SEACS
Tackling the energy challenge together
Relevons ensemble le défi énergétique

Case Study:

Thermal imaging in Dorset and Wiltshire

Summary

SEACS Energy Ambassadors supported the use of thermal imaging by community groups to carry out household surveys as well as a tool to promote energy efficiency more widely. A technical training session was organised in each county, and a thermal imaging camera lent out, where required. Groups continue to experiment in finding the most effective way to use thermal imaging as part of a co-ordinated approach. Thermal imaging was also used in schools, both by the SEACS Ambassador, by local groups and by the schools themselves.

The wooden front door looks substantial but is as inefficient as the single glazed window

Objectives

- To encourage energy saving in individual homes through the provision of information in an engaging and accessible form.

- To develop thermal imaging case studies as a promotional tool, making the most of the eye-catching visual images.

- To enable groups to share their experience of thermal imaging and learn from each other in developing the most effective approaches.

Methodology/approach

In Dorset, thermal imaging was used to help deliver 30 household energy surveys, carried out by trained community volunteers. Through SEACS, Dorset County Council provided a thermal imaging camera, training, and support in implementation of the surveys.

In Wiltshire, three community groups already owned or had been able to borrow thermal imaging cameras, and were experimenting in how best to use them. Two groups were planning to use them in future. This was supported by SEACS through provision of a training day, which also enabled groups to share experience and network.

The groups integrated the use of thermal imaging into their wider activities. Thus, one group used it to illustrate local case studies in the development of their Affordable Warmth plan. Another provided a thermal imaging survey of homes included in Green Doors.

Tools used, including those to reach target groups

A thermal imaging training day, carried out by the same commercial thermal imaging professional, was provided in both counties. Community group representatives also attended a course provided for Wiltshire Council staff, while in Dorset the SEACS ambassador provided hands-on support.

Both Dorset and Wiltshire provided a thermal imaging camera on loan to volunteers. In Dorset, the Council covered the cost of insuring the camera, but required the group to have public liability insurance. In Wiltshire, there was no requirement for public liability insurance, but the group was asked to insure the camera.

To cut down the time taken in providing a report, some Wiltshire groups have developed their own simple pro-forma. In Dorset, this was provided by the SEACS Ambassador. All groups included a disclaimer in the reports to households, recommending further professional advice before taking action.

How was the project managed?

In both Dorset and Wiltshire, thermal imaging was planned and implemented by community groups. The SEACS Ambassadors supported their plans through the provision of training, loan of a camera and funding.

Who were the project partners?

Dorset- Transition Towns Dorchester, Weymouth and Portland, Dorset Energy Advice Centre, Dorset County Council.

Wiltshire- Cherhill Energy Forum, Climate Friendly Bradford on Avon, Transition Marlborough, Sustainable Devizes Network and Devizes Community Area Partnership, Wilton Community Land Trust, Wiltshire Council.

How was it financed and much did the project cost?

In Dorset, Transition Town Dorchester was funded £800 to publicise the project, select households and carry out 16 surveys. Transition Towns Weymouth and Portland were funded £250 to carry out surveys and produce 5 reports.

In Wiltshire, thermal imaging has been mainly carried out on a volunteer basis, with some groups making a small charge (eg £10) to householders. Thermal imaging of Green Doors homes was covered by the DECC Pioneer Fund, managed by the Council. SEACS funding covered the cost of training; Devizes Community Area Partnership hosted the event.

What were the lessons learned from the project?

This is a summary of the lessons leaned across the 2 local authorities:

- Unsolicited feedback from about half the Dorset households confirmed that the surveys were useful, to identify heat loss areas and to confirm that measures had been installed correctly.

- Long delays of a year or more were anticipated in taking action on issues identified, so short-term monitoring of results is likely to be unreliable.

- Additional support may be required in converting interest to action. This might be attending training in draught proofing or making thermal curtains.

- Thermal images need to be interpreted with great care and expertise. Training in analysis is crucial,

as well as a clear disclaimer recommending further professional advice.

- Thermal imaging depends on having favourable weather conditions, such as a 10 deg C difference between internal and external temperatures. This makes it hard for volunteers to plan ahead. A warm, wet winter can lead to long delays, and work cannot be done in summer.

- There are three main points to consider in buying a camera: resolution, provision of a wide angle lens and software. The choice depends partly on intended use.

- Thermal imaging works best as part of a wider programme, and in response to householder interest. It has potential to work well with initiatives such as Transition Streets, with participants asked to commit to proactive involvement, including sharing results with neighbours.

- The need for public liability insurance and camera insurance is a barrier for smaller groups.

- The risks of volunteers carrying out a survey in strangers' homes were not fully addressed, although in practice no problems were encountered.

- Thermal imaging was useful as an educational tool with primary children. While numbers of children involved need to be kept to 8 or less, findings can be shared with the wider community, including parents.

Links to website information

See the SEACS Toolkit for examples of disclaimers, advice on buying a camera and camera use. www.seacs.info