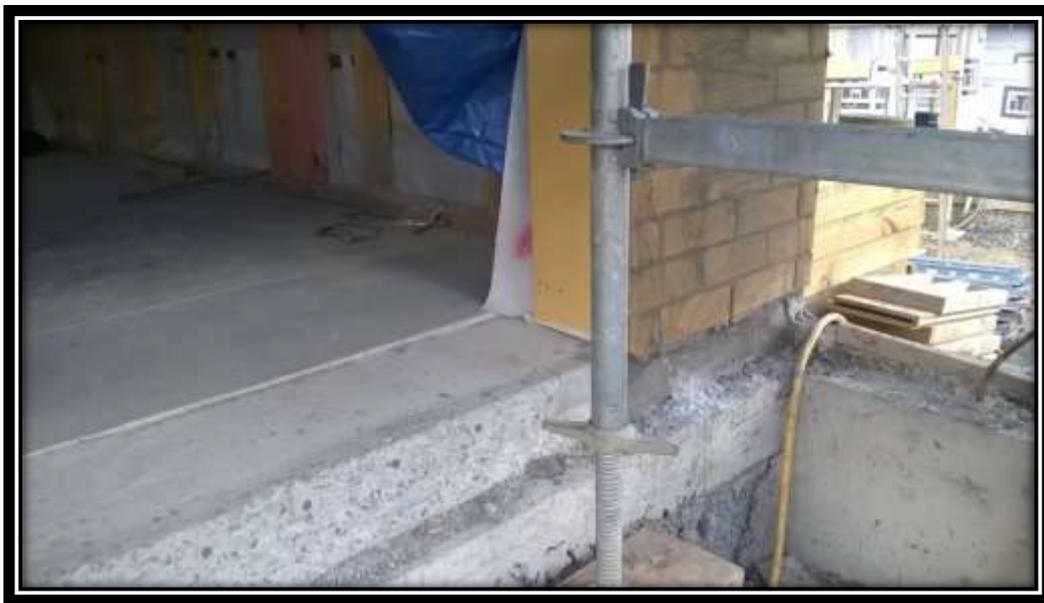


Challenging on-site construction issues

As part of our day to day building inspection visits we are increasingly finding builders working on often major residential projects that are not working to the correct level of competency and skill. There is also a problem with the project manager on site having little understanding of the building code and specific requirements of the approved building consent.

Issues include:

- The basics of concrete slab set outs and formwork do not meet the requirements of the building consent documents or the building code resulting in slabs being cut with concrete saws leaving reinforcing steel exposed or brackets added to support exterior wall framing. Brick cavities are too narrow or have been altered to try and correct the mistakes made at the slab set out. Foundation piles are out of alignment resulting in bearers failing to land on top of the pile within the specifications of NZS 3604.



Exposed reinforcing steel as a result of mistakes in the slab set out

- Building wraps are not installed to the manufacturer's specifications resulting in loose installation or failing to finish at the correct height at the base of the external framing causing issues when the bricklayer starts laying the brick veneer or any other cladding is installed. The installation of the selected insulation product will then cause the un-tensioned building wrap to bulge into the brick cavity causing wicking to the timber framing. Joints between multiple claddings are often not flashed correctly or not flashed at all; these are critical areas of moisture ingress to the timber framing
- Brick cavities are not cleaned adequately resulting in excess plaster on the back of the bricks and loose plaster filling the base of the cavity resulting in wicking to the timber framing and ponding of water at the base of the cavity.
- Joinery air seals require a PF rod to be installed to ensure that the foam surrounding the window does not penetrate through to the exterior. It is the PF rod which is the air seal with

the foam blocking any other small gaps to prevent the ingress of air and subsequently wind driven moisture.



Poorly installed building wrap

- Framing is incorrectly fixed down and on occasion the framing has been erected overhanging the exterior block work, resulting in minimal support and connection to the floor slab. In these instances, the slab fixing has no value for hold down purposes or bracing requirements. This also results in minimal support to wall framing and the transfer of roof load paths to the slab thickenings or foundations.



Framing overhanging foundations resulting in inadequate support to framing

Other issues include:

Plywood sheeting must be laid with the grain across floor joists rather than in line with them to provide lateral support for the future or be noggled at 400 mm centres to provide ongoing support.

There is a general lack of understanding of the specifications to ensure that each building in close proximity to the boundary or another building is appropriately fire rated on the boundary. This also applies to inter-tenancy walls where we are finding that those who are doing the work have no understanding of fire or acoustic matters as detailed in the building consent.

Window flashing stop ends are not constructed correctly or missed completely. These provide the means for water to be deflected away from the cladding ensuring the window performs its design function correctly.

One of the biggest challenges faced by a number of builders is managing wall/fascia roof junctions. This is a critical cladding performance point requiring very good design and construction skills to ensure that there is no water ingress under any circumstances.



Poorly flashed roof junction

Garage door jambs and the associated flashings required to ensure compliance with E2/AS1 are a misunderstood area resulting in a number of issues with water deflection and drainage in heavy rain events. There must be a drip edge at the top to deflect water and if bricks are laid above the garage opening a fully flashed cavity to exterior moisture path.

These actions from often licenced building practitioners are taking more time for us to manage requiring additional site visits and follow up discussion with those involved by senior members of the building inspections team. It may also result in complaints to the licenced practitioner's board.

This is an industry issue which we must all work together to reduce and remove from across the design and construction environment. Home owners want surety that their new home has been constructed correctly and fully compliant with the building consent and building code.