

Research insights: Water damage and the risk of mould in buildings, Practitioner Education Series webinar

Q&A

The following answers have been provided to questions asked during the Research insights: Water damage and the risk of mould in buildings Practitioner Education Series webinar on 9 February 2023.

Can we download the research report?

The research report is available for download from the VBA website:

<https://www.vba.vic.gov.au/about/research/examining-indoor-mould-and-moisture-damage-in-victorian-residential-buildings>

Is it possible to find out which practitioners had the most accepted VMIA claims?

The data used for the research insights were deidentified for use by the research team.

Will the VBA provide a copy of the presentation slides?

A copy of the presentation slides and recording of the webinar is available from the VBA website:

<https://www.vba.vic.gov.au/building/PES-previous-sessions>

Is the recommendation for mandatory inspection going to be taken up by the VBA?

The VBA is a regulator and does not make policy that regulates the requirements for mandatory inspections. Research like this helps support appropriate regulatory reform by government.

Is there any timeframe or likelihood to roll out Trades Registration for waterproofing in Victoria?

The VBA is a regulator and does not make policy that regulates registration of practitioners. Research like this helps support appropriate regulatory reform by government. Registration for waterproofing is part of the implementation plan for Trades Registration proposed by the Victorian Government.



Will the VBA be looking at accreditation of downstream trades to give builders and project managers more certainty the workers on site are more qualified in the field? Understanding that plumbing is accredited, but workers down the line that may affect the head plumbing works?

The VBA is a regulator and does not make policy that regulates registration of practitioners. In late 2018, the Victorian Government made amendments to the *Building Act 1993* to introduce a new registration and licensing scheme for tradespeople. The scheme aims to reduce non-compliant building work, enhance industry accountability and encourage skills formation. Changes will be implemented for carpentry first, with other trades to follow in subsequent implementation stages. The new scheme cannot commence until there are new regulations that prescribe the detail of the scheme. A Regulatory Impact Statement (RIS) and a draft set of regulations will be released for public consultation in 2023. The RIS and draft regulations will set out the detail of the new scheme for carpentry work in terms of a preferred option. A number of feasible alternative options will also be presented for comparison.

There are obviously a lot of variables, however, how long are untreated timber frames/flooring allowed to be exposed before potential issues occur?

It depends on many variables, including the number of rainy days, the intensity of the rain, the exposure to sun, and the weather conditions such as temperature, relative humidity and UV. It also depends on the quality of the protection provided and the material storage method. There is no specific guidance around this, so you need to ensure that water has not set in to the timber, and if in doubt, reach out to a structural engineer. From a health perspective, once you can see visible mould you do have an issue, so it is something that must be remediated.

Is there any way of eradicating the mould?

There are methods for remediating building materials affected by mould, however, determining the right solution for a specific context is a specialised area and advice should be sought from a mould remediation specialist and structural engineer on whether the material can be remediated or whether replacement is required.

How would you non-destructively test the membrane?

A Relevant Building Surveyor (RBS) is not required to carry out waterproofing inspection or testing. It is best practice that the builder would carry out a non-destructive test of the waterproofing area to ensure it achieves a compliant build.

If mould is sighted inside a residential unit during a building condition inspection, shall the occupants vacate or continue living in the mouldy dwelling until remedial works are finished? Who is responsible to direct occupants to vacate, if needed?

If mould is sighted inside a residential building (post the issuing of an occupancy permit) during a building condition inspection, the building occupants/owners should be advised of this. Generally, if you can see or smell mould, action should be taken to clean up and remove the mould immediately, as mould can damage surfaces that it grows on and be harmful to health. The structural integrity of the building could also be impacted. Information for building occupants on testing for mould in their home and where to get help is available from the Better Health Channel website:

<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/mould-and-your-health#what-causes-mould-to-grow-indoors>



Regarding the Total Flow in Eaves Gutter(L/s) from AS3500.3, the table limits 100sqm catchment per downpipe. If we want to go above and beyond the limit per downpipe would that be a performance solution?

Yes, please refer to the National Construction Code (NCC), VBA website, and the VBA YouTube Video on How to Document a Plumbing Performance Solution:
<https://www.youtube.com/watch?v=xRZ5CAVIH4g>

When the details provided in Building Surveyor approved drawings are implemented for waterproofing by the builder and an issue arises, who is responsible? Designer/Building Surveyor?

The question does not give enough detail and is in reference to legal responsibility for a case-by-case scenario. Individuals will need to consult with legal advisers on the merits of each case. In broader terms, the designer is required to show compliance on the proposed design. The RBS is required to be satisfied the design demonstrates compliance prior to approval. The builder is responsible for carrying out work on site in accordance with the approved design and comply with the installation standards specified. The RBS is required to approve mandatory inspection at various intervals, however, waterproofing is not a mandatory inspection stage and may not be visible at final inspection once all the tiling/finishes are complete.

Do you have any information around mould and insulation?

Information about the risk of mould growth in buildings, including in building envelopes, is available in the Australian Building Codes Board's (ABCB) [Condensation in Buildings Handbook](#).

The VBA is supporting research by the University of Tasmania, through a research grant awarded in 2021, to assess the risk of mould growth in external wall systems used in the construction of new housing in Victoria, which does take into account insulation. The objective of the research project is to establish if new homes in Victoria are susceptible to moisture accumulation (condensation) or mould growth, within external wall systems that are built in compliance with regulatory requirements, and if so, ways to mitigate the risk of condensation and/or mould growth without reducing the building's energy efficiency rating. The research is due for completion in 2023. Further information about the research is available on the [VBA's website](#).

Any recommendations on metal walling or roofing to avoid condensation? I.e. spacing between metal and sarking?

For compliance, please refer to the NCC 2019 Volume Two amendment 1 - part 3.8.7 Condensation management and NCC 2019 Volume 1 part F6.

Useful guidance can be found in the [Tasmanian building regulator's guide for building designers on condensation in buildings](#). We also recommend that the practitioner contact the metal roofing manufacturer for specific answers and installation instructions to reduce condensation risk.

If a building frame has signs of mould once the building is locked up, what would be the best action prior to plaster?

The RBS will cause a frame inspection to be carried out once the building has a completed frame and called for the mandatory frame inspection. If signs of mould are identified, the RBS needs to consider the appropriate action to be carried out on a case-by-case basis (Direction to fix (DTF), building notice etc). The regulations do not require the RBS to be called to carry out another mandatory inspection until final inspection stage when the frame is no longer visible. If the frame develops signs on mould post frame stage, it should be considered that the builder is the principal



practitioner responsible for the site and the construction phase works of the build. They have a duty of care to ensure the build is carried out appropriately. They may need to seek guidance to help determine cause and how best to remedy the situation, e.g. by contacting the RBS and/or other consultants (structural engineer, hygienist etc).

How should we deal with 'wet basements' considering there is no Australian codes covering the requirements?

When a Deemed-to-satisfy (DtS) design cannot be achieved and an alternative design system is proposed, the design must be considered via a performance solution in order to meet the performance requirement.

What about installation of water vapour barriers in the case of boundary-to-boundary construction where the water vapour barrier cannot be installed (to allow for brickwork to be constructed)?

When a DtS design cannot be achieved and an alternative footing system is proposed, the design must be considered via a performance solution in order to meet the performance requirement.

There was a gutter photo where width of the box gutter was increasing at the end of the gutter. Can this area form a sump which is bigger than gutter width?

To achieve compliance with the NCC via the DtS pathway, compliance with AS3500.3 is required. The design of the box gutter must strictly incorporate all AS3500.3 requirements, including the correct width of the box gutter, the sump, and the overflow. Increased box gutter width does not replace any of the other requirements (such as the box gutter sump) as part of a DtS solution.

Can the Building Surveyor issue a direction to fix to the builder to rectify mould on timber framing?

Yes, however it may be more appropriate to consider a Building Notice with the show cause process, depending on severity and satisfactory outcome required.

As a building certifier, if I see mould during an inspection, should I be requiring them to engage a mould remediation specialist and getting a certificate before signing off the completion of the building?

A building notice may be issued by the RBS under section 106(a) or (b) of the Act if the RBS considers the building is unsuitable for occupation or is a danger to the health and safety of a person using the building respectively. The way in which the owner or builder remediates or rectifies the mould would depend on the circumstances in each specific context.

Are there mandatory design and construction details addressed by the Building Standards that can be aligned to or satisfy the Building Surveyor so that the works can be approved?

Prior to issuing a building permit, the RBS must be satisfied the design proposal suitability complies with the *Building Act 1993*, and relevant Regulations and is demonstrated on the design documentation submission. The VBA has a practitioner resource page that provide further guidance, link can be found here:

Building: <https://www.vba.vic.gov.au/building/building-resource-hub>

Plumbing: <https://www.vba.vic.gov.au/plumbing/plumbing-resource-hub>

**Is there a guidance booklet that consolidates all the design and code requirements for practitioners to refer to?**

There is currently no single guidance document that consolidates all the design and code requirements for practitioners to refer to reduce the risk of moisture ingress and water damage in buildings. Some helpful resources are the ABCB's [Condensation in Buildings Handbook](#), the VBA's [Guide to Standards and Tolerances](#), and the [Tasmanian building regulator's guide for building designers on condensation in buildings](#).

Where can I find detail information regarding balcony waterproofing?

Please refer to AS4654.1 and AS4654.2.

After the roof is complete, if windows and wall wrap are installed and the wall wrap is sealed properly, is it safe to proceed with interior finishes before the external cladding is complete?

Builders are free to proceed with the construction plans as they see fit, as long as there is no water ingress, and the protection measures divert water outside of the building.

When a Building Surveyor/Inspector inspects and approves and frame inspection, how are they supposed know/be aware how long the frame there after has bene left exposed?

The regulations do not require the RBS to be called to carry out another mandatory inspection until final inspection stage when the frame is no longer visible. If the frame develops signs on mould post frame/fire stage, it should be considered that the builder is the principal practitioner responsible for the site and construction phase works of the build. They have a duty of care to ensure the build is carried out appropriately. They would need to seek guidance to determine cause and how best to remedy the situation, e.g., by contacting the RBS and/or other consultants (structural engineer, hygienist etc).

How does the Building Surveyor assess a D&C project when full documentation may not be completed?

The designer/s are required to show compliance on the proposed design. The RBS is required to be satisfied the design demonstrates compliance prior to approval. The builder is responsible for carrying out work on site in accordance with the endorsed design and comply with the installation standards specified.