



Keep the Heat

Thermal imaging camera loan guidance

This guide covers:

- Planning and promoting your surveys
- Setting up and using the camera
- Taking useful thermal images
- Understanding what the images show
- Helping households identify ways to reduce heat loss

**Please read this guidance before carrying
out your first survey.**

Contact: charles.nixon@suffolk.gov.uk

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Planning your survey

- Allow around 20-30 minutes per house.
- Advertise the surveys in advance (resources to help: <https://tinyurl.com/keeptheheatsuffolk>)
- Make sure you survey the homes with the residents. Their knowledge of their house will inform the survey, and they can learn what they need to improve.
- Consider targeting homes with a low EPC rating (Energy Performance Certificate). You can use www.gov.uk/find-energy-certificate to find homes in your area.
- Have a few back up evenings as you may have to reschedule due to poor conditions.
- Ideally, there needs to be a difference of 10 degrees between the inside and outside temperatures, so the camera can identify where heat may be leaking out.
- The central heating needs to have been on high for a couple of hours beforehand.
- If it has been sunny all day, you need to make sure it's been at least 1.5 hours since sunset so that any heat from the sun which has warmed the outside of a building has dissipated.
- Avoid surveying after it has rained, as it wet surfaces will give a distorted image.
- Survey in the early morning or in the evening.

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Increasing accessibility and uptake

We encourage you to reach as many households as possible during your loan period, particularly households who may be more in need of help with their home energy costs such as those with low EPC ratings.

Think beyond your usual networks

Consider how you can reach people who may not normally engage with your group or climate projects.

Target areas with greater need

Focus promotion on rented, lower-income or harder-to-heat homes where energy bills and heat loss may be a bigger concern

Use simple, practical messaging

Focus on warmer homes, lower energy bills and finding where heat is being lost, rather than sustainability alone

Avoid making assumptions

Renters, people on lower incomes and people in different cultural areas may face barriers to taking part, so ask what would make the project useful and accessible to them

Record what works

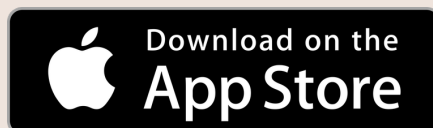
Let the project team know which communities, organisations and approaches are helping you reach new households, so these can be built into future rounds

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Getting started

1. Check that your phone is compatible. You need iOS 17 or later, or Android 13 or later. For Huawei phones, check:
www.bit.ly/huaweicompatibility
2. Download the **FLIR ONE** app from your phone's app store
3. Open the app and accept the terms and conditions
4. Choose "**FLIR ONE Edge**" and allow the permissions the app requests.
5. Attach the camera to the back of your phone using the clamp, or hold it close to your phone
6. Press and hold the camera's power button for 3 seconds, until the light flashes
7. Wait for your phone to find the camera. This can take up to 60 seconds. Select 'Connect' and allow your phone to join the camera's network
8. You are now ready to take thermal images!



You may encounter some compatibility issues with the Flir One Pro camera. Please refer to the seperate guide in the Keep the Heat box.

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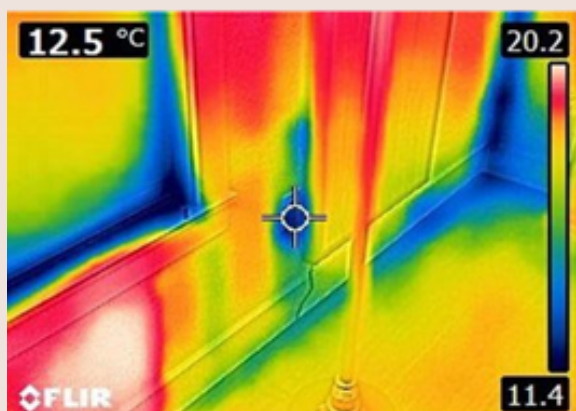
How does a thermal imaging camera work?

A thermal camera detects heat (infrared radiation) and turns it into a picture. The colours help you spot areas where heat may be escaping from your home.

Understanding the colours

The colours mean different things depending on whether you are using the camera indoors or outdoors:

Indoors	Outdoors
Blue areas are cooler and may show where heat is escaping. Red areas are warmer.	Red areas may show heat escaping from your home. Blue areas are cooler.



These images are a guide, not a diagnosis. A cold-looking area can have more than one cause.

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Taking and saving photos

1. To take a photo, press the grey button at the bottom of the app screen.
2. Allow the app to access your photo library so photos can be saved automatically.
3. The camera does not store photos. Images are saved on your phone. Deleting an image from your phone's photo library will also delete it from the FLIR ONE app gallery, and vice versa.
4. For a short video showing how to use the camera, visit:
www.bit.ly/flironeedgevideo

Top tip!

It's best to avoid including the sky in your image, as it is extremely cold. If the sky is included, the large temperature difference between the sky and the home can distort the image, making the whole home appear relatively warm.



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Tips for using the camera indoors

When you use the camera inside your home, blue areas are cooler and may indicate where heat is escaping.

Choose the right conditions

- Aim for a temperature difference of at least 10°C between inside and outside.
- Keep rooms at their usual temperature, with the heating switched off while you take images. Keeping the heating on during the survey makes it harder to see active heat leaks.
- Avoid bathrooms that have been used recently as damp surfaces will distort the image.

Where to take photos

- Where different parts of the building meet, such as joists or hidden joints in woodwork.
- Around windows and doors.
- On floors and external walls.
- On the floor of your loft space and around the loft hatch.
- In bathrooms and utility rooms.

What to look for

- Blue or cooler patches on floors and walls may indicate that insulation or draught proofing could be improved.
- In bathrooms and other wet rooms, cold-looking patches may be caused by water, condensation or damp.
- In the loft, look for cold spots between areas of insulation.

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Tips for using the camera outdoors

When you use the camera outside your home, red areas may indicate heat escaping from the building.

Choose the right conditions

- Take photos in the evening or on a cold day.
- Aim for a temperature difference of at least 10°C, with the outside at least 10°C cooler than indoors.
- Avoid taking photos in the rain or direct sunshine.

Where to take photos

- Where different parts of the building meet, such as extensions.
- Around windows and doors.
- On roofs and walls.
- Around ventilation points, such as airbricks, chimneys and extraction fans.

What to look for

- Red-coloured gaps and holes may indicate draughts. These may be possible to seal (although don't seal ventilation bricks!).
- Warmer red areas on walls and roofs may indicate that more insulation is needed.

For more advice, visit:

<https://octopus.energy/blog/how-to-use-flir-thermal-camera/>

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What to do next

Once you have identified areas where heat may be escaping, you can explore ways to address them.

Find advice and support at: www.bit.ly/fixheatloss

Please encourage households that have been surveyed to fill in this short questionnaire: <https://forms.cloud.microsoft/e/dGDhLas0BM>

Grants and support for Suffolk residents

Find a roundup of offers, schemes, support and grants that may help make your home warmer. Visit: <https://sustainablesuffolk.org.uk/how-to-take-action/at-home/grants-and-support-for-suffolk-residents/>



Feedback form

