

## ECO OPEN HOUSES – SHOWING AND TELLING

**Icon: Behaviour change**



Most visitors could tour a site similar to their own home. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)



### LEARNING POINTS

- ❑ Changing people's behaviour inside their own home can seem like a challenge, but a simple 'show and tell' exercise can be a very effective and low cost way of doing this.
- ❑ Word of mouth is a powerful advertising tool. People are more likely to accept change if they see their neighbours are doing the same.
- ❑ It is easier for experts to explain technologies such as solar panels and rainwater harvesting systems to homeowners when they can see the equipment in use.
- ❑ The open houses had almost 2,500 visitors in total, more than 500 of whom returned feedback forms. It was a powerful way to reach a large number of local residents.

### WHAT

Over two weekends in summer 2008, 14 sustainable homes in the Brighton and Hove area were opened to the public for free. Several different types of building were on display – meaning most visitors could tour a site that was similar in some ways to their own home. Some of these were new build, allowing residents to live a lower carbon lifestyle from the day they move in. Examples include the new One Brighton development (visitors could find out more about this at a marketing suite, as the building was not finished in summer 2008). Others were older houses, many of which had required a lot of work before they could be described as sustainable.

#### One Brighton

This is a new development in Brighton's New England quarter. 172 homes will be built in two blocks, each six storeys high. The development has been designed around the 'One Planet Living' concept created by environmental organisations BioRegional and World Wildlife Fund (WWF). This concept follows ten basic tenets:

1. Zero carbon – the flats feature improved insulation and energy efficient appliances and lighting; electricity is supplied from renewable sources on and off site (including roof-mounted wind turbines) and heat comes from a woodchip-fired boiler.
2. Zero waste – recycled building materials have been used and construction waste minimised. Composting and recycling facilities are provided for household waste.
3. Sustainable transport – car club and bicycle storage facilities are available and the development is near the train station, giving easy access to public transport.
4. Sustainable materials – locally sourced and recycled building materials are used; residents are encouraged to shop sustainably.
5. Local, sustainable food – rooftop allotments are provided and residents encouraged to buy local and organic seasonal food.
6. Sustainable water – rainwater harvesting and water efficient appliances are installed.
7. Natural habitats – nest boxes and green spaces allow wildlife to live around the development.
8. Culture and heritage – the development fits into its surroundings.
9. Equity and fair trade – access is provided for disabled people and affordable housing is included in the development.
10. Health and happiness – open spaces and an intranet allow people to form a real community.

For more information see: [www.onebrighton.co.uk](http://www.onebrighton.co.uk)



The technologies on show in these homes ranged from improved insulation to renewable energy installations – ten of the homes had solar thermal systems, whilst two had photovoltaics. Many had green roofs and used water conservation measures – including rainwater harvesting and waste-water recycling. During the open days, volunteers from various environmental organisations were on hand in each house to answer questions and demonstrate the technologies in use.

Visitors were invited to provide feedback on the event and asked to make a pledge to introduce simple steps in their own homes to reduce their carbon footprint. Suggested actions included turning down the central heating and



Evacuated tube solar hot water technology. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)



Visitors could pledge to insulate their homes. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)

putting on a jumper to keep warm, insulating the loft, installing solar panels and getting a water butt for the garden. One in four visitors returned their feedback form, with 205 people 'definitely' promising to make a change and 175 saying they 'probably' would. Visitors could promise to take action 'now', 'in one year' or 'in three years'. If every action pledged on these forms were taken, all the households concerned could together save 4,000 tonnes of carbon dioxide and £475,000 from heat and £31,000 from electricity bills in just three years. Householders would also save hundreds of pounds a year – an idea that becomes more attractive as energy prices continue to rise. The event was highly commended in the Community and Voluntary Sector category of the National Energy Efficiency Awards 2008.

## WHY

On average, UK inhabitants use more than three times the resources they should in order to be sustainable. Brighton and Hove residents are no different – despite coming top of the Sustainable Cities Index in 2007. Waste management, pollution, energy and water use are all identified as local issues.

### Brighton and Hove on the Sustainable Cities Index

Forum for the Future, a sustainable development charity, published the first Sustainable Cities Index in 2007. This compares Britain's 20 largest cities and their achievements in areas such as climate change, recycling and biodiversity. Brighton and Hove came top of the Index in 2007 and second in 2008. It was still ranked highest for quality of life and future-proofing in 2008 compared to other cities, but performed slightly worse in environmental terms.

[www.forumforthefuture.org/sustainable-cities08](http://www.forumforthefuture.org/sustainable-cities08)

More than two thirds of the homes in Brighton and Hove were built before 1939 and have poor energy performance. According to the event organisers, the city emits 1.37 million tonnes of CO<sub>2</sub> per year and almost half of these emissions are the result of household energy use. Improving household energy efficiency is therefore an accepted local priority. Fuel costs also look likely to keep rising, making energy efficiency a good way for households to save money too.

Although floods are likely to become more common because of the effects of a changing climate, supplying enough water to meet local demand is a problem in the South East. The region's demand for water already exceeds the natural water supply, providing a good reason to introduce water efficiency measures in local homes.

Action in both of these areas – energy and water – is needed, but it can be difficult to persuade people to change their behaviour, especially inside their own home. Householders may not know how to reduce their energy or water use. It may also not be obvious that the little changes each individual makes can have a big effect when added together.

Inspiring people to take action was the main driver behind the eco houses open days. It was made as easy as possible for visitors to learn about simple ways to improve the energy performance of their home or to save water. They were also asked to promise to adopt some of the actions demonstrated. As far as the organisations involved were concerned, the event was an inexpensive approach – total costs were just over £20,500 – and one that reached a large number of people. Costs work out at just over £8 per person.

This was a relatively simple way to reach local residents and find out their opinions on the subject of climate change. A quarter of the 2,459 visitors returned feedback forms. 371 said they learnt 'a great deal' or 'quite a lot' from their visits. Organisers are also pleased to have created a model that other cities can copy – meaning their message could reach an even wider audience.



Sustainable new build in Brighton. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)

## HOW

In 2007 the Permaculture Trust and Brighton and Hove City Council had the idea of taking a bus full of interested people on a tour of interesting local examples of sustainability in the built environment. This did not prove to be a very effective way to change behaviour and was difficult to organise, so they decided instead to arrange an event where people could tour open eco houses locally. The idea was partly inspired by the Artists' Open Houses events that have been taking place in Brighton and Hove for more than 20 years. These allow people to see (and buy) local artists' work displayed in people's homes.

The eco houses were identified in a number of ways. Some were projects the organisers knew of already through living and working in the area and some they were involved in developing and building. They reached a few houses through a press release too, but mainly these were projects they already knew about. Houses needed to have at least a minimum standard of sustainability to participate – for example good insulation (of walls, ceiling and floor), glazing, renewable energy installations, and water efficiency measures. Mainly they needed to be interesting projects that could inspire visitors to take action. The organisers expected to receive many offers of houses to show but were surprised to find this was not the case. They suggest that the low number of eco homes available only highlights the need for this project and others like it.

The event was publicised via a banner hung outside Brighton station and a 28-page brochure printed on sustainably sourced paper using vegetable inks, which was distributed in local outlets. Twenty three articles about the event appeared in a variety of media, including The Observer newspaper, BBC Southern Counties Radio and even the New York Times and International Herald Tribune. A website – [www.ecoopenhouses.org](http://www.ecoopenhouses.org) – is still available to people wanting to eco-reno- vate their house and received more than 12,000 unique visitors between March and October 2008. The organisers learnt a lot about how best to publicise the event – finding the brochure the most useful method of advertising. In the future, they would launch such an event on a weekday in order to ensure even better press coverage.

A display outlining the event and providing details on six of the houses involved was created for the launch event in June 2008 and remained on show at Hove Town Hall for two weeks after this. It has also been used at other events locally – including the Royal Institute of British Architects (RIBA) and Low Carbon Trust's Housing Retrofit conference in November 2008.



## FURTHER DETAILS

### When

After developing the original idea in December 2007, the project quickly gathered pace. Following an initial meeting in January 2008, funding was raised in just two weeks. The organisers then embarked on an intense period of hard work – arranging publicity, setting up a website, contacting householders, etc. – before the event was held. The houses were open over two weekends in summer 2008 – the 28/29 June and 06/07 July.



Self-built timber-frame houses in Brighton. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)

### Where

The fourteen sites were located throughout Brighton and Hove. A wide area was covered, ensuring the biggest audience could be reached.

### Who

This project was set up by two local environmental organisations – the Brighton Permaculture Trust and the Low Carbon Trust – working in partnership with Brighton and Hove City Council.

Organisers included Francesca Iliffe – Acting Sustainability Manager at Brighton and Hove Council; Mischa Hewitt – from the Low Carbon Trust; Bryn Thomas – from the Brighton Permaculture Trust; and Caroline Schofield – also from the Brighton Permaculture Trust. Tours of the houses were given by the homeowners themselves, together with volunteers from the Brighton Permaculture Trust, the Association of Environment Conscious Building and students from the Centre of Alternative Technology. Some sites offered tours given by some of the construction industry professionals who had worked on them.

Funding came from Legal and General and the South East England Regional Assembly. The South East England Development Agency (SEEDA) provided smart meters for the volunteers involved, the houses on show and as prizes for five visitors who returned feedback forms. According to the project organisers, this event was such a success because of the close working partnership that developed between all of the bodies involved.

### Smart meters

A smart meter captures data on electricity (and sometimes gas or water) usage, but in more detail than a traditional meter could. Basic models can communicate this data back to the utility directly – and can thus avoid the need for the meter to be manually read. They may also come with a visual display unit – which tells householders how much electricity they are using at a given time. This can help people control their energy use. Smart meters can also sometimes monitor a reverse flow of electricity if, for example, a household is generating electricity and wants to export this to the National Grid. In this case they can show how much electricity is exported and how much is imported.

The use of knowledgeable volunteers from several environmental organisations working in partnership seems to have worked very well. The organisers recommend future projects make sure enough resources are available (particularly human resources) to run the project well. Volunteers also need to be well trained in the types of technologies they will be asked to explain.

### Brighton Permaculture Trust

The Trust is a not-for-profit organisation formed in 2000. It works to promote greener living and sustainable development through design. Work includes running projects that raise awareness about climate change and educating people about permaculture – a concept that covers all aspects of building a sustainable future and improving quality of life.

[www.brightonpermaculture.co.uk](http://www.brightonpermaculture.co.uk)

### The Low Carbon Trust

This organisation was formed in 2001 and runs conferences, workshops, training courses and projects that demonstrate the link between buildings and the carbon dioxide emitted through their use. One of their first projects was Earthship Brighton, a low carbon, low waste community centre, where the Trust is based.

[www.lowcarbon.co.uk/home](http://www.lowcarbon.co.uk/home)

**Brighton and Hove City Council's sustainability team**

The team works to reduce carbon emissions locally and helps develop projects related to sustainable living. It seeks to bring economic, social and environmental issues together through its work with local residents, schools and businesses.

[www.brighton-hove.gov.uk](http://www.brighton-hove.gov.uk)

**NEXT STEPS**

Although this event took a lot of hard work to organise and co-ordinate, overall it was deemed to have been a success and so a similar event looks likely to be held in Brighton and Hove next year. The households involved are happy to participate again and 15 visitors suggested on their feedback forms that they would also be willing for people to visit their house. The organisers are keen for the event to be repeated elsewhere and feel that this would not be difficult to achieve, especially now they have tested the water.

*March 2009*



Mayor Councillor Gary Peltzer Dunn opens Eco Open Houses. Image courtesy of [www.ecoopenhouses.org](http://www.ecoopenhouses.org)