

# NEWSLETTER



Brought to you by the Waterproofing Membrane Association Inc.

## Anthony Howell, Junior Vice Chair WMAI

Hello All, at 48 years young my biggest achievement to date is family, my wife Monique, our 5 children and 1 beautiful grandchild.

I have been in the construction industry for most of my working life running a small exterior rendering/ waterproofing company in Wellington (17yrs), before jumping the fence to begin sales/technical roles with firstly Equus and then Ardex NZ.

My spare time is divided between family, the dog and playing various sports with other blokes who should also know better.

In my brief time to date representing Ardex on the WMAI I have come to appreciate how vast our groups knowledge and experience is, the effort that every member willingly puts back into the industry we all love, all of which will be a benefit to all associated for years to come.

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## WMAI Drip Edge

So have you tried the new WMAI Drip Edge?

If you haven't, then I hope my experience with this product will encourage you to purchase and install this product.

I have started installing the WMAI Drip Edge on my own project. It is installed on a warm roof situation. In one instance it is on ST900 profile metal tray. The predrilled holes made it very easy to install by myself. Once the first screw is installed the rest is a breeze.

I did pre-prime the Drip Edge with a solvent primer. Once the membrane touched the surface the adhesion was strong.

Cutting along the bottom edge was simple with a sharp hock knife.

Installing into timber was even easier (if that was possible).

To summarize:

It is fast, easy and looks great.

All good membrane suppliers have this product in stock.

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## Membrane Training 2020s

The evolution of training in the NZ waterproofing industry has been slow to get underway. Reality was that the industry learnt from mistakes made along the way. This was then communicated badly by word of mouth like china's whispers. Suppliers were bringing in product, with little knowledge of how the substrate needed to be constructed, or how the product was to be laid. It was often left to the installers to work out this methodology. I think a disconnect with the suppliers and manufacturers of the product, the distance and language issues were very much at play.

Building techniques were also very different in various countries with weather and materials used a big factor. In short there was not enough testing conducted by suppliers bring in product into the NZ market. Reliance on other countries data and experience was heavily relied upon. This was due to the small nature of the market and the industry at the time. Investment in this kind of information and testing is expensive. When you are not assured of the results and don't have the sales to back up the investment it become a chicken and egg situation. Bad results that many home owners applicators and suppliers have experienced over many years

So when training was finally offered it was basic. Driven by suppliers and tailored to particular products. This unregulated training is still the main way installers are given the information. Some training organisations are on board and offer a more holistic overview training apprenticeships.

Now offered is a waterproofing NZQA qualification. This qualification is made up of 3 sections that cover Torch-on, Single Ply and Liquid membranes.

The training facilities are located in Auckland at Viking and Ardex training facilities

The first students are due to complete the course in September 2022.

The companies and student that have invested in the programme have had a tough road with many postponements with lockdowns and the various policies in this period of life we all navigating.

The WMAI has been looking on in the background with interest. The recent completion of the Reinforced modified Bitumen Code of Practice and the Internal Wet Area Membrane Code of Practice should become a basis for the training.

The Next Code of Practice is now underway this is the Single Ply Membrane Code of Practice. Once complete the three code will help or applicators and installers with a good road map to follow. It should form part of the training programme in the years to come.

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## BGT Snippet

### 3.1.4 Construction Programme and Time Constraints

The construction programme can determine the type of tanking membrane that should be used on a particular project. Issues to be considered include (but are not limited to):

- Construction sequencing programme
- Installation timeframe for complete system
- Curing time of the substrate, primers, adhesives and/or the membrane
- Curing time between multiple layers
- Access by other trades during or after membrane installation
- Moisture content of the concrete at time of membrane application
- The time of the year and the likely weather conditions

Exposure time to elements before backfilling or overlay

### 3.1.5 Penetrations

The number and size of penetrations can determine of the type of membrane that must be used on a particular project. Issues to be considered include (but are not limited to):

- A sleeve can be cast into an in-situ substrate or post-installed into a drilled or formed hole.
- Consider the ease of detailing to dissimilar materials, eg concrete substrate with a PVC sleeve
- Select the appropriate membrane to ensure a water-tight seal to the sleeve.
- Number of penetrations and their proximity to each other.
- Termination of the membrane to the membrane on the penetration.
- Recommendation is to have the pipe at a minimum 5 degree downward angle.

Use of compatible products to ensure a total seal

### 3.1.6 Complexity of Detailing in the Design

Complexity of detailing in the design of the substrate can determine the type of tanking membrane that must be used on a particular project. The less complex the substrate, the more assured the integrity of the membrane installation. Issues to be considered include (but are not limited to):

- The complexity and number of changes of direction
- Junctions of dissimilar substrate materials
- Minimising the number of penetrations
- The number and location of expansion joints
- Termination points

Maintaining continuity of membrane system in multistage construction

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## **BGT Snippet (cont).**

### **3.1.7 Installation and Site Conditions**

Conditions on all working sites differ, and many factors can affect the performance of a membrane. Issues to be considered include (but are not limited to):

- Wet or dry site conditions
- Working space and substrate temperature
- Ventilation
- Working space for the Applicator
- Dust
- The ground water chemistry to which the membrane will be subjected

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At the working meeting held in Wellington on 30th June 2022, Aquaknight Industries Ltd presented Clamping Ring test results to the association.

## Membrane Clamping Drains: The problem with plastic clamp rings

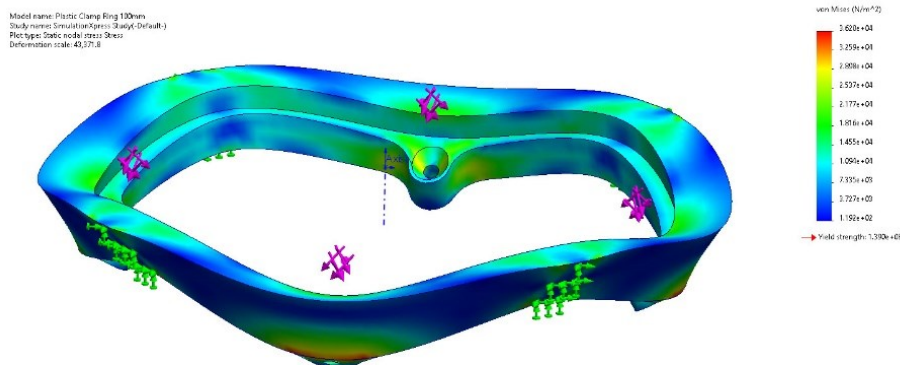
Roofing membranes repel water. All of the water on a membrane makes its way to a clamped outlet.



To achieve a seal that can prevent moisture ingress, pressure must be evenly transferred by the Clamp Ring to the membrane. The Clamp Ring itself, must be rigid enough to achieve that.

Following anecdotal feedback from members, the question is: Can a Plastic Clamp Ring perform this function?

Load simulations suggested there is a problem with the rigidity of Plastic Clamping Rings.



FEA of Plastic Clamp Ring under heavy load.

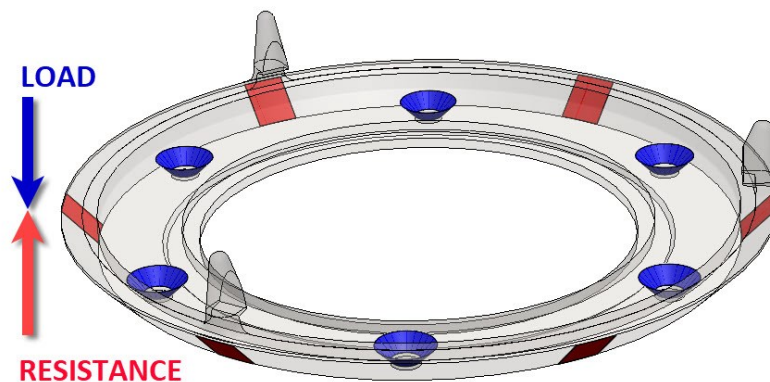
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## Membrane Clamping Drains: The problem with plastic clamp rings (*cont*).

WSP laboratories in Auckland were commissioned to conduct a series of standardised deflection tests on Stainless Steel and plastic clamping rings with the aim of establishing what does happen to the clamping ring when tightened on installation.



Clamping Rings mounted into the test machine



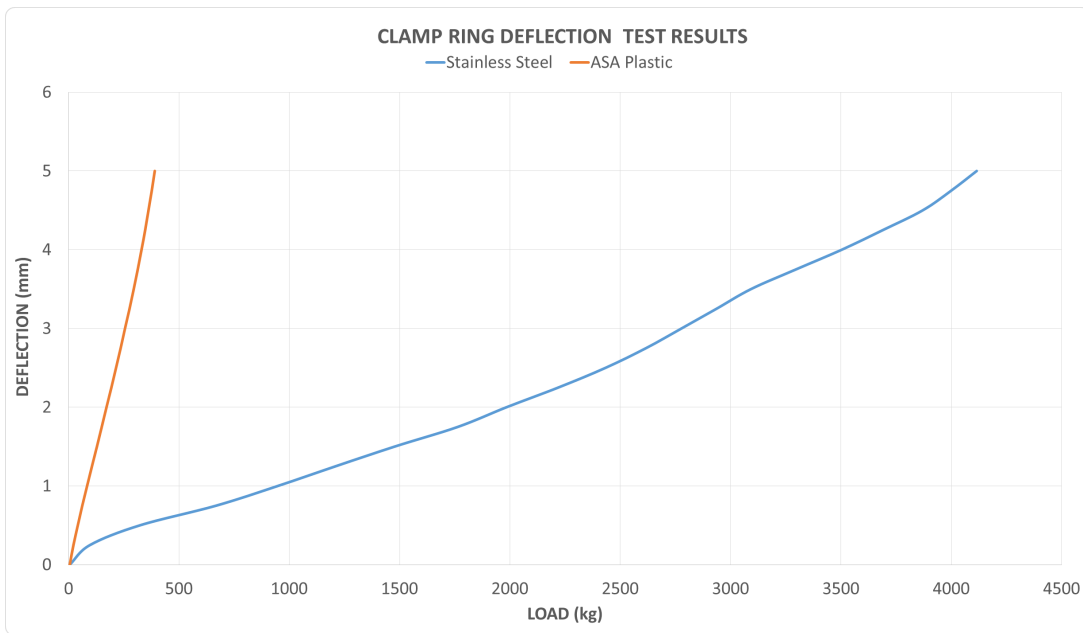
Load is applied to the screw holes (blue, simulating screws being tightened) and resistance is applied half way between the screw holes (red). Different loads are applied from the top, and any vertical travel is measured as deflection.

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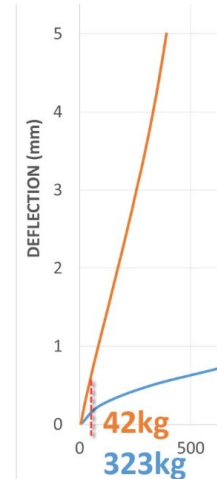
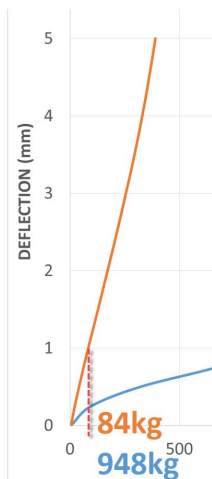
## Membrane Clamping Drains: The problem with plastic clamp rings (cont).



Test results showing deflection under load

Under the same loads, Stainless Steel is **10 times more rigid** than plastic.

Of concern, is the low-load deflection of Plastic Clamping Rings.



Plastic Clamping Rings deform at low pressures.

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## Membrane Clamping Drains: The problem with plastic clamp rings (*cont*).

Plastic Clamping Rings deform at low pressures.



**Stainless Steel Clamping Rings** tested as fit for purpose.

Due to these findings, concerns of plastic clamping ring's performance and long-term durability were discussed at length.

This association resolved to only endorse the use of **Metal Clamping Rings** in COP.

A consultation period remains open over the next month and will close 31<sup>st</sup> August 2022. Submissions from members and any other interested parties should be addressed to the secretary: [secretary@wmai.org.nz](mailto:secretary@wmai.org.nz)



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## Enquiry: Problem Resolution

### Problem Resolution

The Waterproofing Membrane Association Inc. main purpose is to develop Codes of Practice for Waterproofing Membranes to set best practice for selection and installation of waterproof membranes to raise industry standards. Our association also provide good technical support service to wide cross section of the building and construction industry and including property managers or owners. To be involved in problem project resolutions we require full and comprehensive information that requires this enquiry form to be completed and sent back to us

However, as your contract is with the applicator firm direct or through the building contractor, you must first refer the matter to them to obtain resolution, if that fails then contact the supplier of materials used on the project seeking their assistance to resolve. That's the correct procedure and our policy. Only when that procedure fails do you contact our association seeking assistance.

To obtain a copy of the Problem Resolution form

contact [secretary@wmai.org.nz](mailto:secretary@wmai.org.nz)

- Ensure you have provided FULL information.
- E-mail Back to the Association

**Applicants Full details**

Name:				
Contact Details:	Phone		Mobile	
E-mail address:				
Address:				

**Other Parties involved in project.**

Designer Praticce: Contact name:		Phone	
E-mail address:			
Builder Firm: Contact name:		Phone	
E-mail address:			
Applicator Firm: Contact name:		Phone	
E-mail address:			
Installer's Name:		Phone	
E-mail address:			
Other Party: Contact name:		Phone	
E-mail address:			
Supplier Firm: Contact name:		Phone	
E-mail address:			

**Nature of Problem (Full Details)**

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**Background Information**

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**Attachments Provided**

Contract Documents, Photos, Reports, Detail plans and helpful information

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