

Thermographic Surveys To Identify Air Leakage and / or Discontinuous Insulation

Golden Rules To Ensure Part L Is Met

Ensure there is a minimum temperature differential between inside and outside the building of at least 10 0C. This is usually achieved by leaving the heating system turned on inside the building for 12 – 24 hours prior to the survey.

Carry out external thermographic surveys after dark (or heavy cloud), to ensure problems with sunlight warming up external surfaces can be ignored. Ensure the weather is dry as moist surfaces play havoc with the survey results. Beware items of plant emitting heat inside a building, as they can affect the results.

Answers To The Most Frequently Asked Questions

Why use thermographic cameras?

A thermal image makes it easy to identify areas of missing, misplaced or discontinuous insulation. It can also be used to identify air leakage paths if used correctly. Cold air leaking into a building will cause cold patches on the surrounding fabric, which can be identified from thermal images.

Can thermographic surveys quantify air leakage?

No, but they provide a qualitative appreciation of the thermal properties of a building envelope, quickly over large areas and display the results graphically in colour. Spot temperatures are also measured which can allow for later analysis of the thermal performance of building envelopes.

How can you interpret the thermal images?

A sound knowledge of construction technology (U values, emissivity of materials) allied with experience of on site defects is required to identify the true cause of faults identified on site. Particular care needs to be taken with regard to the emissivity and reflectivity of surfaces. Surfaces with low emissivity (eg polished steel), appear colder than their surroundings but are sensitive to reflective heat from background sources eg equipment, lights, people etc.

When To Get Worried

If the thermal image of the inside face of a building envelope appears to have a low surface temperature compared to their surroundings. Take care to evaluate the results as this could be caused by;

- Missing or damaged insulation or maybe high levels of moisture within the building fabric
- High levels of air leakage cooling the inside face
- Thermal bridging
- Evaporation of moisture from the internal surface
- Cold rooms inside the building cooling the surroundings
- Note HRS SERVICES have a thermographic camera able to detect temperatures from –10 to 800°C in 0.1 degree intervals. The images can be down loaded and stored and analysed at a later date by the client if required.

