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**Thermal Camera Loan Scheme and**

**User Guidance**

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**Thermal Camera Loan Service**

Find out exactly where your council buildings and residents’ homes are losing energy and start conversations with your residents about reducing their fuel costs and minimising your community’s carbon footprint. Borrow our new easy-to-use thermal camera.

The camera uses infrared technology to find heat loss spots in buildings/homes, to help you identify where improvements are needed and help everyone stay warmer in winter and cooler in summer.

In Gloucestershire, energy consumption in our homes accounts for about 12% of greenhouse gas emissions[[1]](#footnote-1). Reducing energy use in council buildings, and in homes is a key component of tackling the climate emergency and reaching net zero by 2030. It also reduces fuel costs and alleviates fuel poverty.

Common reasons include small gaps around doors, windows and exterior outlets like letterboxes, and connections to the outside such as plumbing fixtures.

**How to borrow the thermal camera**

To borrow the new thermal camera, you need to be a GAPTC member council. Reserve the thermal camera here: <https://forms.office.com/e/y63ZNaZWSY>.

If you're not yet a GAPTC member please contact us.

**Thermal camera kit**

Each thermal camera kit contains everything you need to assess the home's in your community’s energy efficiency. Below you will find all the information you need to use the camera, plus there is a [YouTube instruction video](https://youtu.be/04kAPz79jBg) showing how to use it.

The full user manual can also be found online here:

 <http://support.flir.com/resources/cx>

Please ensure you have read the Terms and Conditions of Use

<https://gaptc.org.uk/camera-ts-cs>

**How to use the FLIRC3X thermal camera**

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| **Turning on the camera** |
|  | Press the power button on top of the camera. |
|  | The display will turn on with the ‘FLIR’ logo on the screen. Wait until the screen loads. |
|  | If the display screen does not turn on, charge the battery using the USB port. |
| The camera will calibrate occasionally to check the device is measuring accurately. You will see a message at the top of the screen when this happens, and the image will briefly freeze. |
| **Taking a photo** |
|  | The screen is a touchscreen. Press the camera icon to begin. |
|  | Point the camera at the area you want to photograph. |
|  | Press the long button on top of the camera to capture the image. |
| **Investigating specific hot and cold points** |
|  | Aim the circle in the centre of the screen at the specific location you want to measure for hot and cold points. |
|  | The temperature bar on the side of the screen will indicate the temperature difference in the image.The temperature displayed in the top left of the screen is the temperature of the point you are aiming at. |
| **Looking at your photos and keeping them** |
|  | When you have taken a photo, access the images by pressing the gallery icon on the right of the screen. |
|  | **Three Ways to Save Photos:**1. **USB Cable**
	* Plug the camera into your computer using the provided cable.
	* On Windows, open the device folder (labelled ‘MTP USB Device’).
	* On Mac, install <https://www.android.com/filetransfer>.
	* Drag and drop images to your computer.
2. **Wi-Fi (FLIR Ignite Account Required)**
	* In the gallery, tap the three dots in the top right corner.
	* Select the photo and press upload.
3. **Bluetooth**
	* Go to **Settings > Connections > Bluetooth > Available Devices**.
	* Select your device and pair.
	* Ensure Bluetooth is enabled on both devices.
 |
|  | After you are sure the images are saved, delete any stored images from the camera. Select the settings icon on the bottom right of the screen > select ‘Save options & storage’ > select ‘Delete all saved files…’ > confirm by pressing ‘Delete’ |
| **When You’re finished** |
|  | Press and hold power button on top of camera to turn it off  |
|  | Put the camera back into the box along with any cables and information sheets. |
|  | Return the box to GAPTC. |

**Next Steps: Finding ways to fix issues**

Once you’ve used a thermal camera to find where your home is losing energy, the next step is to identify the home improvements needed to help you stay warmer in winter and cooler in summer – reducing your carbon emissions plus saving you money on your energy bills.

**Small gaps**

For heat loss around doors, windows, letterboxes, cables or plumbing fixtures, there are lots of low-cost ideas to fix problem spots on the Centre for Sustainable Energy website at [www.cse.org.uk/advice/diy-draught-proofing](http://www.cse.org.uk/advice/diy-draught-proofing)

**Larger areas**

If your thermal camera photos show there are larger areas where heat is escaping your home, there are lots of options to help you fix the problem.

There is money available to help you pay for many of these solutions – check the ‘Funding’ section of our toolkit <https://gaptc.org.uk/climate-step-5>.

**Roof**

If your home is losing energy through the roof, it’s a good idea to top-up your loft insulation.

<https://www.cse.org.uk/advice/loft-insulation>

**Walls**

Homes built after the 1930s usually have a gap between the external walls, which can be filled with insulation to stop energy escaping.

<https://www.cse.org.uk/advice/cavity-wall-insulation>

**Windows**

If your home is single glazed, secondary glazing will reduce energy loss. If double glazing is not an option for your property, it is usually still possible to fit alternative secondary glazing.

<https://www.cse.org.uk/advice/secondary-glazing>

For more information on retrofitting visit our Climate Action Toolkit’s Step 4: Develop a Climate Action Plan

<https://gaptc.org.uk/retrofitting>

1. For interest: 30% of per capita emissions on goods and services, 30% on transport (19% on cars, 7% on flying and 4% on public transport including ferries and coaches), 26.5% on food and drink, 12% on household fuel and electricity and 1.5% on waste. [↑](#footnote-ref-1)