



# How experts solve problems

People in the building industry should strive to be always learning and improving their skills. As Jerry Tyrrell explains, it makes financial and operational sense – with personal pride as the big bonus.

**B**uilders, subbies and professionals are mainly competent people, usually good at fitting materials together.

They also have another skill they are often unaware of – problem solving. This isn't simply 'what is 2 times 2?' It is complex and involves how we think, what we have learned and what we can learn. Prevention is also an important ingredient because this is the ultimate form of problem solving.

Mistakes and poor choices cost the industry hundreds of millions of dollars every year and much more in lost reputation and early deterioration of our work.

How many times have you been on site or at a meeting with so called experts when they have dug their heels in about how to do something? The bricklayer who says "it doesn't matter what quality bricks they lay below the DPC", or the tiler who proclaims "I've never needed sealants in my corner joints", or the architect who says "just follow the plans".

Problems come in many forms. Many are administrative, like choosing the right subbie to suit the work, especially for finishing trades.

Planning the program and the logistics of the project can make a huge difference in reduced time and frustration. I have seen sites where the access was not properly thought out. Or the really slow part of the job was not started early.

Of course, money management is vital. Making money is irrelevant if you are not making a profit of at least 25% (jobs to \$1 million) on all costs. If you haven't got systems in place for the reality of variations and extras, then you will face big problems making the money you deserve.

The actual work will depend on your team's ability to build what is on the drawings to the minimum required quality. You will make money easily if you can handle all the problems well.

Even though builders have a natural aptitude for solving problems, we can always be better. This means getting your mind right. Most people I deal with can be categorised as:

- Know it alls – defensive, quick decision makers who don't consider all the facts;
- Formula followers – this is how we were taught and this is how we should always do it;

- She'll be right – whatever you do will be OK;
- Over cautious – never make a decision because they confuse themselves with irrelevant side issues;
- Pragmatists – experienced and get it right most of the time;
- Always-learning professionals – like the pragmatist but take account of all available information and advice.

There is always potential for learning, and this will make you a better problem solver. The always-learning professional can be identified by the following :

- Qualifications in building;
- Solid practical background working in all trades;
- Common sense (a perfectionist but not unreasonable);
- Doesn't worry about things that usually go right, such as stretcher bond masonry and spacing of gutter brackets;
- Is always ahead of anything complex, eg: a hexagon roof, spiral stair, box gutter or internal pond;
- Involves the right people to sort out what to do;
- Listens to the subbie's ideas;
- Checks (researches) any technical stuff with manufacturers or consultants;
- Sets out the solution on site if possible;
- Checks the quality of the work carefully, especially anything that can leak or cause expensive damage.

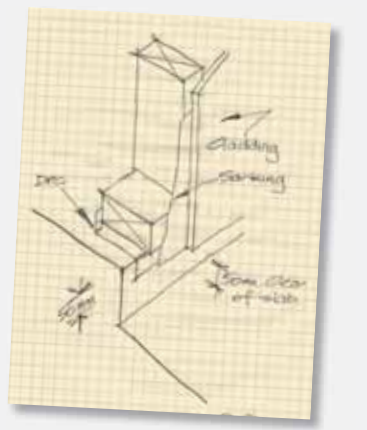
The thing that singles out very good problem solvers is the ability to prioritise their thinking. For instance, if you are getting a prefabricated shed put up, you check the details carefully – including engineering certification of the wind bracing and footings. But once that is done you only worry about scheduling delivery,

## HOW TO DETAIL SOLUTIONS

You work with drawings all the time. The plans and elevations show the big picture. The drawings that show how materials and components are put together are called 'details'.

Being able to sketch details accurately and quickly is a really useful skill. You'd be amazed how easily you can develop this skill. They don't teach this clearly enough in courses, so learn to draw details by using the following tricks:

- Use squared paper (5mm grid is good);
- Draw everything close to scale – this will take a bit of getting used to. Think proportion, ie: a 50mm post is half the size of the 100mm stud next to it;
- As you get better, do the drawings in 3D;
- Practice, practice, practice;
- Stick to the rules – see diagram.



## PROBLEMS FOR BCA EXPERTS TO SOLVE

The Australian Building Codes Board is author of the Building Code of Australia, the industry bible. However, in 2008 we need the board to solve the confusion of how to:

- Combine access for people with disabilities; proper termite management; proper drainage, especially at front doors and doors to courtyards;
- Make sure all building products last at least 25 years with proper maintenance, especially exterior fixings;
- Make sure the BCA drawings integrate all the main rules from the important Australian Standards, ie: requirements relating to bushfires, termites, fire services and maintenance;
- Obtain the minimum quality that all parties want;
- Get more builders and tradesmen to use and understand their 'good book'.

If the experts from BCA solve these problems everyone will save millions of dollars in failures and disputes.

## TRUST YOUR INSTINCTS

If you get only one thing from this article, it is this – develop and trust your instincts. When you drive in the wet you know to slow down. When something is hot you know not to touch it.

Your instincts for sensing and avoiding problems are quite remarkable. You know the typical signs or feelings:

What the client wants can't be done;

- The drawing is unclear or ambiguous;
- The product they want is a new one;
- The detail is complex and there are lots of different materials to join together;
- You don't trust what someone is telling you;
- It just isn't common sense.

So if your instincts tell you there is trouble ahead, stop. Stop! Get it sorted.

organising the crane and the set-out from the surveyor's reference point.

If you are doing a lift pit, you know very good concrete quality is needed and a water bar between the pit slab and walls will be necessary to make sure the pit stays dry.

Most of the effort goes into thinking ahead because prevention is so much cheaper than remedial work. Real problem solvers just 'laser in' on anything complex or critical and get potential problems sorted so the work goes smoothly.

We are all proud of our ability to dig, carry, organise and get a physical job done. However, this doesn't mean we are reaching our full potential. In the end we want to be clever and skilled professionals, not inflexible know-it-alls.

Problem solving takes science and wisdom. Part of that is the lifelong journey of continuing education – like reading this magazine.

Please email thoughts or experiences at [jwtyrrell@tyrrells.com](mailto:jwtyrrell@tyrrells.com) ■

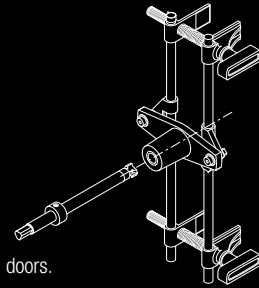
*Jerry Tyrrell is co-founder of Tyrrells Property Inspections. He has more than 30 years' experience as a labourer, tradesman, contractor, architect, mediator, building consultant and author.*

*Next Issue: How to inspect your building work, Part 1*



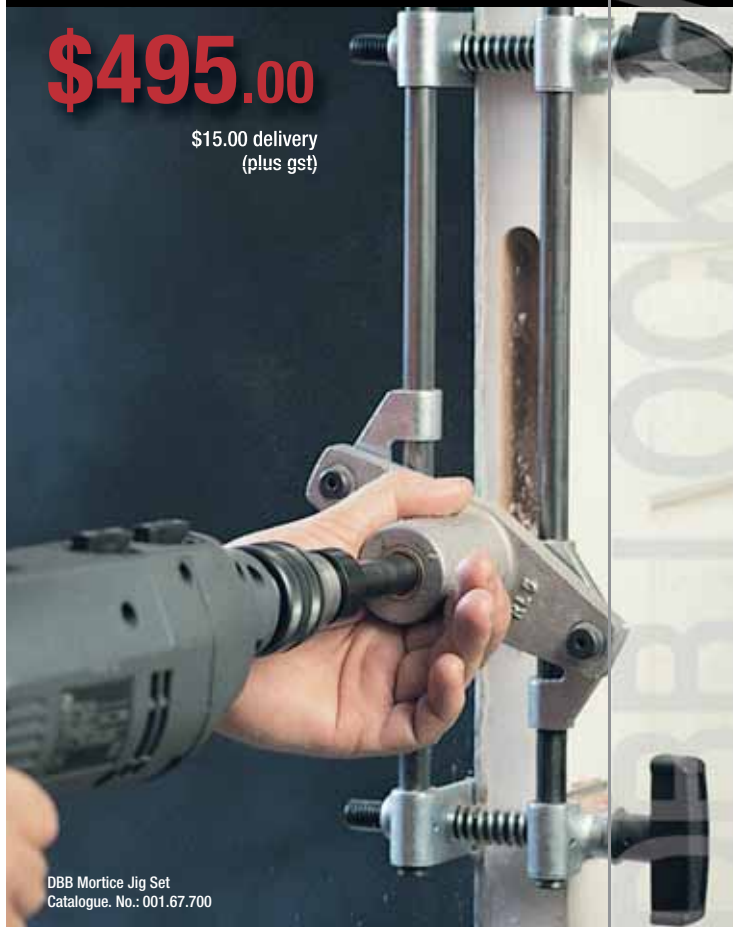
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