

# Roof & Building Leak Detection & Prevention

## GUIDANCE & INFORMATION NOTE NO. 12

### TIMBER ROOFS & ELECTRONIC INTEGRITY TESTING



The most common testing undertaken to confirm waterproofing integrity is non-destructive electronic leak testing using either the low or high voltage earth leakage testing methods. To produce accurate and reliable results this testing requires within the roof for there to be an electrically conductive component, for example, metal or concrete structural deck or foil faced insulation board. On some roofs, for example, those comprising a timber deck with a tissue faced insulation there is no electrically conductive component within the roof to conduct the voltage and therefore electronic integrity testing may not give completely accurate and reliable results

Although the waterproofing on a timber roof can be electronically tested to complement this the waterproofing is also visually inspected and the integrity of the laps physically tested.

The combination of these three assessments on timber decks gives an accurate and reliable assessment of the integrity of the waterproofing.

#### Visual Inspection

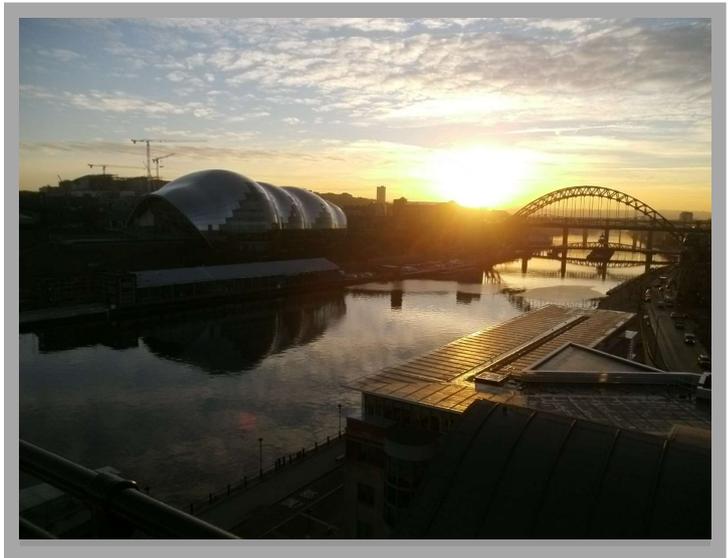
The waterproofing is closely visually inspected to identify if there are any breaches at punctures (splits, tears or holes) in it where rainwater may penetrate through the waterproofing.

#### Physical Seam Testing

The integrity of the site formed seams are physically tested with a scribe to pinpoint any capillaries through them where they are not fully sealed and may not fully watertight either due to, for example, delamination or ineffective initial welding allowing some rainwater to seep through them.

#### Conclusion

**On roofs with timber substrates electronic integrity testing of the waterproofing alone may not produce accurate and reliable results and the electronic testing should be complemented by visual inspection and physically integrity testing of the laps/seams. The combination of these three assessments gives the most accurate and reliable assessment of waterproofing integrity.**



Tyrrell & Jenkins Consultancy (TJC) offer a range of services, including:

- Electronic Leak Testing • Leak Investigations
- Floor & Roof Vacuum Dewatering.
- Thermal Imaging. • Expert Witness.

**i** TJC is an independent specialist Roofing Consultancy and Testing Services Company. We work throughout the UK providing non-destructive electronic leak testing, building envelope leak investigations, independent, specialist roofing technical advisory services to main and roofing contractors, building owners and developers in both the commercial and domestic markets. The company offers an extensive range of testing and investigative surveys that can quickly and accurately identify water entry pathways into and areas of entrapped water within a flat roof construction.

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