

RICS Article - Part L2 conservation of fuel & power and thermography

Has it gone amiss? Are the implications understood? Professionals in a number of related disciplines may not know of its function, but since September 2001 thermography has sat quietly within Part L2 of the building regulations.

Look closely and the references will be found under 'section 2.1b'. At the time of publication, the technology and techniques required to ascertain the continuity of insulation/thermal bridging within a building-envelope, were just emerging. Whilst the objectives of such an inspection were readily agreed, the methodology and practicality, in terms of cost/benefit, had yet to be developed.

Most industries are adverse to change and the construction world is no different. Tighter building regulations require a stronger more advanced design and build technique, which in turn necessitates higher standards of inspection, quality audits and product approval. This is why thermography is becoming an integral part of the overall process, as it can provide the documentary evidence to prove compliance.

So what is Thermography?

Thermography is a method by which thermal information of an object can be acquired, processed and then displayed in a visual way. A 'thermogram' or 'thermal image' can be likened to a picture created with heat, in the same way that a photograph is a picture created with light. All objects warmer than -273°C emit infrared radiation. The power and wavelength of the emission varies with the temperature such that colder objects emit less infrared energy.

The small additional cost for building handovers including thermography is minimal, especially if compared to the expenditure on energy bills during the life cycle of a structure. Controlling the heat loss leads to an immediate financial benefit for the consumer whilst reducing carbon emission and the conservation of fuel and power.

A thermographic building survey not only shows continuity of insulation but in areas of prolific heat loss can aid with the development of future design details. The importance of this tool will inevitably grow as the general understanding and acceptance spreads; but that's for the future.

Only professionally qualified thermographic companies or individuals should conduct thermographic building surveys.

The report delivered should include:

- Reference to building drawings/plans
- Camera serial number, time and date of survey
- Environmental Conditions of Survey
- Locations of where the still IR images were collected
- Qualitative infrared and digital images showing all buildings external elevations
- Report pages detailing any specific observed anomalies with analysis
- Date, signature, calibration certificate of camera and Thermographers certification number.