntary work
- Average happiness rating is 6/10
- Participants have lived in the area an average of 12 years (and some have lived in the area for 90 years!).

Monitoring

A monitoring plan is currently being developed in partnership with Imperial College London. We hope to contact all participants by phone and predict an 80% response rate. The main aim of this first monitoring programme is to analyse how many measures were taken up following the audit (including related carbon and ecological footprint reductions) and to highlight any barriers to uptake and any other support and resources the audited households may need. We will also use this contact to promote the One Planet Living on-going programme and the Hackbridge auditee event in June. A detailed analysis of the monitoring data will be developed by BioRegional and Imperial College.

BioRegional are developing an ecological and carbon footprinting tool, using the Resources and Energy Analysis Programme (REAP) tool. Participants will be encouraged to work out their annual footprint before, during and after participation in the project. We also hope to encourage uptake of Smart metering which will hopefully enable more accurate readings during the project. We will also work with suppliers to measure number of installed measures and calculate the potential carbon savings.

Conclusion and Future Work

The CEEF funding was vital in enabling us to develop our approach to reduce fuel poverty and increase energy efficiency and carbon reductions throughout Sutton. The insulation offer has proved very popular and as well as increasing access to free and discounted insulation has provided a referral route for those needing assistance with heating measures. The Hackbridge sustainability audits were perhaps the first audits in the country to offer households such a comprehensive, holistic approach to footprint reduction and we are extremely keen to continue this work in future. We have learnt a lot through trialling our approach and will be developing best practice guidelines to enable other organisations and local authorities to replicate our approach as well as reporting on the on going monitoring of the impact of this work. We are currently seeking funding so that we can expand the offer throughout Sutton.