Appendix B - Thermal Imaging Camera project for Area East.

Thermal imaging cameras are used to identify where there are heat leakages from buildings to see where there is missing insulation, thermal bridging and other leakages through single and failed double glazed windows and air gaps in mortar and around door and windows.

Can only be done in the winter months and where the outside temperature is well below 10 degrees C and internal temperature plus 20 degrees C difference to the outside temperature.

Costs vary from a couple of hundred £ to several thousands. FLIR are the company that make the most used and recommended thermal imaging camera. They also recommend a thermal imaging camera should only be used by someone fully trained to interpret the images as they don't only show up cold spots relating to heat leakage but also damp, different material reflecting the infrared beam differently and other issues like water leaks. https://www.flir.co.uk/discover/professional-tools/thermal-camera-tips-to-avoid-common-home-inspection-mistakes/

There is a smaller affordable mobile version that plugs into a smart phone or tablet and purchasing a couple would enable multiple users at the same time. Cost £179.99 to £399.00 ex. VAT https://www.flir.co.uk/products/flir-one-gen-3/?model=435-0004-02

Other free opportunities are for Octopus Energy Customers so could be an incentive to switch to a renewable energy tariff. Octopus Energy offers free thermal image camera hire (one as above) for a week and they have energy efficiency advice on their website https://octopus.energy/blog/flir-thermal-cameras/

Examples in Somerset:

Many years ago **SCC** had a thermal imaging camera that was offered to community groups to use. However, the communities wanted someone to come out with it to do the survey and give the advice. Most people who wanted it done had already put in insulation and wanted to see how well or not it was performing. No data on exactly how many communities took up the offer – possibly 5 and no data on whether the survey with the camera created any action to improve the energy efficiency of their homes.

Frome Town Council bought the Flir E4 thermal imaging camera for £723 and hire it out through the SHARE Shop Library of things for £20 a time.

No data yet available on how often it has been hired or whether the use of the camera actually lead to energy efficiency improvements.

Options considered

In the process of researching the approach, officers contacted the **Cold Homes Energy Efficiency Survey Experts (C.H.E.E.S.E)** https://cheeseproject.co.uk/ a not for profit community interest company who do this for Bristol and Bath. Their advice is:

Thermal imaging needs to come with a fully trained surveyor to give proper advice on identifying the cold areas and what remedial work can be done and signpost to the possible grants and solutions.

Must be done internally and in conjunction with air tightness depressurisation to maximise the efficacy of the survey as this will really identify the problem areas.

And a review of their annual energy bills to also identify if annual cost is above average and a base line to see the benefit of the recommended energy efficiency measures once carried out.

C.H.E.E.S.E are franchising their scheme which involves an air pressure tester, thermal imaging and fully trained surveyor with a copy of the thermal imaging video and recommendations and links on how to implement the necessary energy efficiency improvements.

Takes 2 hours and for a 5 roomed house is £200

Follow up one year after survey to see how the homeowner has improved on their energy consumption after implementing the suggested improvements or find out what the barrier to implementing the recommended changes were.

Most homeowners surveyed implement the recommendations within one month of receiving the survey and report.

Proposed approach

The service offered by the C.H.E.E.S.E company is comprehensive and can demonstrate that improvements are made. However, the cost of up to £200 per property will limit the take up and subsidy is not sustainable. For £1,369.90 (the approximate cost for 2 thermal imaging cameras) this could be used to fully survey and support around seven, 5 roomed houses (less for smaller dwellings) to implement energy efficiency solutions for their homes via this survey and energy efficiency support

The proposal is therefore to buy 2 cameras for the community to use but engage with an active community/council working on retrofit projects eg Bruton and Castle Cary to lead a pilot project.

Suitable equipment has been identified and will be purchased later in the year. Officers would like to investigate if One Planet Bruton/Bruton Town Council re: Retrofit project would be interested in trialling it in Area East. If agreed, the details in terms of bookings, cost etc, will be designed with One Planet Bruton (or other Community group/Environment Champion) and the approach to offer the equipment with support to Parish Council via Environment Champions in area East can be trialled.

Other considerations

Training and how to use camera and interpret images info sheet. Booking system, follow up photo sharing with info signposting advice i.e. via CSE website and Energy Advice Centre plus a further follow up in a year on whether advice was implemented or not and why with energy saving/carbon saving calculations.

Cost of Hire – To be designed to encourage take up, ensure that the offer is actively promoted and to increase sustainability by covering some of the ongoing costs. To be considered further as part of the detailed design.

Insurance

There are two sides to this insurance that have to be considered.

Firstly, Liability cover - it is automatically in place for anything that we are responsible for, however, we need to ensure that it is safe to use.

Secondly insuring the item itself for replacement - It is difficult to insure an item that is not normally stored within SSDC premises, nor in control of a SSDC officer. Under these circumstances, even if

insurance is obtained, theft and accidental damage are very likely to be excluded. If these risks can be excluded, what is the risk(s) would you expect to insure against?

If are looking to insure against theft and accidental damage, need to confirm what risk management is in place (or proposed) to ensure the camera is kept safe and allow responsible use only.

Data Protection

All images to be deleted from camera after each use, so that it is blank when next person uses. Part of the training/how to use guidance.

For SSDC or group to use/store images a GDPR form needs to be signed by home owner to give permission to store images of their home and for their use for insulation proposals within their community. However, at a later stage an individual could withdraw that consent and we/the group would be compelled to delete the images May need to look at an alternative lawful basis and whether the images without the address or contact details is a GDPR issue?

Would need to add a privacy notice to explain how the data is being used and SSDC this will need to add to the Information Asset Register if storing and keeping the images.