



Below Ground Tanking

The WMAI spends many hours working on Codes of practice. These take a substantial amount of time and effort from the representatives who attend the work sessions.

With a change of Chairman, the drive has been to push the Below Ground Tanking (BGT) code a lot faster than previously produced codes.

The focus has moved away from MBIE citing's to looking after our members requirements for these documents. This has been a good decision as MBIE will not site the completed Reinforced Modified Bitumen Membrane (RMBM) until sometime in 2024. We hope that the BGT will follow soon after.

The WMAI anticipates that the BGT will be in circulation within months or even weeks of this newsletter publication.

Our loyal members will receive a copy as part of the annual subscription they pay to support this great industry. Non-members and interested stakeholders in the building industry and associated governing body's will be able to purchase this awesome Code of Practice via the web site.

WMAI is a unique organisation of suppliers or Ordinary members.

In the marketplace they fight tooth and nail to secure a specification. Most have similar products and systems.

However, when in the meeting room, there is a respectful appreciation of your competitor with a common goal of achieving the best industry practice.

This is a great time to join this *ground-breaking* organisation. (dad joke, get it? *ground-breaking* reference to the BGT) OK not my best effort.

Interior Wet Area Membranes (IWAM)

Comment from the WMAI Chair in reference to the Ardex article that follows below:

The requirement to include floor wastes and overflows, and to create a plumbed cabinet, is a requirement under E3/AS2 as shown in figures 5 through to 9 and tabled in clause 4.0.6 section 1 part c and section 2-part b. The 2nd notes of figure 2 and 3, figures 7 and 9 note 2.

The WMAI feel that these new requirements do have merit and if used as a design principle and utilised into a projects scope, can be achieved very easily.

MBIE also made a change to the IWAM in relation to its citing as E3/AS2, by including the following passage:

2.0 Modifications to the IWAM Code of Practice

2.1 Modification to IWAM Code of Practice Section 1.2.4. **Deleted from Section 1.2.4 of the IWAM Code of Practice** the commentary text that reads: "*Both the Applicator (i.e., the company), and the Installer (i.e., the person or people) who carry out or supervise the work, must be certified by the Supplier. The Applicator should provide a Producer Statement – Construction (PS3) to verify that the installation of the waterproof membrane system complies with this Code of Practice and the approved building consent documents.*"

Also deleted from Section 1.2.4 of the IWAM Code of Practice the statement "*All waterproof membrane systems must be installed by or under the supervision of an installer certified by the supplier of the waterproof membrane system, working for a certified applicator*"

This is not a great scenario, as it potentially opens the DIY market to start installing wet area membranes. Surely, as manufacturers/suppliers, we must all be wanting applicators to be familiar with the products and trained to install our systems?

Wet area article courtesy of Ardex:

PRINCIPAL CHANGES E3/AS1 and AS2

Acceptable solutions for internal moisture have changed and a new one has been added. These came into effect on 5th November 2020 with a year for transition.

PRINCIPAL CHANGES E3/AS1

Definitions:

- Sanitary appliance - appliance used for sanitation ie. Dishwashers, washing machines but not a sanitary fixture
- Sanitary fixture - sinks and tubs have been added

SECTION 2.0 OVERFLOW

If there is a possibility of an accidental overflow in certain conditions:

- Applies to sanitary fixtures only
- Applies if there is risk to accidental damage to adjoining units or (any) other property
- If it does apply, then additional requirements are:
 - Containment and floor wastes
 - Integrated overflows for kitchen sinks and laundry tubs
 - May not apply for stand-alone buildings under a single ownership
- If integrated overflows are used containment may not be required but an impervious floor may still be required for watersplash

CONTAINMENT AND FLOOR WASTES

- Requirement of an impervious floor or floor finish 1.5m from the source or full extent of the room if water-stops not used
- Also required to have a floor waste
- Falls are not required to it

3.0 WATERSPLASH

If water can be splashed, there is a requirement 1.5m from the source, or, full extent of the room

3:1 Lining materials for floors include:

- Integrally Waterproof Sheet- ie Vinyl with seams welded and covered
- Ceramic or Stone Tiles on an impervious substrate- i.e. Waterproof Membrane
- Slab on grade concrete but limited to laundry in garages
- All else must be considered an alternative solution

Materials removed include:

- Plaster, Concrete, Cork Tiles, Monolithic Coatings (terrazzo) sealed timber or timber-based materials

3.1 Lining materials for walls include:

- Integrally Waterproof Sheet- ie Vinyl with seams welded and covered
- Ceramic or Stone Tiles
- Sheet linings with suitable paint types
- Water resistant lining with impervious joints
- All else must be considered an alternative solution

Materials removed include:

- Plaster, Concrete, Cork tiles, Monolithic Coatings, sealed timber, Vinyl Wallpaper

3.2 Joints

- All joints between sanitary fixtures and impervious floor finishes must be sealed
- All joints between sanitary fixtures and the wall must be sealed

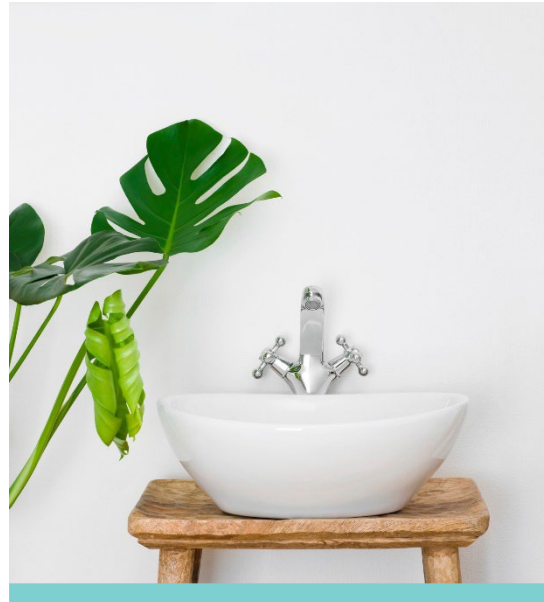
3.3 SHOWERS

3.3.1 Showers to have impervious surfaces

- For floors 1.5m from the rose or full extent of the room- note if a handheld shower from extent of the rose once extended
- For Walls 1.5m horizontally from the extent of the shower rose and 1800mm (min) high or 50mm above the rose

Materials Allowed:

- Plastic or Stainless Shower trays
- Integrally Waterproof Sheet i.e. Vinyl- Cuts must be welded
- Ceramic or Stone Tiles on Waterproofing membrane or impervious tray. If floor is tiles walls must be also
- Plastic shower wall liners
- Water resistant sheet lining with impervious joints.
- All lining materials must be sealed along the top edge.
- Penetrations must be sealed with sealant or proprietary flange systems



3.3.1.3 SHOWERS OVER BATHS

- Linings same as for showers
- Bath must have a minimum lip of 15mm, and lining materials must lap over- flashings and mouldings must not be used



NEW ACCEPTABLE SOLUTION NZBC E3/AS2

Details within E3/AS2 are much clearer with a high attention to water stops, their location and extent of wet area waterproofing

- The new acceptable solution cites the Waterproofing membrane Code of Practice for Internal wet area membrane systems
- Slightly modified whereby it only includes sections 1-4 (materials, design and details) and does not include installation, site practice, specialist systems or finishes. It also removes the requirement for the installer to be certified by the manufacturer.
- It also notes that by following the code of practice some clauses of E3 may be exceeded i.e. waterproofing behind impervious wall linings, locations of floor wastes and overflows in plumbed cabinets

Allowable substrates in the COP include:

- Concrete, Concrete blocks, AAC panels, cement plaster(walls)
- Plywood H3 CCA treated Fiber Cement Sheeting
- Reconstituted Wood Panels non orientated (not particle board)
- Wet area plaster board

CONCLUSION It is important to familiarize yourself with the changes and have your documentation correct. Providing clearer details and the correct information at consent stage can reduce any RFI time.

Use full systems. It is not uncommon to attend projects where multiple suppliers' products have been used invalidating warranties. ARDEX works with a number of suppliers to assist them with testing and providing compatible fixing systems. Check concrete curing compound compatibility before proceeding some can alter the alkalinity adding extra costs.

Snippet from the Reinforced Modified Bitumen Membrane (RMBM)

5.11 Fire Safety

The installation of an RMBM system is predominantly achieved by the use of a gas torch with a naked flame to heat the bituminous content of a sheet, which then adheres to the substrate (or the layer immediately under).

We recommend the use of a hot air gun for detailed flashing work.

Cold adhesive bonding of the membrane, thermal self-adhesive membrane, a hot air gun, or similar types of RMBM systems must be used in situations where the nature of the structure could heighten the fire risk, for example when dealing with upstand and downturn detailing on existing structures where the construction detailing and/or materials are unknown.

Fire prevention is the responsibility of the Applicator in the first instance, where current industry best practice may include (but is not limited to):

- *All torch work must cease a minimum of one hour before departure from the site.*
- *Ensuring fire extinguishers are on site.*
- *Ensure all site fire regulations are followed.*
- *Provision of insurance cover commensurate with the nature and size of the works, including specific clauses for on-site torch work including duty of care. Proof of insurance should be submitted as part of the Applicators documentation when they tender for the project.*
- *The adoption of working procedures which ensure the safety of all personnel on site.*
- *Taking adequate care where flame is directed in carrying out work to flashings, confined spaces or around combustible materials and ideally with a dedicated fire-watcher.*
- *Complying with all the conditions of the hot-work permit where one is required.*
- *Remove all combustible materials from the work area regularly. This includes materials such but not limited to building paper, cardboard, sawdust, birds' nests, general rubbish and debris, and other flammable products.*
- *All site safety rules with regard to smoking must be followed.*

Waterproofing Apprenticeship

It has been a long road for the participants of the inaugural New Zealand Certificate in Roofing (level 4).

The Qualification was put together by Skills NZ and delivered by Vertical Horizons; with trainers from Ardex and Viking Roofspec. The focus is on membrane installation of single ply membranes, liquids, and Torch-on membrane.

The students were required to attend block courses such as Working at Heights, First Aid, Site Safe, as well as in-depth specialised training TPO, Torch-on, Rubber and Liquid Membranes.

Unit standards in topics such as heat, moisture, airflow, corrosion, wind loadings, rainwater handling systems, handling of dangerous goods, report writing, planning, building works roles & responsibilities, calculating and ordering materials, contracting for building works and regulatory requirements, to name a few.

The first students have now completed the full course:



Regan Hauwaho (Premier Roofing), **Taine McLeod** (Arid Technologies), **Conner Strong** (Arid Technologies), **Grant Ford** (Arid Technologies), **Matthew Richmond** (Arid Technologies)

The WMAI gifted the first 5 students' hard copies of the latest IWAM and RMBM Codes of Practice.

The WMAI wishes them all the success in their waterproofing careers and congratulates them on the completion of the level 4 Certificate.