

# Waterproofing of wet areas

## Q&A

*The following answers have been provided to questions asked during the Waterproofing of wet areas webinar on 23 March 2023.*

*The answers provided are correct as at 21 April 2023.*

### **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/plumbing/PES-previous-sessions>

### **Does the 1800 mm water proofing to the shower wall have to extend out 1500 mm, as shown in figure 10.2.2 (b)?**

Not for every type of unenclosed shower. It depends on the extend of the shower area (defined). Only when that figure is relevant such as no shower screen. To understand relevance of figures, refer to A1G4(3)(h) and last paragraph in the explanatory information.

### **With regards to Class 1a, if a practitioner waterproofs the whole floor and 150 mm up the walls and 1800 mm around the shower wall junction and have a floor waste, is a shower screen required?**

No, a shower screen is not required if you have practically waterproofed the entire bathroom.

### **The definition of enclosed shower area within the BCA now makes reference to the walls or screen containing the spread of water to within that space. If a semi-frameless or frameless screen is used which has gaps between the sections of glass (without deflectors or similar), does this type of screen contain the spread of water to the area? Or would this scenario be deemed an unenclosed shower area?**

It would be deemed an unenclosed shower, as it does not have seals and deflectors.

### **With regards to AS3740, how will the change in fall requirements from 1:100 to 1:80 for the bathroom area outside the unenclosed shower affect AS1428, which currently allows 1:80?**

There isn't any affect, as there is no conflict.

### **When inspecting a site for defects, how can a practitioner know if the design or construction method carried out has used Housing Provision Design or AS3740?**

Refer to the approved building permit drawings.



**If renovating a bathroom for like for like, where no building permit is required, can the fall to waste remain at 1:100?**

Technically no, the waterproofing must comply with the current regulations.

**A lot of builders are waterproofing under and on top of the screed; if they have installed a bond breaker on the waterproof under the screed, do they need to install a bond breaker to the top of the screed?**

Waterproofing both under and top of screed is unusual. The relevant building surveyor would need to consider and determine the specific waterproofing system.

**Hypalon Flashings are still almost impossible to find, and epoxy won't always adhere to it, is there an alternative now?**

The VBA does not comment on specific waterproofing system issues. You may wish to refer an industry association, such as the Australian Institute of Waterproofing.

**Multiple builders have mentioned that they will no longer install additional wastes to a bathroom or laundry (other than that required in the shower area and bath), as they will now need to fall to those wastes. Is this not reducing best practice principles? Now there may be no backup waste to capture if a bath overflows, etc. as builders don't want the additional work associated with achieving falls to the whole of a bathroom. for example.**

The provision is there to ensure that floor wastes work effectively. You may wish to select a bathtub with a built-in overflow.

**AS3740:2021 contains many inconsistencies and errors. Will the VBA be providing industry with interpretations on how these should be applied such as in a Practice Note to ensure consistent application?**

The VBA is not involved in the preparation of AS 3740. You may wish to obtain clarification to the committee members, such as the Australian Institute of Waterproofing.

**What is the definition of an unenclosed shower under the National Construction Code (NCC)? If the shower is fully frameless but had a door, is this unenclosed?**

An enclosed shower needs to have a shower screen that will be designed and installed to prevent the spread of water.

The determination of whether the fully frameless shower area is designed and will function so that the spread of water will be prevented from the category 1 area is up to the relevant building surveyor.

**Doesn't 10.2 override AS3740? If so, should 10.2 be used as a first option?**

H4D2 of the NCC 2022 states that provided the wet areas are protected in accordance with the appropriate requirements of 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions, you can use either AS3740 OR Part 10.2 of the ABCB Housing Provisions.

In order to use AS3740, the builder/person carrying out the work will still need to comply with 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions.

Please note: 10.2.7 to 10.2.11 of the ABCB Housing Provisions is also required to be complied with to be satisfied that the provisions 10.2.1 to 10.2.6 of the ABCB Housing Provisions have been meet. This includes and not limited to, materials required to be used in the waterproof and water-resistant system.



### **Can practitioners use particleboard flooring in the wet area, given it was taken out of the new AS3740 standard?**

The new standard no longer allows the use of particleboard to be part of the waterproofing system ('water resistant system').

Particleboard may be used underneath a water-resistant system, provided that it complies with the structural and other relevant requirements under the NCC and will not damage or compromise the water-resistant system used above.

Further, the required purpose of the particleboard is not compromised during the installation of the water-resistant system. The determination of whether the design/installation of both the particleboard and water-resistant system is fit for purpose and complies is up to the relevant building surveyor.

### **Is there an option for performance requirements and deemed to comply systems and any new 'systems' being developed, such as new impervious material linings like 'green' tiles, etc? Are they being approved at the moment and how long is it likely to be before they are approved?**

For use of materials or a system that does not comply with the Deemed to Satisfy provisions, a performance solution or a modification from the Building Appeals Board may need to be discussed with the relevant building surveyor.

The common use of polished concrete in wet areas, without use of tiles or lino on top, was an example of this under the current AS3740 (to be superseded shortly).

Please note that for more information in relation to the modification application or process, please contact the Building Appeals Board.

### **Was a water bar a standard requirement in 2016 AS3740?**

Water bars (also known as water stop) requirements under the waterproofing standard exist in the AS3740-2010 version of the standard.

The updated provisions relating to them however need to be considered as required in the new ABCB Housing Provisions and AS 3740 standard.

### **Can AS3740 be applied to demonstrate the design of a shower design and BCA Clause 10.2 be applied to the design of a bath located in the same room as the shower?**

For Class 1a building, the NCC 2022 Volume 2 states that provided the wet areas are protected in accordance with the appropriate requirements of 10.2.1 to 10.2.6 and 10.2.12 of the Australian Building Codes Board (ABCB) Housing Provisions, either AS 3740 OR Part 10.2 of the ABCB Housing Provisions can be used.

In order to use AS3740, the builder/person carrying out the work will still need to comply with 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions.

Where any part of the shower design needs to be carried out that requires the compliance with 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions, a practitioner can't just use the AS3740 standard, the builder will need to use both documents to comply under the deemed to satisfy provisions.

### **Who signs off on compliance? What qualifications can they get and or should have? If they sign off, are they then responsible for the job?**

Where a building permit is required for the building work, the relevant building surveyor is responsible for signing off on the building work when they are satisfied the construction of the building work complies with the Building Act 1993 ('the Act') and Building Regulations 2018.



Therefore, the means of being satisfied that the work complies will be up to that relevant building surveyor to determine whether they cause an inspection under Section 35 of the Act or whether they rely on the requested certificate of compliance provided by the competent person, i.e. competent builder.

**Can a practitioner just use AS3740 and ignore the housing provisions and not worry about non-compliance?**

H4D2 of the NCC 2022 states that provided that the wet areas are protected in accordance with the appropriate requirements of 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions, you can use either AS3740 OR Part 10.2 of the ABCB Housing Provisions.

In order to use AS3740, the builder/person carrying out the work will still need to comply with 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions.

Please note that 10.2.7 to 10.2.11 of the ABCB Housing Provisions is also required to be complied with to be satisfied that the provisions 10.2.1 to 10.2.6 of the ABCB Housing Provisions have been met. This includes and not limited to, materials required to be used in the waterproof and water-resistant system.

**Is there a need to have fall or a minimum shower screen width? For example, an open shower that is 1200 x 1200 and with only a 900 mm wide shower screen?**

An enclosed shower needs to have a shower screen that will be designed and installed to prevent the spread of water from the Category 1 Area. In which, using a 900 mm wide shower screen is suggested to not comply with for a 1200 x 1200 proposed enclosed shower.

However, provided that the rest of the design complies with the waterproofing requirements, the use of a 900 mm wide shower screen may or may not be permitted by the relevant building surveyor for use in an unenclosed Type 1 shower design, given that you can have a fixed 900 mm shower screen used when the shower is over a bath. However, please note that the shower area (including if the whole bathroom is designed as an unenclosed shower area) will require the fall of 1:80.

**If using a separate waterproofing contractor to tile, who is responsible for the membrane? For example, what if the tiler damages the membrane? How is this proven?**

The person (usually builder) who has been listed on the building permit for the purpose of carrying out the building work is considered responsible for the carry out of that work, regardless of whether the builder has subcontracted other professionals to assist in carrying out the work. They are responsible for supervising each of the other subcontracted professionals.

It is also noted the relevant building surveyor is also responsible for signing off on the overall construction under the building permit and making sure the listed builder has completed the work in accordance with the Building Act 1993 and Building Regulations 2018.

**Can tile underlay be used on top of particle flooring and still be compliant with new regulations?**

The new standard no longer allows the use of particleboard to be part of the waterproofing system ('water resistant system').

Particleboard may be used underneath a water-resistant system, provided that it complies with the structural and other relevant requirements under the NCC and will not damage or compromise the water-resistant system used above.

Further, the required purpose of the particleboard is not compromised during the installation of the water-resistant system. The determination of whether the design/installation of both the particleboard and water-resistant system is fit for purpose and complies is up to the relevant building surveyor.

**Is it possible to install a shower above a bath, and could you explain who are accredited installers?**

AS3740 makes an allowance for the installation of a shower above a bath, provided that the relevant appropriate requirements of 10.2.1 to 10.2.6 and 10.2.12 of the ABCB Housing Provisions have also been met.

It may be suggested to consult with a competent builder for more specific information on how to achieve and construct the compliant design.

**Does this mean, that a practitioner cannot put a note saying, 'Comply with standards'. But someone completely unqualified can come and inspect the work and provide a sign off certificate that says refer to regulations?**

Where a building permit is required for the building work, the relevant building surveyor is responsible for signing off on the building work, when they are satisfied the construction of the building work complies with the Building Act 1993 ('the Act') and Building Regulations 2018.

Therefore, the means of being satisfied that the work complies will be up to that relevant building surveyor to determine whether they cause an inspection under Section 35 of the Act themselves or whether they rely on the requested certificate of compliance provided by the competent person i.e. builder.

Also noting that the relevant building surveyor has the discretion to not accept the certificate or the person carrying out the work if they are not satisfied they are appropriate to carry out the work or further provide the certificate.

**Is there a Deemed to Satisfy method for waterproofing the wall to floor junction, where polished concrete is used?**

AS 3740 now provides a clause in 4.17 which provides options for using a polished concrete floor beneath a waterproofing system and further reference to dealing junctions in accordance with clause 4.11 of the standard.

It may be suggested if the polished concrete system complies with 4.17 that it may be used as a deemed to satisfy method. Where the design does not comply with this standard, a performance solution or a modification from the Building Appeals Board may need to be discussed with the relevant building surveyor.

Please note that for more information in relation to the modification application or process, please contact the Building Appeals Board.

**Why doesn't it require an independent water proofer to sign off?**

Section 35 of the Building Act 1993 provides the relevant building surveyor with the powers to cause an inspection at any time, whether or not a mandatory notification stage has been completed. This means the relevant building surveyor can cause the water proofing building work to be inspected at any time during the process of installation before signing off.

**Can you provide more explanation about not using particle sheet flooring. What is the alternative option here?**

The ABCB Housing Provisions provide different materials that can be used in a compliant waterproofing system (inter-alia as a water-resistant system substrate material) instead of using particleboard. Examples of these substrate materials are within part 10.2.9 of the ABCB Housing Provisions.



For use of materials or a system that does not comply with the Deemed to Satisfy provisions, a performance solution or a modification from the Building Appeals Board may need to be discussed with the relevant building surveyor.

Please note that for more information in relation to the modification application or process, please contact the Building Appeals Board.

### **Where does Class 2 fit into changes to waterproofing?**

Section F2D2 under the NCC Volume One requires Class 2 and 3 building and a Class 4 part of a building, building elements in wet area must comply with specification 26 of the NCC and AS3740 waterproofing standard.

Also noting that the performance requirement F2P1 also requires compliance with the deemed to satisfy provisions F2D2 to F2D4 of the NCC.

### **Who is technically responsible for connecting the leak control flange to the shower grate, when screeding and waterproofing is required in between? Is this the responsibility of a plumber? If so, what if the responsibility is passed onto the tiler?**

Where any work is not considered plumbing work under Part 2 of the Plumbing Regulations 2018, for example not considered as drainage work or water supply work, the work to be carried out on the shower area should be carried out by a competent builder or any person approved by the relevant building surveyor.

Where work is considered as defective, please note that building action can be sought against a building practitioner under Section 134 of the Building Act 1993 for up to 10 years, from the time the certificate of final inspection or occupancy permit has been issued if defective work is not fixed.

### **Can you please advise on the technical installation of water stops and water bars?**

The VBA Building Technical and Regulations Unit does not provide site specific advice in relation to wet area designs of water stops or water bars.

Where specific technical information is required for the installation of the water stops or water bars, you may like to start with the requirements detailed in the NCC and AS3740.

For further site-specific assistance, it is best to consult with the competent builder for the installation requirements that best suits your needs and wet area design.

### **Can we get a bit more clarification of the 3-5 mm lap to architraves?**

With regards to AS3740, please refer to figure 4.9.1(C) for the required installation, which indicates a lap a further 3-5mm over the waterproofing membrane on either side. This prevents exposure of the membrane at the edge (due to application of adhesive, backing rod if installed).