

Learning from other people's stuff-ups

Jerry Tyrrell reports how clever builders can benefit from the many mistakes made by competitors and suppliers.

CPD Academy is a series of 'lessons in print' for readers to help improve your trade skills and business know-how so that you can keep your edge in a competitive market. Sydney consultant Jerry Tyrrell, co-founder of Tyrrells Property Inspections, shares his insights into the basic principles of building practice – what to do, what not to do and where to find out more. Jerry has 30 years' experience as a labourer, tradesman, contractor, architect, mediator, building consultant and author, and has been involved in the inspection and building of more than 55,000 properties (including 30,000 timber-pest inspections).

When we were kids our parents were always giving us the benefit of their experiences...Swim between the flags. Watch that boiling water. Don't leave the fridge door open...

As apprentices in the building industry, we learn lots about the best way of doing things.

But sadly, once you start building for real there is very little feedback and help on:

- Mistakes other contractors are making
- Problems contractors are being blamed for
- New technology and changed practices

WHAT CAN GOVERNMENT DO?

If our government was a serious or privately run scientific, accountable body it would:

- Encourage a no-fault reporting system for any serious problems and mistakes;
- Identify the cause of the above;
- Provide a centralised database for building-related faults;
- Standardise the terminology used by all the people involved, for example, the term for plasterboard;
- Standardise the syllabus for all trades and professionals learning about construction;
- Include risk assessment and problem

- Products that don't perform as expected
- Manufacturers that don't stand behind their products.

We need feedback to prevent unnecessary mistakes and keep up to date.

Government is doing nothing; the industry associations publish the odd tip on problems. However, much of the information is unhelpful and not founded on accurate research and analysis. The Building Code of Australia gets to the problems 10 years too late – and even then it misses the opportunity to deal with big problems like slippery floor surfaces and durability of materials.

Typical examples

In the 1990s I had the misfortune to advise several builders about a Sydney company making lime wash and cement paint.

Jobs were going wrong, and the manufacturer abandoned the contractors without clear advice on how to prepare and recoat the works.

Since then I have not recommended this company and have always been careful to warn builders and owners about



careful preparation and compliance with specifications for this type of coating.

Then there were the unfortunate builders who built AAC structures without a construction joint in sight, and the eventual trouble that caused because they believed the material specifications.

I have looked at hundreds of driveways where the contractor poorly set out the stencils, tried to pour too big an area on a hot day, failed to cut joints or simply did not slope the drive to drains or gardens.

Pretty basic stuff, but it happens again and again.

I advise consumers to see a concreter's recent work before choosing him, and to work with him to plan any complex parts of the work.

In previous articles I've covered some of the waterproofing and termite-management principles.

Now I will concentrate on the simple things we can do – or not do – to build properly.

It should make sense, because you probably know a lot of these anyway.

WHAT WORKS



- Use a surveyor to set out key corners, levels or setbacks
- Get your engineer to see every important part of the structure before pouring concrete
- If in doubt, dig your strip footings deeper
- Tell the client to get design advice on colours and finishes early, and that changes might increase the price but will be worth it
- Vibrate all slabs on ground to achieve an effective termite barrier
- Attach termite barriers to concrete and masonry walls in split-level floors or walls on boundary
- Use treated timbers for bottom and top plates, and concealed floor and roof frames
- Keep slab edges exposed even if it is only the top 20mm (AS 3660.1 requires 75mm)
- Provide access to all voids, especially under floors
- Slope concrete to drains and floor wastes
- Use hobs to all balcony edges to limit salt damage
- Use puddle flanges in all wet-area drains
- Protect wet-area membranes as you would a plush carpet
- Use tile adhesives and grouts compatible with the waterproofing system
- Set out the tiles with your client
- Warn clients about any changes in levels at wet areas or between different surfaces – advise them of the added cost of setdowns in concrete or splayed thresholds to eliminate small steps
- Don't select the tiles. Let the client chose them, including the appropriate slip resistance
- In fact, let your client chose everything – this means they take responsibility for product quality
- Use subsills under all weather-exposed doors and windows
- Install draining weepholes at base of weather-exposed walls
- Carefully install cavity flashings and weepholes to base of walls above habitable rooms
- Paint tops and bottoms of external and wet-area doors
- Plan safe access for future maintenance – this will also help you during the project
- Use acrylic paints with mould inhibitors in wet areas and laundries
- Use heavy-duty hardware for kitchens, doors and locks
- Use sewer-grade PCV for all stormwater pipes
- Stiffen any eaves structure, especially hip ends wider than 900mm
- Vent range hoods to the exterior
- Allow for shrinkage and movement whenever you join new timber structures to existing work
- Remember – absence of shrinkage in steel floor beams can cause unevenness in the top of the floor
- On roofs use super tough sarking
- Fit backtrays behind any large penetration back to the ridge
- Carefully flash joints between different roofs
- Use stainless steel for box gutters
- Fit overflows to box gutters and rainwater heads
- Self-cleaning 100mm x 75mm downpipe
- Gutter Guards are great idea – avoid using in valleys unless the valleys are wide and the roof pitch is steep

WHAT DOESN'T WORK



- Ground-floor slabs without setdowns
- Basement slabs without 20mm setdown
- Leaving areas where water can pond in clay soils and rock under buildings
- Leaving formwork under buildings
- Using any chemical barrier treatment
- Infill slabs
- Building brick walls longer than 9m without vertical joints
- Embedding timber/MDF in tiles or concrete
- Not protecting finishes and components when acid-washing the building
- Letting autoclave concrete get wet
- Setting out stair riser height without allowance for different finishes at floor level
- Tiling over joints, especially between timber and concrete
- Tiling over joints in sheet flooring
- Concealed cisterns without easy access
- Frameless shower screens if your client won't accept leaks through gaps
- Rendering over joints between masonry and concrete
- Using floorboards at a moisture content different from the area where they will be laid
- Manholes too close to eaves
- Bad bows in studs in long walls
- Sloppy plasterboard joints in long walls looking into bright natural light
- Cutting holes or running services in acoustic and fire rated walls
- Leaving laminated glass edges unsealed
- Site cutting or welding galvanised steel without very careful recoating
- Using passified zinc or mild steel fixings anywhere
- Nailed balusters, which can easily work loose
- Easily damaged western red cedar handrails, wall cladding and sills
- Planters and ponds without very careful detailing of waterproofing and drainage
- Concrete roofs without insulation
- Roofs with dog legs in valleys
- Flat offset in downpipes under eaves
- Using acrylic instead of polycarbonate skylights and roof sheeting
- Not extending the chimney above the highest ridge
- Unrestrained galvanised electrical poles with long aerial mains pulling them out of plumb
- Leaving the DPC out of painted brick fences
- Painted masonry retaining walls
- Pool copings without expansion joints
- Planting large trees against buildings
- Finally, it's silly to turn a blind eye to problems and callbacks you get when you build.

I have learnt more from fixing my mistakes than from the many building courses I did. Sometimes you simply need to explain to your client why the work has turned out a certain way. Other times you will see a mistake that you or your subbies should have avoided. I reckon that builders should always add at least 2% to their quote for 'after sales' service and fix-ups.

In the end, a professional attitude to your product will enhance your reputation, reduce the cost of complaints and disputes, and teach you what to avoid next time.

Please email me any thoughts or experiences at jwtyrrell@tyrrells.com ■

Next Issue: Insurance be damned! How our good work can replace insurance.