



Icopal Roof Protect

Roof Leak Detection System



PREVENTION IS BETTER THAN CURE



An **Innovative** technique for **Protecting** your **Investment**

THE ROOF IS ONE OF YOUR MOST VALUABLE ASSETS – PROTECT IT !

Although modern waterproofing systems are robust and when installed correctly, will rarely give any cause for concern, building owners still require that extra security and peace of mind regarding the integrity of the waterproofing element of the building.

The wide and varied uses of today's flat roof construction can lead to damage of the waterproofing. Even the best roofing systems can sustain damage from construction, maintenance or pedestrian traffic through it's lifetime. Undetected, the smallest puncture, membrane split, or mechanical breach can be devastating, causing severe and costly structural decay, interior damage, wet insulation with loss of thermal performance and mould.

FOCUS ON PREVENTION

Finding a leak can be a hit-or-miss process as well as costly and time consuming, particularly when the roofing membrane is covered by a green roof or ballast. Removal of such is labour intensive and can create more problems than the original leak itself.



Icopal Roof Protect™ : The Benefits

Icopal Roof Protect™ provides a sustainable non-destructive asset management tool which enables pinpoint accurate, quality control leak detection of the roof waterproofing system.

Once installed the system is integrated for the life of the roof and can be used as part of a pro-active maintenance program to regularly and easily test the integrity of the roof.

The system provides true building life cycle cost savings by avoiding premature roof refurbishment, loss of insulation performance, and the associated landfill, scaffolding and replacement waterproofing system costs.

Early diagnosis or alert of a breach in the waterproofing can save considerable time and cost. Defects can be identified quickly, accurate to within 100 sq.mm, and repaired and retested within the same day.



Icopal Roof Protect™ provides security and confidence to each party involved in the design, material supply, or construction of a flat roofing project, and significantly to the building owner over the lifetime of the investment.

Icopal Roof Protect™ is economical to install as part of the waterproofing system and does not require additional running costs.

Icopal Roof Protect™ is particularly beneficial for flat roof waterproofing systems covered by green roofs, ballasted surfacing, or photovoltaic (PV) installations.

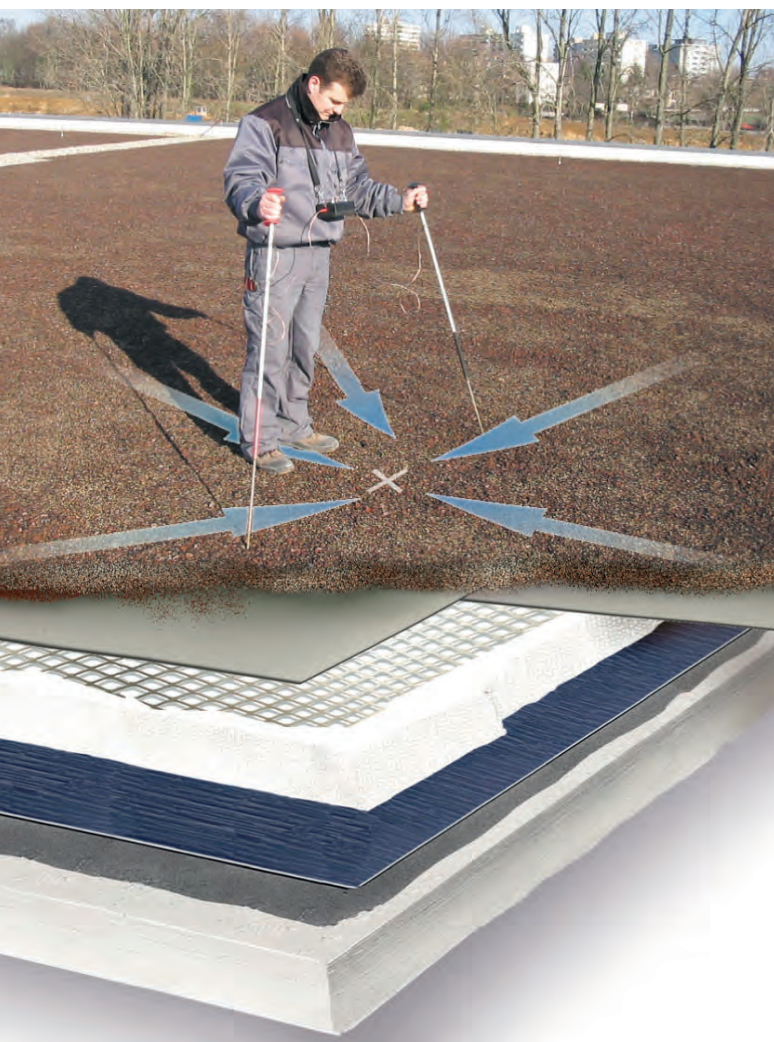
Icopal Roof Protect™ : How It Works

Icopal Roof Protect™ incorporating ILD's patented Conductive Medium Technology, including Electric Field Vector Mapping (EFVM®) technology takes the risk out of undetected roof leaks.

EFVM® is a low-voltage power based test method that creates an electrical potential difference between the non-conductive waterproof membrane surface and the conductive grid or fleece placed directly under the primary waterproofing layer.

A watertight membrane will isolate the electric charge while breaches in the membrane will cause an electrical connection to occur creating an earth with the grid or fleece beneath the waterproofing.

ILD's certified inspectors read the directional flow of the current with a potentiometer to locate the point of entry with pinpoint accuracy regardless of size.



Icopal Roof Protect™ : Where It Can Be Used

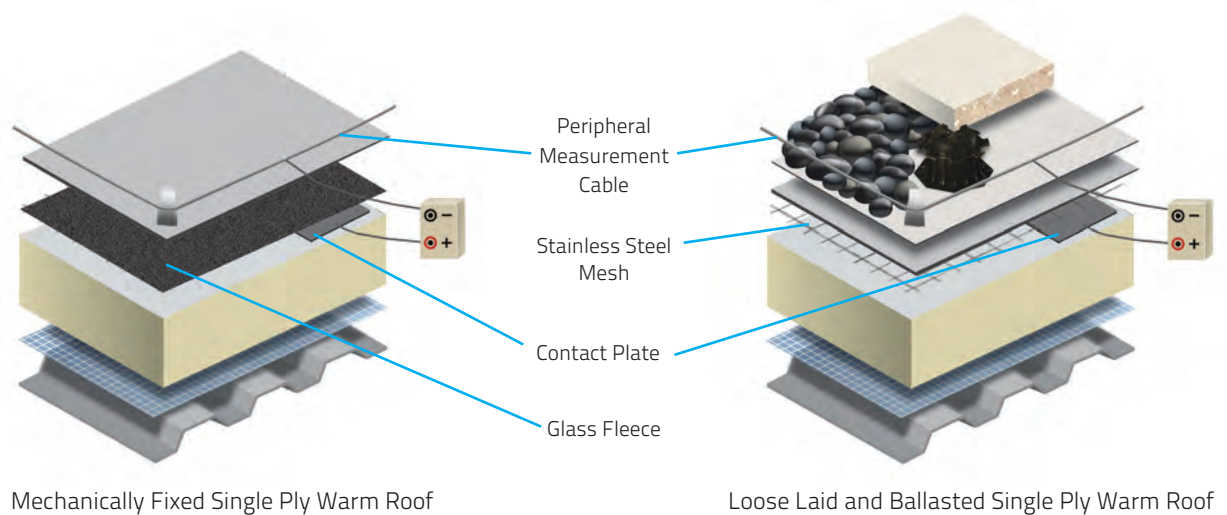
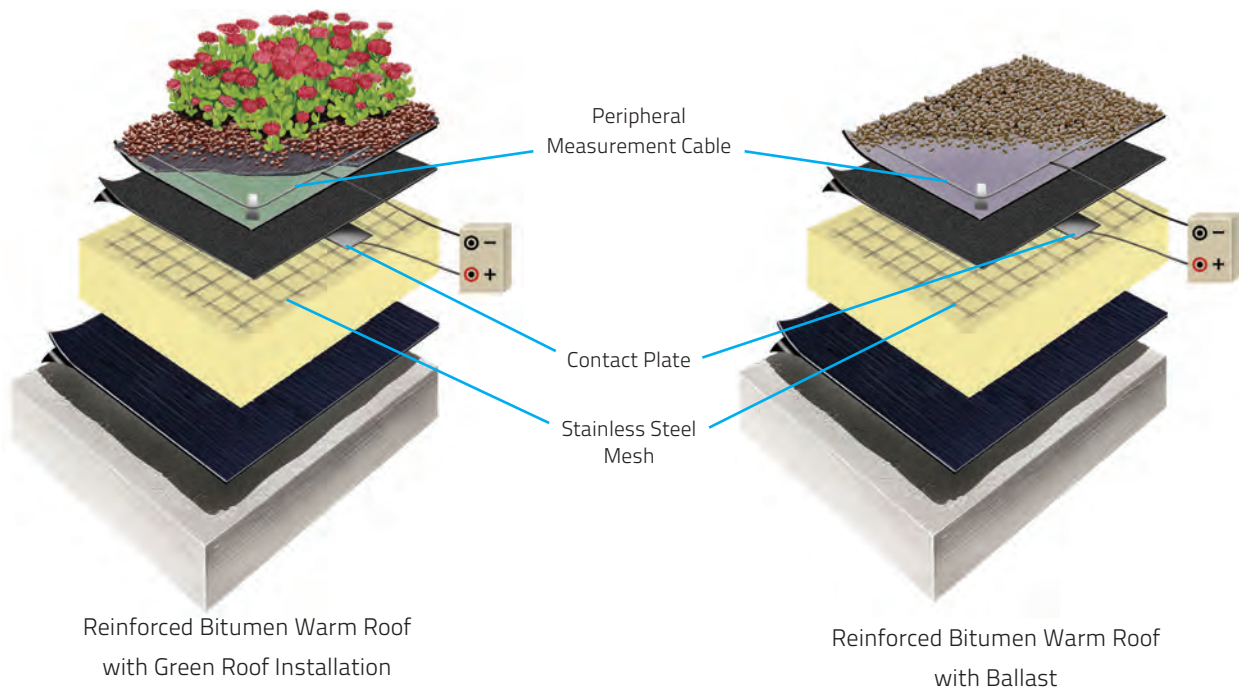
Icopal Roof Protect™ is suitable for use with Icopal bituminous built-up roofing and Icopal single-ply waterproofing systems.

It is ideal for use beneath ballasted or green roof constructions; where the ballast or green roof build-up does not need to be removed.

- Flat roofs of buildings that house expensive items or highly sensitive electrical, telecommunication or computer type installations, or where water ingress could create irreparable damage to the contents.
- Buildings where disruption would cause business discontinuance, loss of profit and major disruption.
- Where the property owner considers building asset management to be a future necessity.
- Roof build-ups on non-conductive timber deck constructions where traditional electronic leak detection can be problematic.



Example buildups where Icopal Roof Protect™ may be used.



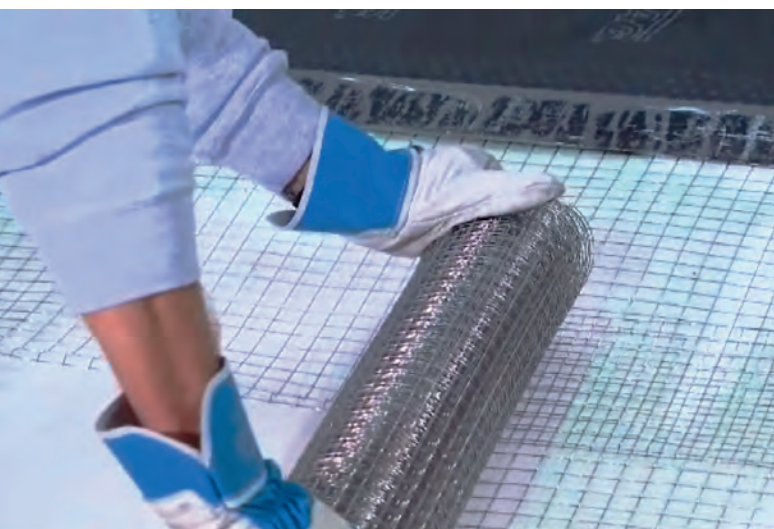
Icopal Roof Protect™ : Adding Value

Icopal Roof Protect™ is an extremely cost effective method of protecting a valuable asset which must be considered against the long term return on investment and potential high costs of investigation and disruption associated with roof leaks and premature roof failure.

With Icopal Roof Protect™ difficult visual inspections are not necessary, moisture penetration can be located quickly and easily with the minimum of disruption, saving many hours of manpower. This is particularly important within green roof and ballasted roof construction, avoiding the need for costly removal of the substrate.

Once installed the security of the waterproofing system can be checked whenever it is deemed necessary therefore adopting a pro-active approach to roof maintenance and potentially saving high consequential costs.

A quotation is prepared by Icopal Technical Services based upon a free roof survey for each individual project or roof area to be covered.



The components of the system are minimal and comprise of a stainless steel mesh or glass fleece, depending upon the waterproofing system used, contact plates and perimeter measurement cable which connects to the metering device.

Once installed an ILD technician will test and commission the system for which a nominal fee is payable based upon roof size and number of visits required.

A testing regime can then be agreed with the client dependant upon the sensitivity of the building as part of an ongoing asset management program.

Projects

The following are a selection of projects which have benefited from Icopal Roof Protect™.



Project: Augustine House
Location: Canturbury, UK
System: Reinforced Bitumen Membrane
Client: Canterbury Christ Church University
Area: 2500 m²
Completion: 2009



Project: Courtney Primary School
Location: Bristol, UK
System: Polymeric Single Ply with Green Roof
Client: South Gloucestershire Council
Area: 1450 m²
Completion: 2010



Project: Bradley Stoke Community School
Location: Bristol, UK
System: Polymeric Single Ply with Green Roof
Client: South Gloucestershire Council
Area: 1050 m²
Completion: 2010



Project: Jacob Javits Convention Center
Location: New York City, USA
System: Reinforced Bitumen Membrane with Green Roof
Client: New York Convention Center Corporation
Area: 45'000 m²
Completion: 2014



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