



Infrared Thermal Inspection Checklist

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to speak with an adviser or visit
aptsoundtesting.co.uk

The Building should be prepared (and health and safety items supplied) as follows:

1. Ensure the building envelope is complete.
2. All Glazing, external doors and cladding to be complete.
3. Any Penetration made through the external envelope to be sealed.
4. The survey will generally be undertaken following completion of the building when site risks are substantially reduced. It is important however that the survey is undertaken in a safe, planned and methodical manner.
5. Access and clear working areas will be required, especially if mechanical machinery is to be used to aid the thermographic survey (i.e. in the event of surveying roofing).
6. The survey requires the consultant to view an image of the building through the view finder on the thermographic camera. Even though it is likely that the floor surface will be level and clear of obstruction, care should be taken to only view the image in the camera display whilst at standstill; however, it is still the client's responsibility to remove any trip hazards.
7. If a survey requires mobile access, due to the expanse of the building/s under review, then extreme care is required and the client must provide safe access mobile/fixed. If its mobile access the client must provide a mobile platform that is fit for purpose along with a fully qualified driver as well as the appropriate fall arrest system/s. The surveyor and driver must also be attended by a banksman where and when required.
8. As the survey will generally be undertaken externally at night, care must be taken to ensure that high-visibility clothing is worn. Assistance must be sought where risk of collision with vehicles exists.
9. Thermographic inspectors shall have unrestricted access to the Site. Where access is limited or there are obstructions which cannot be overcome, then the survey report will reflect this. Thermographic inspectors shall not be liable for any deficiencies in the report as a result of lack of access or the presence of an obstruction.

10. Roof surveys undertaken by walking over the surface of the roof will only be undertaken under the accompaniment of an assistant or the client's representative. Safety harnesses (that are fit for purpose) must be supplied by the client worn as required.

11. Please tape all ventilation within the build as this will enable the engineer adequate time on site. Ventilation includes intermittent extracts, mechanical extractors, air bricks, fire vents, chimney openings, trickle vents, roof window vents, inlet – outlet ductwork.

12. The Consultant will be responsible for the safe conduct of the inspection, and will be responsible for all operatives and equipment in his charge.

13. Tests may be witnessed by the contractor, the Contract Administrator (CA) and/or the Building Inspector (if required). The contractor should liaise with all parties in advance to ensure their attendance.

14. Any accidents, injuries or unsafe conditions on site must be notified immediately to the main contractor. Accidents and/or injuries sustained by APT Sound Testing engineers must be recorded and notified to the main contractor. Notification under RIDDOR must be arranged by the consultant through the main contractor, should such situations arise. If you have any questions about the site preparation or the actual survey test, then please ring our office to discuss them. We are here to help you achieve a pass at the first attempt.

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The recommended environmental Conditions:

The survey would aim to be carried out under the recommended environmental conditions (detailed below) this would be subject to weather conditions.

1. A minimum temperature difference of at least 10 degrees Celsius between internal and external areas is required. This may require heating systems to be on for at least 24 hours prior to commencement of survey.

2. Survey to be conducted at night or early morning when environmental conditions are suitable and solar loading effects have completely disappeared.

3. Recommended Environmental Conditions

- a. Temperature difference across building fabric $>10^{\circ}\text{C}$ at the time of the survey.
- b. Temperature difference across building fabric $>5^{\circ}\text{C}$ for 24hrs preceding the survey.
- c. External air temperature to be within $\pm 3^{\circ}\text{C}$ during the survey.
- d. External air temperature to be within $\pm 10^{\circ}\text{C}$ for the preceding 24 hours.
- e. Surfaces free from solar gain.
- f. Wind speed to be less than 10mph.
- g. No precipitation just prior to or during the survey.

Our Thermal Survey will be carried to the following methodology

1. Images would be captured of each elevation of the building from the outside with assessment/analysis included within the report.
2. The building would then be scanned from the inside with images and analysis recorded if anomalies are identified.
3. Carry out infrared thermography inspections using a specialist consultant to demonstrate that the insulation of the building is reasonably continuous over the whole visible envelope, that there are no unintentional air leakage paths through the fabric and that the insulation aspects of the work have been carried out in accordance with construction drawings.
4. Survey to be carried out as recommended in BS EN 13187 Thermal Imaging of Building Fabric and CIBSE Technical Memoranda TM23: 2000 Testing Buildings for Air Leakage.
5. During the survey the consultant will collate the relevant information, recording the thermographic images, photographic images and taking notes to enable a report of the findings to be compiled on return to the office.
6. The contractor should allow sufficient time in the programme to rectify any defects that become apparent in testing and retesting to demonstrate compliance prior to the completion date.

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