

Evidence of insulation reducing energy bills

Angie Titchen, now leading on the GreenTEA thermal imaging work, tells her story ...

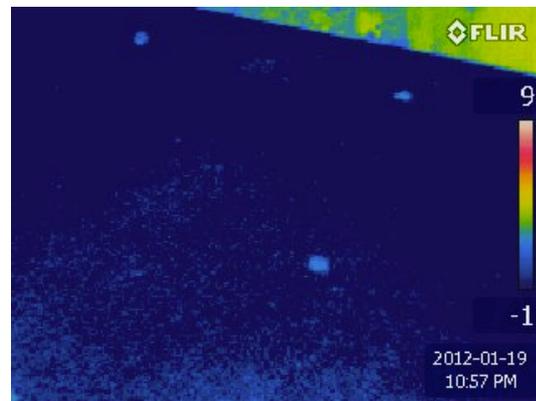
In January 2012, my house in Eynsham was thermal imaged by the GreenTEA team and I was shocked to see that I was losing so much heat through the roof and through the walls where my radiators are located. There were rectangles of red and yellowy green on the outside wall.

On the outside of the flat roof over my single storey kitchen extension at the back, I could see the heat coming off my halogen spotlights.

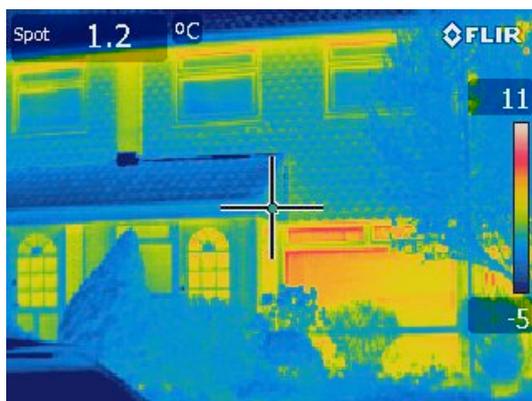


Radiator heat loss - front wall

Before insulation measures (red = hot, blue = cold)



Halogen spotlights on flat roof



After insulation measures



The next year, I had an Energy Assessment - also through GreenTEA and similar to the one the Green Deal are now

offering. The report confirmed that I was losing heat and recommended what I could do. So I asked Paul Hayes, one of our excellent local builders, to join with me in an Insulation Project. We discussed what best to do and then, over the summer, we (well, Paul did all the work and I just made the tea and supervised!) did the following:

- Added more loft insulation to make it up to the recommended depth and made sure that it was spread right into the eaves (the thermal image shows that I was losing heat there).
- Also in the loft, we put insulation caps over the ceiling spotlights upstairs- it was incredible how much heat was escaping into the loft through the gaps around the lights. Also by changing the halogen spotlights for LED ones thermal imaging afterwards showed that the heat now given out into the loft space had decreased
- Put radiator foil behind the radiators located on outside walls. The images above show how much this reduced heat loss through the front wall of the house (the red is almost gone and the greeny-yellow is going toward blue). The foil only cost me £17.
- Although I have had radiator thermostats for some years, the Energy Assessor advised having a room thermostat as well - now I have much better control over my heating and am not working my boiler so hard.
- Plugged all the gaps: between the wall and the water and waste pipes and the boiler flue where they went outside; around the water pipes in the airing cupboard and; cracks in the cupboard under the stairs
- Insulated the inside of the front door with radiator foil and chipboard and put draught excluder around the front and porch doors (I have been meaning to do that for 10 years and it is finally done!).

Earlier this year, my Energy Assessor's looked at my energy bills again and told me that I had used 16% less electricity

and 7% less gas (even though I had had my gas-fired central heating on more than usual due to the very cold winter and spring). I was amazed and really pleased. By making changes too to my behaviour, like turning off lights when I am not using them, keeping the room thermostat at 19 degrees, turning off plugs at the wall socket and getting a rain water butt, I had reduced my carbon consumption by 10% and my energy bills have not risen whilst everyone else's seem to have done.

I am very grateful to GreenTEA for spurring me on to invest in these simple insulation measures. I do hope that you too will sign up for a thermal imaging survey and start insulating this winter to beat the energy price rises.