



Building: Proactive Inspections Program and Common Non-compliances

This webinar will start shortly to allow participants to join.



The VBA respectfully acknowledges the Traditional Owners and custodians of the land and water upon which we rely. We pay our respects to their Elders past and present.

We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life.

We embrace the spirit of reconciliation, working towards equality of outcomes and an equal voice.

Welcome

Today you will hear from:



Nathan Naidu

Team Leader

Inspection Services,

Audits and Inspections, VBA



As Victoria's Building and Plumbing Regulator, we **safeguard Victoria's future liveability, promoting safe, compliant buildings, built to last**

Our role is not to set policy, but to **support industry to understand and comply with the rules.**

Our Practitioner Education series **helps support the industry by providing practical insights, evidence-based strategies and useful resources.**

Housekeeping



Today's session will be recorded and will be available on the VBA website.



Questions can be submitted via the Q&A function. For any questions that we don't have time to answer during the session, the questions and answers will be emailed to you after the webinar.



We will be conducting live polls today. These will appear on your screen.



This webinar is scheduled to run for 60 minutes, however in some cases we may run over time in order to cover all content.

Webinar questions



We do our best to answer as many of your questions as we can during the webinar.



However, due to the high volume of questions that we receive, we may not be able to answer your question during the webinar time.



Approximately two weeks after this webinar, you will receive an email with answers to all of the questions that were asked in this webinar.

We thank you for your patience.

Purpose of the webinar

Why is this webinar important?

This webinar will raise awareness of the purpose and reach of the Proactive Inspections Program (PIP).

This webinar will highlight common building non-compliances being identified across various stages of building works, and examples of rectification.



NOTE: this webinar will focus on Building non-compliances only, not Plumbing

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Learning goals

After this webinar, you should:



Have a **better understanding** of the purpose of the **PIP** program



Be **better able to identify and prevent** common non-compliances and be better aware of their impacts.

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Today we will cover

1. Introduction to Proactive Inspection Program (PIP)

2. Risk Matrix

3. Common Non-Compliances

3.1 Slab Reinforcement & Concrete Cover

3.2 Holes in Frame

3.3 Fire Separation

3.4 Waterstops

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Introduction to the Proactive Inspections Program (PIP)



Proactive Inspections Program (PIP) overview



Purpose

To provide a health check on active building work within Victoria.

To find in which areas our industry is excelling and which are not meeting legislative and community standards



What does it involve?

Visits to a range of building types across various stages. Inspect building work outside of the mandatory inspection stages.

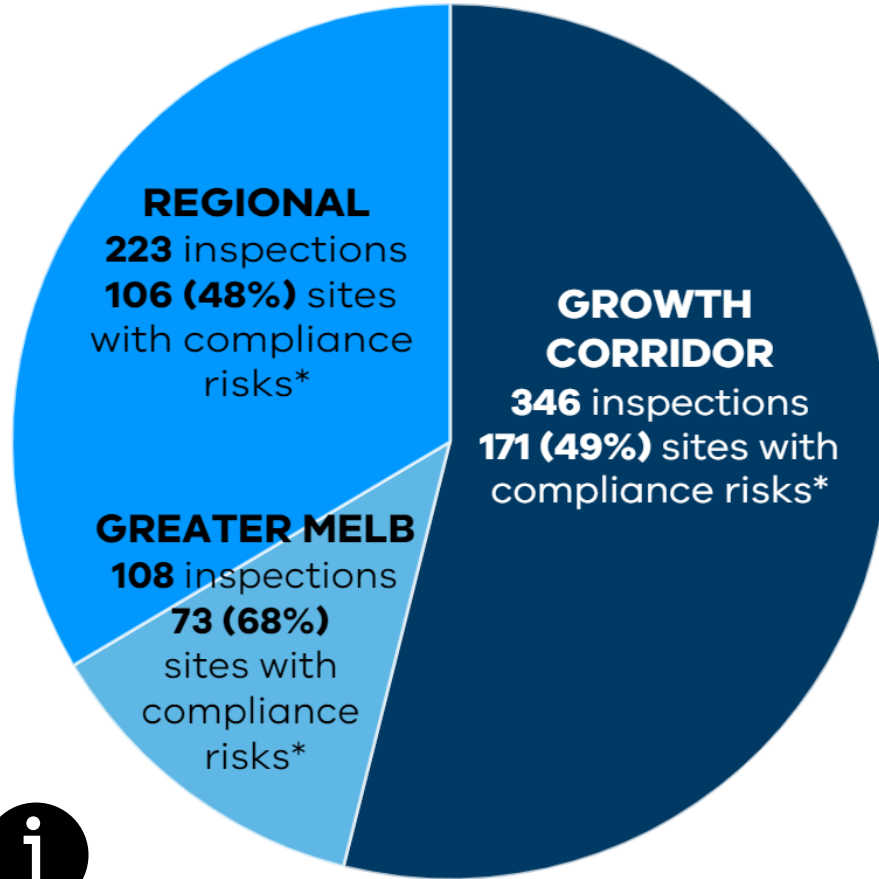


PIP website

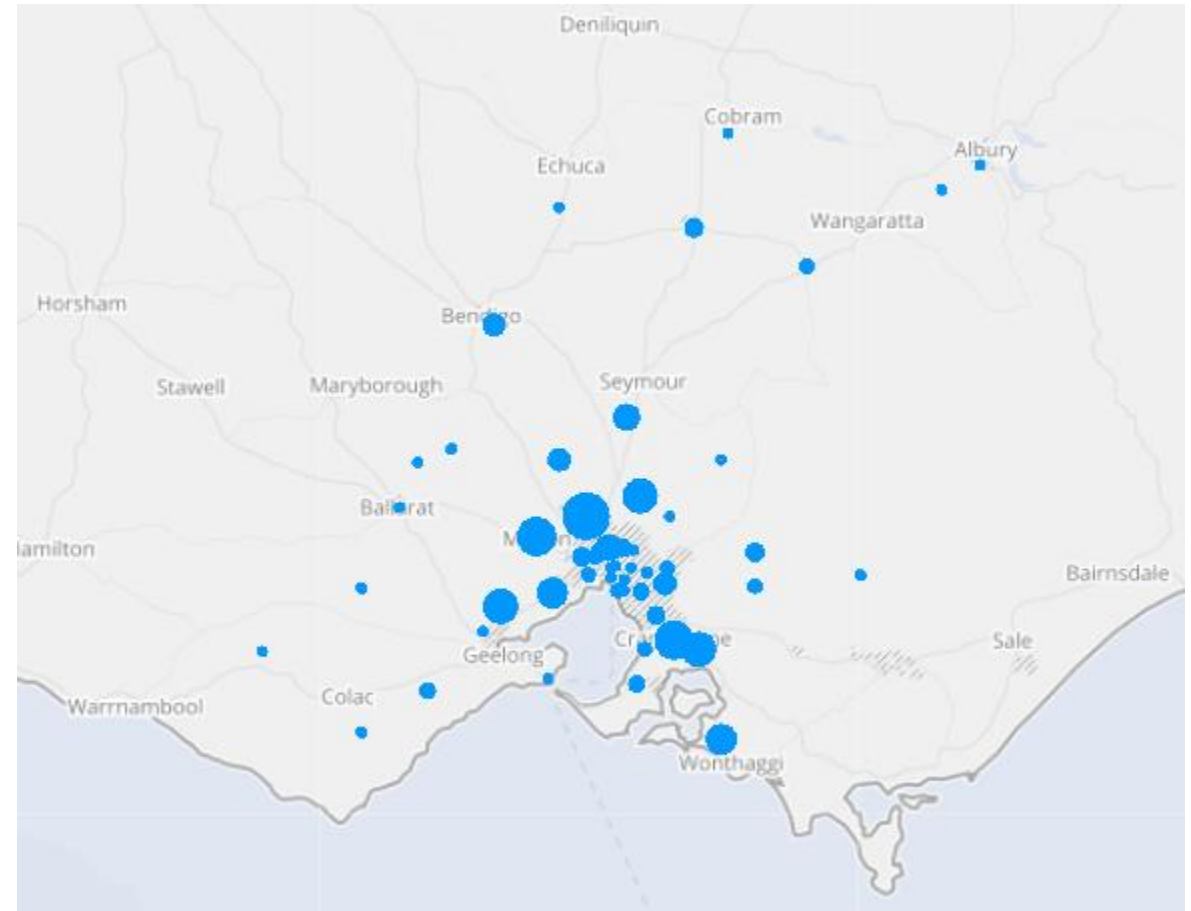
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Total Building Inspections
677



Inspection locations



PIP quarterly reports

Risk Matrix



Risk matrix

Low risk (pass)

Non-compliance is not identified at inspection, or any non-compliance is consistent with work in progress and is reasonably expected to be resolved as work progresses.

No. and % in last financial year: 1918
(25.5%)

Low risk (low- impact non compliance)

It is unlikely that the non-compliance, if left untreated, would cause an adverse effect on the safety and/or amenity of the occupants. Financial loss for future occupants or loss of structural integrity is unlikely.

No. and % in last financial year: 2004
(26.65%)

Medium risk

It is possible that the non-compliance, if left untreated, would cause an adverse effect on safety and/or amenity of the occupants/public. Financial loss for future occupants or loss of structural integrity is possible.

No. and % in last financial year: 3471
(46.15%)

High risk

It is almost certain that the non-compliance, if left untreated, would cause an adverse effect on the safety and/or amenity of the occupants/public. Structural integrity would be significantly compromised and/or total loss of project value would be incurred.

No. and % in last financial year: 128
(1.7%)

Common Non-Compliances: Slab Reinforcement & Concrete Cover



Concrete Cover



What is concrete cover?

The thickness of concrete that surrounds the steel reinforcement.



How to ensure adequate concrete cover?

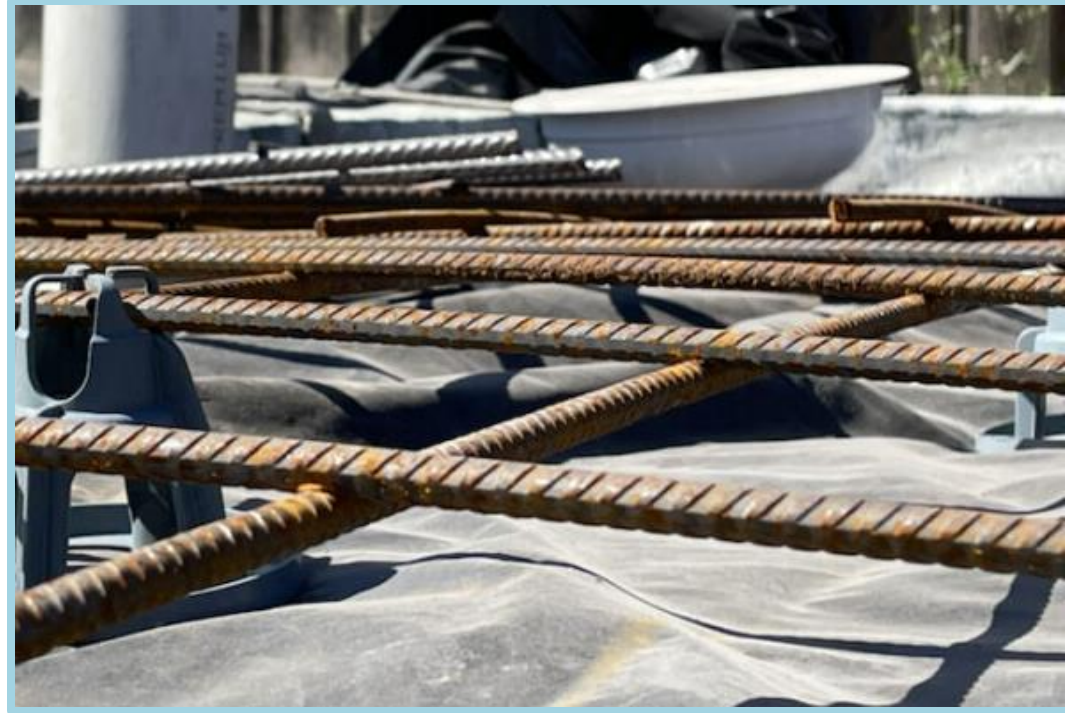
Correct installation of slab reinforcement

Impacts

Corrosion

Weakened slab

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How can it be rectified?



Best time to rectify is pre-pour

5.3.2. Reinforcement in rafts and slabs:

- a) Minimum concrete cover for the reinforcement shall be 40mm to unprotected ground, 40mm to external exposure, 30mm to a membrane in contact with the ground, and 20mm to an internal surface
- b) The slab mesh shall be placed towards the top of the raft of slab (Clause 5.5)

5.3.1 Concrete

The grade of concrete shall be N20 with slump of 100mm in accordance with AS1379, with a 20mm minimal nominal aggregate size, or as specified in Clause 5.5, or as specified by the designer



Honeycombing



Exposed steel



Consequences

Corrosion

Weakened slab



How can it be rectified?

Likely involves cutting back part of the slab, treating the steel reinforcement, applying specially formulated products and rectifying concrete finish.



Remember to seek advice from a structural engineer and approval from the Relevant Building Surveyor (RBS)

Slab mesh



Trench mesh



Impacts

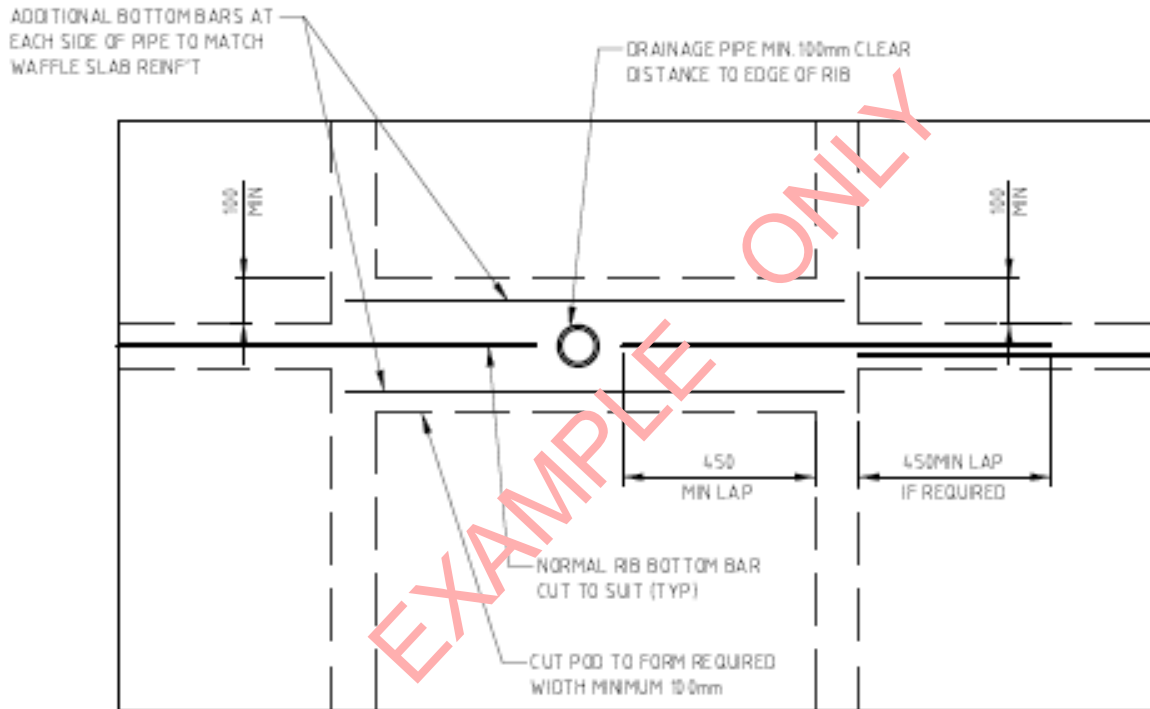
Weakened slab

Void structural warranty

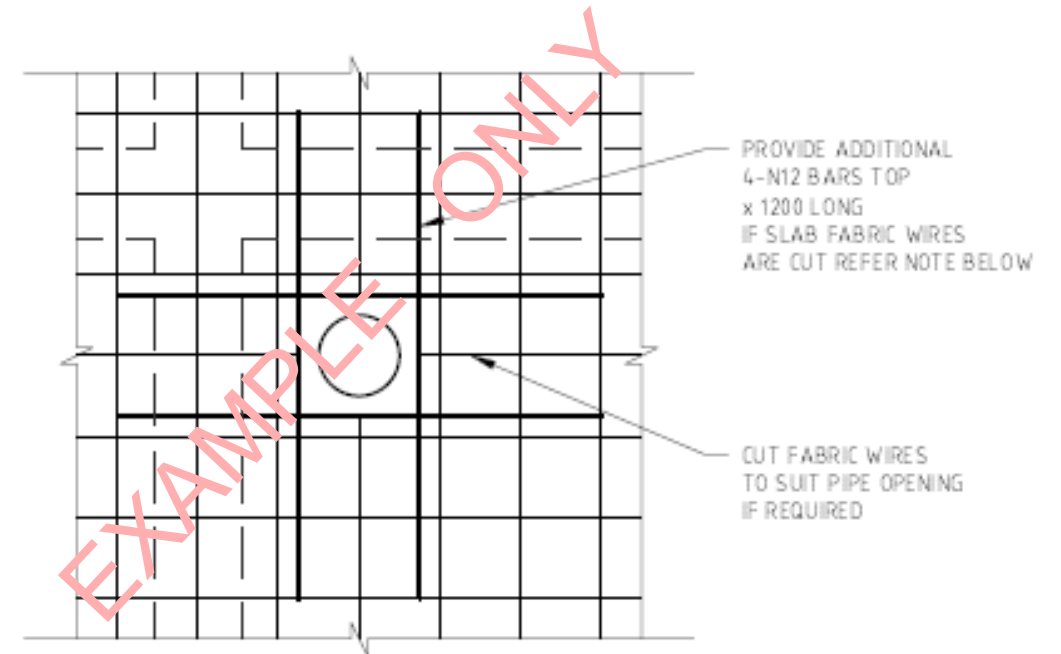


How can it be rectified?

Example of rectifying slab rib penetration



Example of rectifying a slab mesh penetration



Quick quiz

What problems may be a direct result of inadequate concrete cover?

- A. Corrosion of reinforcement
- B. Poor anchoring of reinforcement
- C. Reduced slab strength
- D. All of the above



Quick quiz

What problems may be a direct result of inadequate concrete cover?

D. All of the above



Common Non-Compliances: Holes In Frame



Discontinuous plate



Holes



Holes

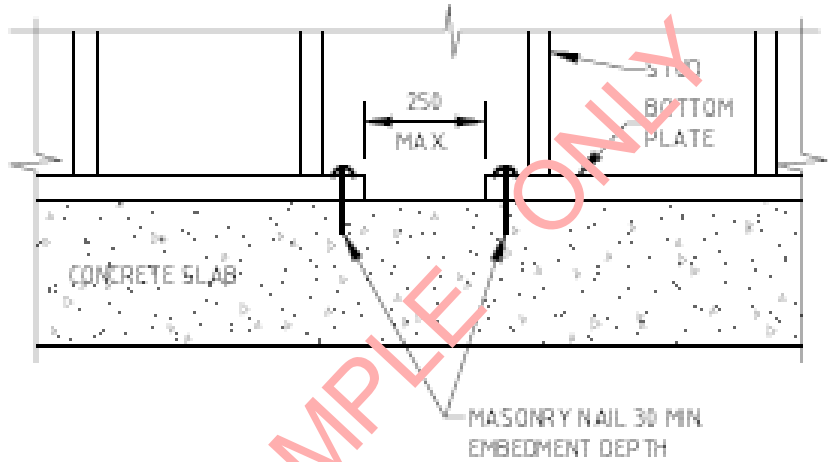


Impacts

Reduced bracing capacity

Weakens load capacity

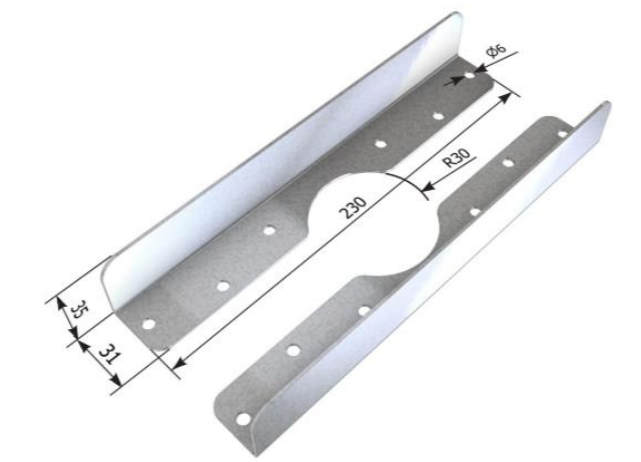
? How can it be rectified?



DISCONTINUED BOTTOM PLATE
- SLAB SUPPORTED
N.T.S.



MiTek Top Plate Stiffener



Pryda Frame Fix



PES PIP Timber Framing webinar

Common Non-Compliances: Fire Separation

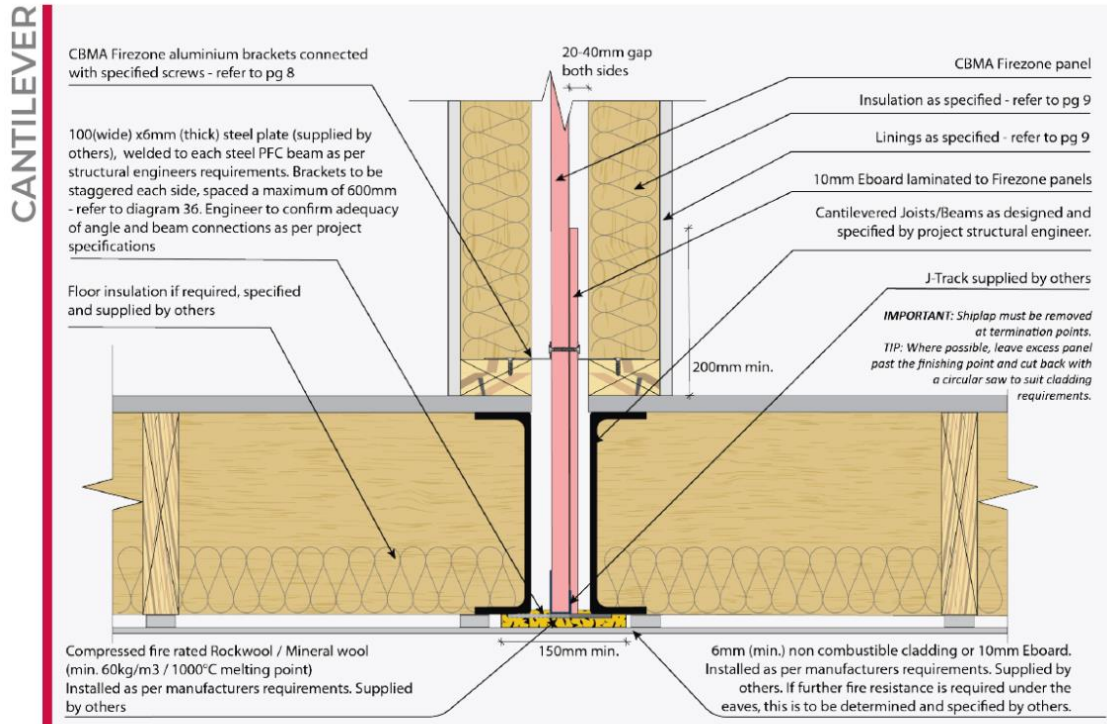


Cantilevered Fire Rated Walls: maintaining the required Fire Resistance Level (FRL)



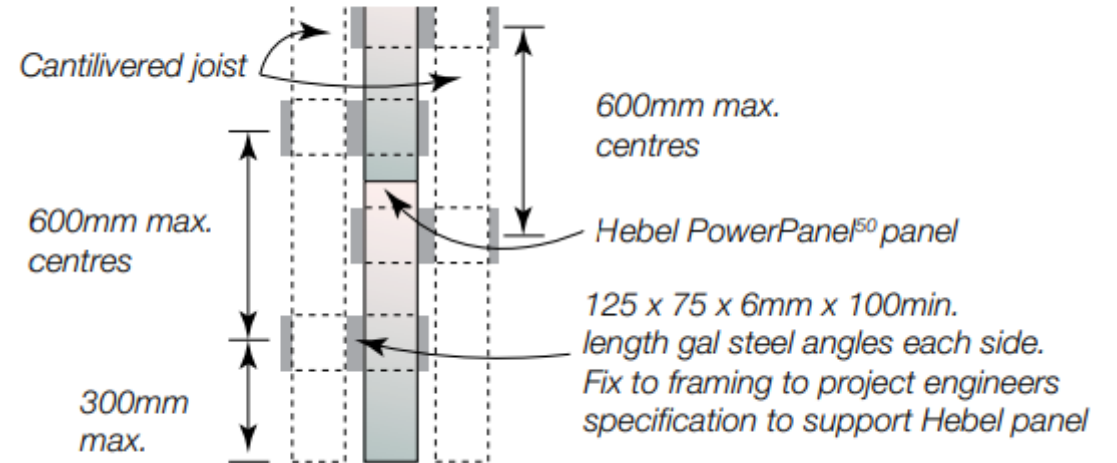
Achieving the required Fire Resistance Level

Example from CBMA – Section view



FIREZONE TYPICAL CANTILEVER STEEL DETAIL
DIAGRAM 34

Example from Hebel – Plan view



- Wall structurally supported by each side independently
- No path of travel for heat to transfer across

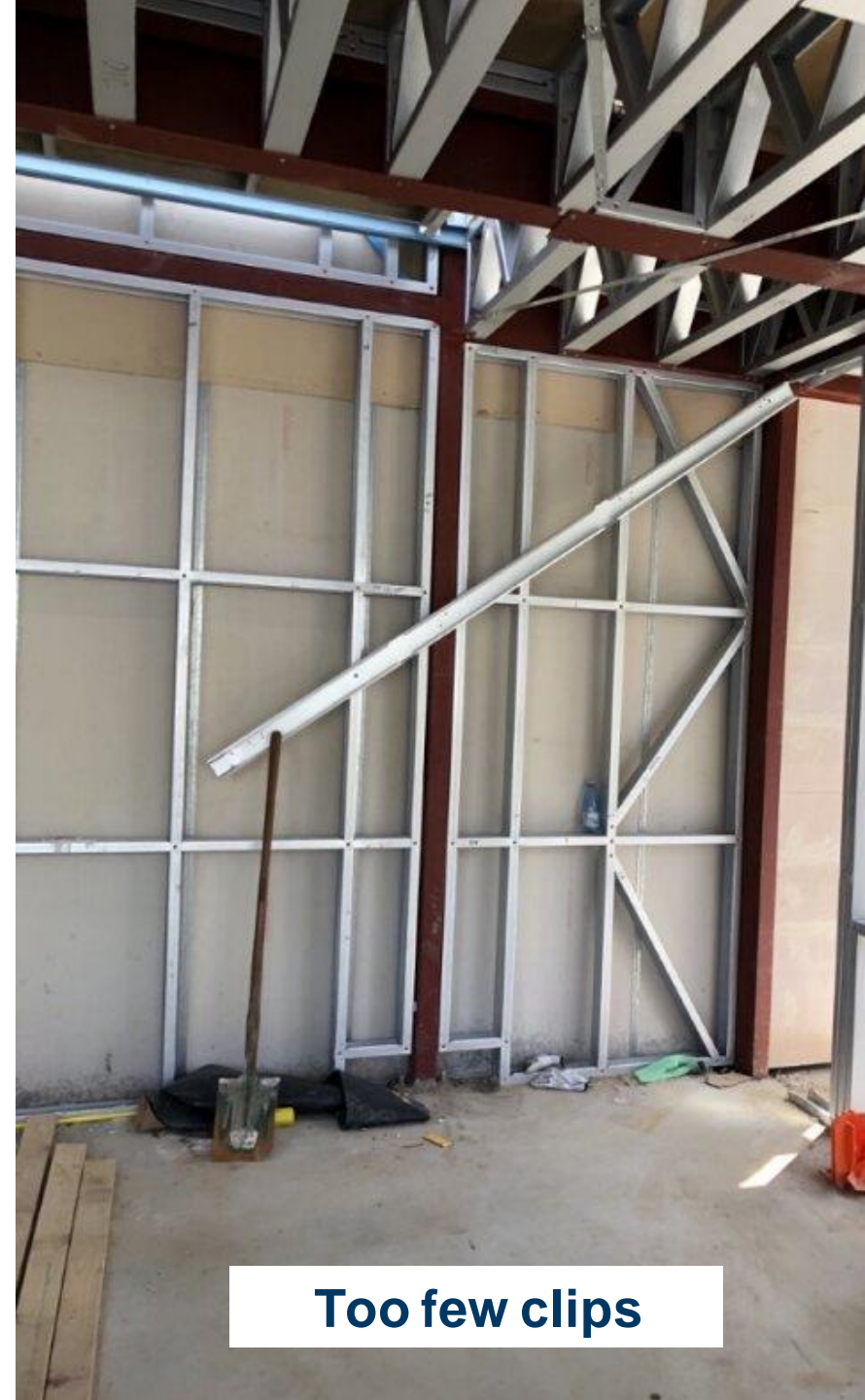
Fire Separation: Party wall clips

Purpose of clips

Hold fire rated wall in place
Designed to melt away in the
event of a fire

Consequences: too few

Wall not adequately supported
FRL - Structural adequacy not
achieved.



Too few clips

Fire Separation: Party wall clips

**Consequences:
too many**

Reduced acoustic
performance of the wall

Wall may not meet
requirement for
discontinuous construction



PES PIP Findings Fire
Separation
Construction webinar



Too many clips

Quick quiz

Does this support of a cantilevered fire separating wall appear compliant?

Yes
No



Quick quiz

Does this support of a cantilevered fire separating wall appear compliant?

No



Common Non-Compliances: Waterstops



Wet Areas: Waterstops at Cavity Sliders

Purpose

**To contain water
within wet area**

**Consequence of
non-compliance**

**Water escapes wet
area; mould & water
damage.**

What are the problems shown here?



- Waterstop does not form a continuous perimeter flashing.
- Wet area is not compartmentalised.



Wet Areas: Waterstops; maintain waterproofing

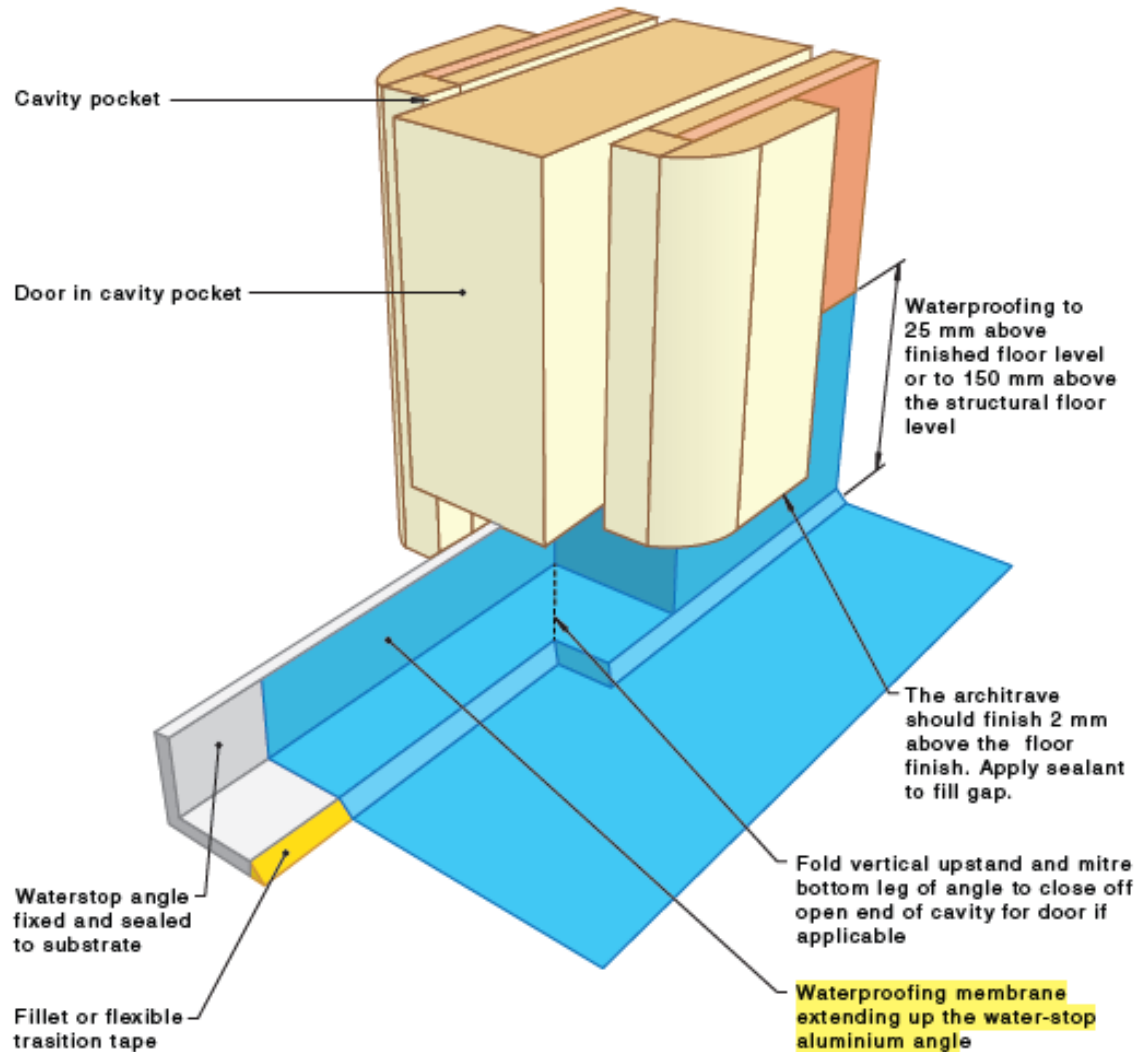


Figure 4.9.1(B) — Waterproofing at door opening cavity slider



PES Waterproofing of Wet Areas webinar (and changes to AS3740)

Quick quiz

Is this perimeter flashing and waterstop compliant?

Yes

No



Quick quiz

Is this perimeter flashing and waterstop compliant?

No



Conclusion

Today we have covered:

- The purpose of concrete cover
- The consequence of cutting slab reinforcement
- The impacts of drilling holes in frames
- Maintaining the FRL of fire separating walls
- Considering sound insulation
- Keeping water within wet areas



Q & A



Pre-submitted questions

Q1. Can you please clarify what is the minimum required concrete cover for a dwelling slab?

Q2. Why are slabs poured if the reinforcement is not correct?

Q3. What is the best way to avoid framing defects?

Q4. Why are waterproofing defects still occurring?

Q5. At which stage of a build do the Proactive Inspectors aim to do their inspections?

Q6. Does the Proactive Program also focus on commercial buildings?



Thank you!

After this webinar:

Later today

We'd love your feedback!

You'll receive an email with a quick survey

You'll receive your attendance certificate via email

In approximately 2 weeks

You'll receive an email with the answers to all of today's questions that we didn't get to, as well as those that we did

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