




..motivate and empower people to
substantially reduce their CO₂ emissions


- started 8 years ago - Ro & Andy
- Carbon Conversations
- outreach:
 - individuals
 - local communities
 - schools
 - businesses



carbon conversations

six meetings about climate change
and carbon reduction

Rosemary Randall



Welcome to Cambridge Carbon Footprint

Cambridge Carbon Footprint (CCF) is an award-winning environmental charity that works to raise awareness of climate change issues and promotes practical solutions to help people live more sustainably

Food



Consumption



Home Energy





Home Energy - context



UK ranking in Western Europe

Indicator	Rank
Affordability of space heating	14/15
Share of household expenditure spent on energy	11/13
Percentage of households in energy poverty	13/13
Homes in poor state of repair	11/15

Cold Man of Europe

Association for the Conservation of Energy, 2013

1 Climate Friendly Homes

Trained Volunteer Surveyors

- **Survey with questionnaire**
- **Web tool helps generate report**
- **Return visit / phone call → action plan**
- **6 month follow-up / sampling**



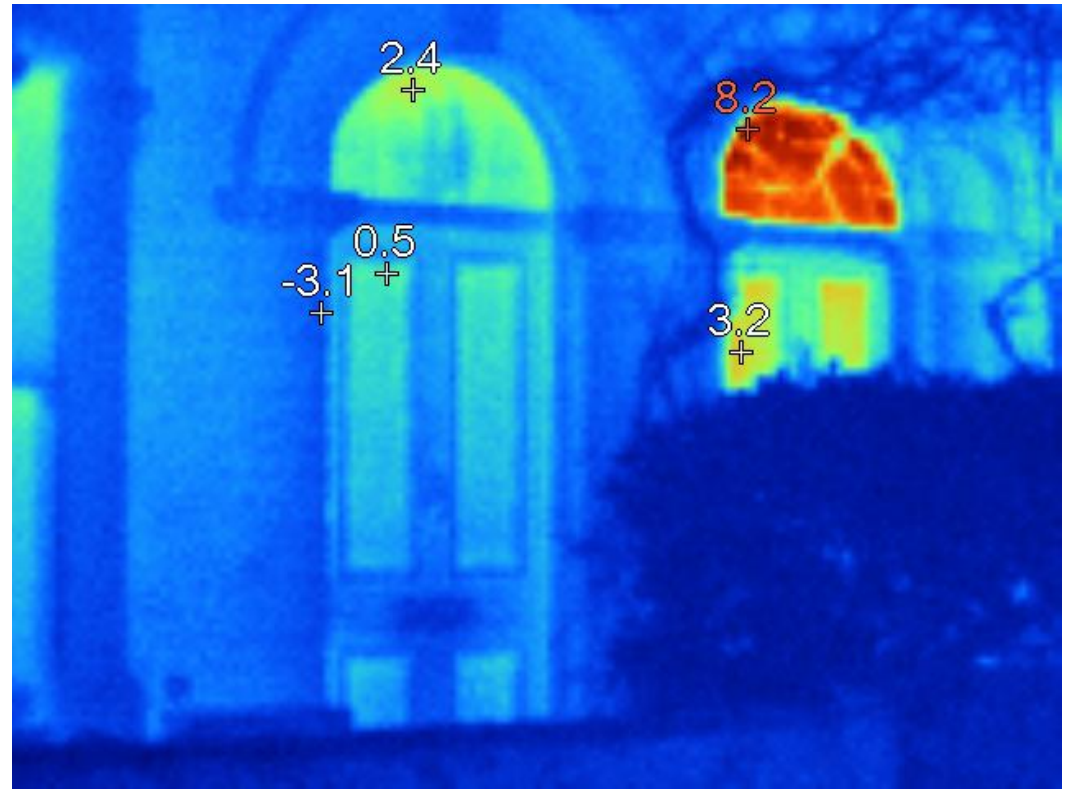
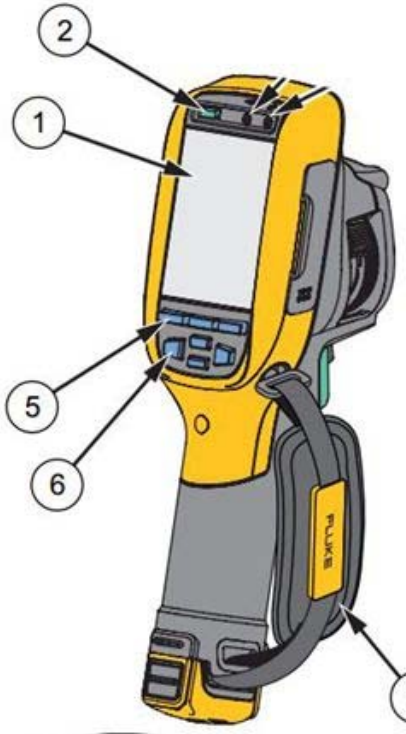
Developed from Home Energy Survey :
Lightfoot, Shropshire.



2 Thermal imaging

After training:

- borrow a camera
- arrange a survey
- report on thermal leaks

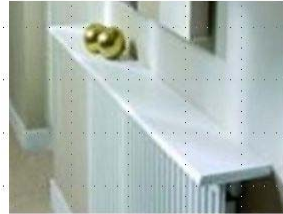


3 Eco-Renovation Events

DIY:

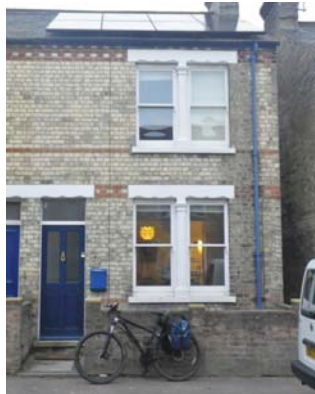
Radiators, Windows

- Foil Behind Radiators
- Shelves above
- Curtains
- Secondary Glazing



eco-homes: personal stories

Judith's
Retrofitted
Home



visits:

BedZED



warm homes

Mill Road

free community event

Saturday 2 November • 1.30 to 5.30pm
Ross St Community Centre, Cambridge CB1 3UZ

Home energy day aimed at pre-1920s homes typical of Mill Rd and surrounds

- talks, workshops & impartial advice for home-owners and tenants
- morning visits to homes (booking essential)
- local residents on video
- latest info on financial help
- local company displays

Organised by
Cambridge Carbon Footprint.org

in collaboration with
CAMBRIDGE CITY COUNCIL

For more information and the programme, see
www.cambridgecarbonfootprint.org
email info@cambridgecarbonfootprint.org or phone 01223 301842

designed by 2dgraphic.com



- annual event for 4 years:
- Retrofit & new-build
- 16-22 homes over 2 weekends
- 250-500 visits each year
- ~ 70% new visitors



*"I Love it –
a wonderful opportunity to receive inspiration
from wonderful people."*





Launch event:

Eco Renovation Question Time



Sponsors:

Major sponsors



cambridge solar

Other sponsors

Midsunmere

AC ARCHITECTS CAMBRIDGE LTD



Mole

ghc





Nuttings Road, CB1 3HU

Suzie and Iain – Suzie says:

When looking for our first home, we wanted it to be south facing, with a big garden. A big lounge, for socialising, was also an important factor. In 2006 we moved into a home with aluminium framed double-glazed windows, minimal insulation and an old gas fire with boiler.

We are both very passionate about the environment and love that our home is now an expression of this. We sometimes put our ideology before our finances or convenience but are happy about this.

Now our utility bills are only £30 a month, yet our home is warm and snug, with a close connection between the house, garden and seasons.



We mainly use eco paint and minimal eco-cleaning products. We have only bought five new items of furniture or white goods, the rest was second hand. This has helped create a low toxin environment for us, our lodger and our two year old.

Low Energy Measures

As soon as we moved in we switched to Good Energy, who only 'provide' 100% renewable energy.

We drew up a **five-year plan**. The major work so far has been installing the hot water and heating system - adding **solar thermal hot water** and a **9 kW wood-burning stove** which supplies hot water for taps and central heating. We cut ourselves off of gas when this was installed.

At the same time, we installed a **highly insulated Akvaterm hot water tank**, designed to be heated by wood, the sun, or electricity if we are desperate.

We had the **cavity walls insulated**, and we did the **loft insulation ourselves with 150 mm of British sheep's wool**, on top of the 150mm of yellow itchy insulation already in situ. We also **insulated under the bath** (re-using coats and pillows) - so now we can have a good long soak in the bath because the water stays warm for ages!

Accessible pipes are insulated with grey foam coats, or Kingspan Tarec. We have a **thermally-lined curtain** which reduces the size of the sitting room in winter, making the stove more effective and the room more cosy. The **fireplace is rendered with lime**.

Our **water use includes 4 water butts for the garden**. And to reduce our mains water use we have a **'water hippo' in the toilet** and a **spray tap in the kitchen**.

Overview

Age, Type: **1950's, Semi-detached,**

Wall type, Floor area: **Cavity, 88 sq m**

Project timescale: **5 yrs**

Cost of whole project, inc. measures: **£35,000**

Energy usage – 3 adults, 1 child

After: **11 kWh** per sq m pa electricity (2011)
3500 kg logs pa (2011)
200 kg wood chip briquettes pa (2011)

Before: **25 kWh** per sq m pa electricity (2006)
2 kWh per sq m pa gas (2006)

Key features

- + insulation: cavity walls, loft, bath, water tank
- + air-sealed windows, doors, letterbox
- + curtains: triple-layered, thermal lined (black-out)
- + windows and external doors: double-glazed
- + heat recovery ventilation
- + solar thermal hot water system
- + wood-burning stove
- + solar photovoltaic (PV) system: funded by friend
- + sedum green roof (shed)
- + water: spray taps, toilet cistern 'hippo', water butts
- + lighting: low energy (house), solar (shed)
- + fridge: terracotta evaporation, non-electric
- + grow our own: fruit, nuts, vegetables
- + biodiversity: wild flower garden

- **Case Studies** for each home in web-archive
- **Four 1 hour visits/day** - all booked



Follow-up



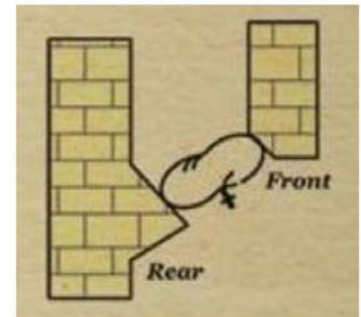
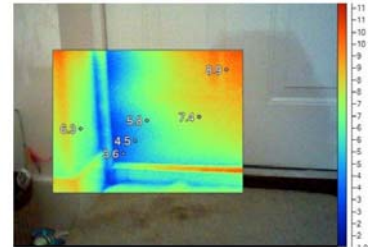
Events

DIY Workshop: Draft-Proofing

Resources

- [Financial Help](#)
- [Architects, surveyors, energy advice](#)
- [Renewable energy systems](#)
- [Building and planning](#)
- [Insulation](#)
- [Doors and windows](#)
- [Heating and plumbing](#)
- [Electrical](#)

- Search for Leaks
- External **Doors**, windows
- Chimney Balloon or pillow
- Letter Box, Cat flap
- Ventilation too



Eco Home Case Studies

Articles & advice

Borrow an Electricity Monitor



People Exploring Low Energy Homes

Gwydir Street, CB1 2LG

Alex Rice, Alex says:

We moved into the property about a year ago, inheriting a solid wall property with a vintage back-boiler. Much of the work so far has been related to making the building liveable although there has been some progress on the low-energy portions of the project and on the veg garden.

Overview

Age, Type: 1840, Victorian, Terraced
Wall type, Floor area: Solid brick, 52 sq m
Project timescale: 1 yr, Ongoing
Cost of measures: About £1800 so far
Energy usage - 3 adults
After: Not yet available



As a result of their visit(s):

- 56% intend to install insulation
- 24% intend to install renewables

Next Year:

- Affordable, grant-aided homes
- more sponsors
- more publicity & homes
- impact evaluation



“Real people who have been through the process & are living with the benefits are trusted messengers for promoting energy efficiency measures”

Consumer Focus, 2012: “What’s in it for me?”