



LET'S TALK ABOUT

WATERPROOFING

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CHAIRMAN'S ADDRESS



Hello to all AIW members.

With the cooler and wet months approaching I cannot emphasise the need to ensure your projects are at a suitable moisture content before applying anything.

We are seeing far too many membranes delaminating due to poor substrate preparation.

Have you got a moisture meter and if so, are you recording your readings prior to application?

MISCONCEPTIONS...

I have recently been asked to give an opinion on an inspection report carried out by an industry professional, for a leaking balcony.

The person who carried out the inspection was sure the sealant (caulking) was the only problem of allowing water to ingress into the frame-work below the balcony and finding its way out on the ends of the balcony at the lower level.

I see this comment so often it drives me crazy. We need to point out that the sealant is more cosmetic after tiling and becomes a flexible barrier only, designed to shed water.

It is NOT designed to prevent water ingress below. Insurance companies use this as a cop-out very frequently as it becomes a maintenance issue and not a defective membrane.

The membrane is always “the barrier”. If the membrane is installed correctly on a fall, water will run to the drains/overflows, “under the tiles” albeit slowly but will get there.

I urge members to educate their clients in the correct methods of tiling when being applied over your hard work.

- Approximately, 50 % of defects come from incorrectly laid tiles
- 20% comes from membrane abuse prior to hard finishes being installed
- 30 % comes from bad membranes

CHAIRMAN'S ADDRESS

TILING...

Expansion joints are paramount. Although the code says 3.0 metre intervals we urge you to recommend many more expansion joints and especially when the tiles are dark colour and or cheap tiles.

Cheap and or dark tiles “grow” after being laid (moisture absorption into the tile biscuit), causing the minimal or sometimes non-existent expansion joints to close up causing the tiles to lift and pop off/crack, which punctures the membrane by tearing holes in it subsequently causing leaks.

This problem is exasperated when a membrane is laid on the flat and a screed applied over the membrane and tiled directly onto screed.

This method allows the screed to remain wet over winter months in particular and often the wrong tile adhesive is used and the constant moisture degrades the adhesive causing bond failure.

We are seeing tile grout effervesce leeching out. We can only put it down to the grouts must have a higher content of salts? Happy to get your feedback on this topic.

I believe a lot of complaints about waterproofing failures are not poor membranes or installation issues, but other factors such as what I have set out above.

I would urge you to provide your clients with this type of information at completion as it will only serve to assist you as waterproofing professionals.

Your feedback is welcome on any of this newsletter insert – you can find me at aiwconnect@gmail.com or **0418 312 646**

Paul Evans

AIW President

“Warm Roofs” What are they? Why should I consider one?

*Karl Wootton
Australian Waterproofing Consultants*



Some of you more distinguished members of the waterproofing community may say, “but we’ve always had them. We called them inverted roofs”.

Yes, you could say that, but there is a distinct difference in the form they take and the thermal Insulation value they ultimately provide.

Warm roof construction in both Europe and America have been in use for quite some years and are generally accepted as the norm in low slope roofing. Here in Australia we are only just catching up.

Warm roof construction takes the form of installing a vapor barrier and hard rigid thermal Insulation board to the top of the roof structural decking. Over the principal Thermal Insulation, the roof membrane is then applied.

The finish can be left exposed or over laid with hard and soft landscaping, pavers on pedestals etc etc. This form of Thermal Insulation is considered to be one of the most efficient forms of thermally Insulating a roof structure.

One of the first benefits is that thermal heat transfer in summer or the Dew Point in winter (the point at which moisture reaches 100% RH) is kept at the Insulation / Membrane external interface. Neither heat nor condensation is allowed to affect the roof cavity.

If we prevent thermal heat transfer or condensation from affecting the roof cavity then your air conditioning must therefore run more cost effectively. This is because the roof ceiling cavity temperature will more closely match the interior temperature of the rooms below it.

Victorian News

It is unfortunate that the proposed mandatory inspections for wet area waterproofing in the new Victorian Building Regulation for 2018 was defeated by pressure from the Building Surveyors.

Thus, the defects and standard of waterproofing will continue to have little 'policing' pressure for both builders and contractors to improve.

Compounding the problem in the new regulations effective 2nd June 2018 is that works completed by an unregistered tradesperson can be done to the value of \$10,000, which doesn't require any compliance certificate.

Which means anyone can complete waterproofing works on a project up to \$10,000 without any controls.

Caveat Emptor! This decision has been taken against the Victorian Insurance Association's data nomination waterproofing as the highest building defects in the last 8 years.

Of the top 10 categories of defects, waterproofing represents one third of the costs paid out.

Clearly the Victorian market has a lot of work ahead to lift the standard of waterproofing.

What we typically use in Australia is “cold” roof construction. Whereby we insulate the ceiling cavity with a mineral wool type insulation. There are some draw backs to this form of Insulation, one of which is that at certain times in the year the dew point can be reached within the ceiling cavity.

I have seen this from time to time where the roof membrane has been blamed but in fact the conditions were such that condensation formed in the space between the top of the mineral wool and the underside of the roof substrate, this is known as Interstitial condensation.

There are other issues such as heat build up within the ceiling cavity during summer and the subsequent transfer of some of the heat to the internal spaces. Both of the issues described above have a negative impact on Air conditioning performance for the spaces below.

Ok you ask, but what about an Inverted roof?

The typical construction for an Inverted (or sometimes referred to as an I.R.M.A roof) roof consists of a roof substrate, typically concrete, to which a membrane finish is installed.

Then a rigid insulation board, typically DOW corning extruded polystyrene, is installed with a screed layer or stone ballast then installed overall to keep the whole system in place to prevent wind uplift or floatation issues.

A reasonable system for its time but from a performance and maintenance view does have some draw backs.

From an Insulation point of view, it is not all that efficient as water from any rain event will percolate down to the interface between membrane and underside of Insulation, how does this affect long term thermal performance.

If any maintenance or repairs need to be undertaken it becomes problematic from a logistical point of view. It is generally a “heavy” system compared to a warm roof construction.

Warm Roofs in the Remedial construction market?

In this sphere of the building and construction market we are seeing a move towards improving overall building performance when the time comes to refurbish a low slope roof.

It makes sense to review what is possible so that the full benefit of any refurb can be realized. There are many ways to carry out this process.

However, if you talk to the right people a plan can be prepared to meet the expectations of all involved. Planning for these types of projects is critical to ensuring the smooth running of any project undertaken.

Did you know that you can also correct the slope of a roof with Insulation!

In this case we use what is known as tapered insulation, a light weight solution without the need for heavy screeds and the like, perfect for older buildings where weight may be an issue.

The insulation provides both thermal performance and fall on the roof, again as above there are some critical steps needed to make sure this works.



Project Reference

**Alexandra Headlands
Water Tower, QLD**

Overview

Property Type: Industrial

Project Type: Remedial

Builder: Unity Water

Applicator: Simon Groth Accurate Waterproofing

Category: Concrete Repair

Products Used

- Soprema Alsan Trafik HP 510
- Soprema Alsan Trafik HP 520
- Soprema Alsan Trafik HP 530
- Soprema Alsan Trafik HP 540



Products Details

The client had an old degraded membrane on the water tanks that had failed. A trafficable polyurethane membrane system from Soprema was put forward and approved by the client.

The existing membrane was removed by mechanical means back to clean concrete.



Cracks in the concrete were cleaned out and filled with a flexible fast cure polyurethane sealant. The Soprema Alsan Trafik System was then installed using a 5 coat application.

The result of this was a seamless, UV stable, flexible, tough waterproof membrane system that the client was pleased with.



ADEB

Architects, Designers, Engineers, Builders. Seminars across Australia this year

*Paul Evans
AIW Chairman*

We have already had the Melbourne seminar on the 14th March. Both David Hepworth and I delivered papers on standards and how they affect the industry.

I spoke on waterproofing defects and the necessity for more training of methods and selection for waterproofing in general.

The shock horror images are designed to hit hard and deliver the message that there are way too many failures and the subsequent costs (both money and personal stress of owners) incurred when it goes wrong.

The response has been nothing short of amazing, we are getting all the right questions being asked. Warranties are going to become a major focus with so many people being left with a leaking building and very little response from the parties who installed or had the system installed.

We are talking to these industry leaders, about the need to invest in suitable waterproofing systems and knowledgeable applicators that will provide a “watertight” (pun intended) guarantee.

Upcoming events presented on behalf of the AIW:

PERTH

Thursday, 10th May 2018

BRISBANE

Date to be confirmed.

(Frank Moebus will be presenting at this seminar on behalf of the AIW)

SYDNEY

Friday, 25th May 2018

SHANGHAI

Sunday, 27th May 2018

(only Paul on his own coin)

Venues and times will be available soon from ADEB. Anyone interested in attending these events can contact Paul on **0418 312 646** or **[aiwconnect@gmail.com](mailto:aIWconnect@gmail.com)**

The collaborative AIW / MBAV training developed with Andrew Golle has also been a fantastic success. Participants are providing glowing feedback to us that they are learning the “real message” of waterproofing.

Participants who have been in the industry for years and did not know many of the topics discussed. It’s not your average dry leaning session; it’s an interactive meeting that promotes discussion and collective of ideas.

MBAV - Waterproof training on the practice of supervising, selection of materials, what to look for when having a waterproofing job done, and much more.

Check out MBAV for session times to book in. Discounts apply for MBAV members.



AIW and WAMAI Join Forces

The Australian Institute of Waterproofing and the New Zealand Waterproofing Membrane Association Incorporated have recently recognised and become members of each other's organisation. This partnership will build on the mutual recognition of the efforts each organisation is making to improve their respective industries. We are actively working to find new ways of assisting our members with new and innovative ideas to constantly improve our industry standing in the community.

The ANZAC tradition of mutual support is alive and well. It seems rather poignant that this recognition and support has come about particularly in April, as we look forward to remembering the important part that each country separately and together has played in the history of World War One and of the tradition of the ANZAC's on April the 25th on the 100th Anniversary of ANZAC day.

LEST WE FORGET.

Published Articles by Paul Evans - Remedial Waterproofing Consultant

Finding and Fixing What Lies Beneath in Waterproofing

February 29th, 2024

Drenched to the Core: Major Waterproofing Problems Plaguing Residential Homes

October 12th, 2023

(Sponsored Content) Raising Standards and Awareness in Waterproofing

February 9th, 2023

Multi-Storey Basements Must be Kept Dry

May 26th, 2022

Why Tiling and Waterproofing are Intrinsically Linked

January 17th, 2022

Waterproofing Design In Construction

July 30th, 2021

Leaking Concrete Rooftops – Why Waterproofing Should Not Be Ignored or Delayed

April 28th, 2021

Solving Water Leaks Is Not Always About Waterproofing

February 4th, 2021

Australia's Awareness of Waterproofing is Growing

May 21st, 2020

Why Balconies Leak

February 24th, 2020

BuildIT – Featured Article 2019

“Committed to Raising Waterproofing Standards and Training Across Australia”

Paul Evans, President of Australian Institute of Waterproofing

<https://buildit.partica.online/buildit/buildit-2018/flipbook/66/>

Sourceable – Construction

Interviewed by Andrew Heaton on October 5th, 2017

<https://sourceable.net/australia-must-improve-waterproofing-standards-practices/>

Waterproofing President to Speak at International Conference

Australian Institute of Waterproofing (AIW) News - October 2017

Solving Roof & Balcony Leaks

Facility Perspectives - The Leading Resource for Facility Management in Australasia. VOL 11 NO 1. March-May 2017

Notes from a Balcony Inspection

Australian Institute of Waterproofing (AIW) News - November 2016

Australian Institute of Waterproofing – Online News

Notes from a Balcony Inspection – Nov 2016

<https://www.waterproof.org.au/notes-from-a-balcony-inspection/>

Getting It Right in the First Place – October 2016

<https://www.waterproof.org.au/getting-right-first-place/>

Waterproofing - Getting it Right the First Time

Australian Institute of Waterproofing (AIW) News - October 2016

Waterproofing - Common Failures

LinkedIn Article - Feb 2015

Associations

Australian Institute of Waterproofing (AIW)

Australian Society of Building Consultants (ASBC)

Building Dispute Practitioner Society (BDPS)

Concrete Institute of Australia (CIA)

Australian Concrete Repair & Remedial Building Association (ACRA)

Master Builders Association Victoria-Specialist Contractor (MBAV)

Owners Corporation Network of Australia Ltd (OCN)

VBA Registered Building Practitioner - Domestic Builder Unlimited DB-U 7983

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