

Climate Emergency: Bovey & Heathfield

Detecting Heat Loss from the Home – The Value of Thermal Imaging.

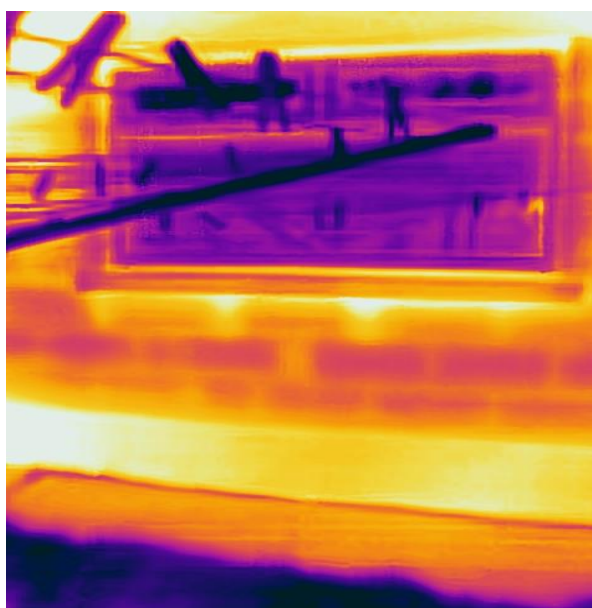


As winter approaches many of us are thinking about how to most effectively and efficiently heat our homes and at the same time reduce our carbon footprint. One member of CEBH has shared his knowledge and experience with us. Here he describes how thermal imaging may help us understand how to more effectively heat our homes.

As keeping a house warm and water hot is typically the biggest energy cost in a household, providing better insulation has the double benefit of improving comfort and reducing cost as well as carbon emissions. However it is often difficult to know what measures would be most cost effective particularly when you have done the basics of loft/cavity wall insulation and double glazing. It can be very helpful to use various pieces of technology, like a thermal imaging camera, to assess heat loss and temperature differences.

I found the images from my thermal camera revealed many areas of heat loss in my house which I was previously unaware of and it was invaluable in helping me to identify areas that need attention.

The example image below of my lounge wall and window shows that the solid concrete base to the floor leaks heat more than the wall does. It has revealed that below the rendering the house is built of block rather than brick and that the heat leaks through the mortar. The UPVC window leaks around the edges. This is referred to as thermal bridging from the lintels and poor seals. It also shows how effective thick curtains are in reducing heat loss through the window. Although the cavity wall has been insulated there is still room for improvement.



The App in the thermal camera creates a colour image which indicates the scale of heat loss from White (being the highest amount of heat loss) through Yellow, Orange, Red, Purple to Black (lowest amount of heat loss). The brighter the colour the bigger the amount of heat loss.

Greater precision of the heat leakage can then be obtained by using an infra-red spot camera which will identify the temperature difference measured from an area inside the house where the leakage is compared to an area beside it.

In one part of the utility room there was a difference of 5°C between a heat loss area and the adjacent part of the wall. Clearly this needs attention. Without the infra-red spot camera it would not have been so obvious.

As a result of surveying my house I am considering getting a contractor to do exterior insulation of the walls and triple glazing of the windows.

Thermal imaging is only really effective in winter when the house heating is turned on. To get the best results there should be a difference of at least 10°C between the outside temperature and inside temperature. It also needs to be dark and the weather dry with very little wind.

Courtesy of funding by Bovey Tracey Town Council, CEBH now have the thermal equipment necessary to undertake thermal imaging surveys and it is the intention for CEBH to offer it as a free service this winter to any interested Bovey Tracey resident. Our aim is to help inform residents who are interested to take action to reduce heat loss and, most importantly, reduce their carbon footprint.

Please let us know if you would like to be a volunteer to help on this scheme. We'll provide training on how to use the equipment. And watch out for further announcements as the scheme develops.

Glen Kennedy

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