Ted's News April 2022

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How Not To Build a Fence



Some time ago, I supplied a very expensive fence to Japan. It had turned 150 diameters heart-free spotted gum posts with 100x50 dressed and select both faces spotted gum rails. It cost an arm and a leg. Japanese architects are very courageous when it comes to spending their client's money and this one was definitely a medal winner. I expected them to be used in an upmarket park in a large city but no, they are crash barriers on a rural road with a substantial drop on the other side. The drop is the least of a driver's worries considering they would probably die from their heart being pierced by one of the pointed horizontal rails. It was a top-quality product but used inappropriately. (Lovely architecture though and could be replicated relatively cheaply - ask me how)



Now let's look at the other extreme. The risk is the same but without the redeeming feature of being a quality product. When I pulled up at a carpark at a tourist attraction recently, my eyes were drawn immediately to this rail which has severe cross-checks. I would hazard a guess that it is brush box as this is what it does from my experience and it grows in the region. A handrail is meant to take a load and this one only gives the allusion of safety. I could easily have broken it. So, it prompted me to look further.



I have said many times that the four critical issues needed for successful external use are durability, stability, appearance, and low shrinkage. You don't see stability issues too often as responsible sawmillers will not supply species that are unstable. But you can see it in this top rail. It is also twisted which you can't pick up. Again, this is how brush box would perform. It may not be that species but whatever it was it is not something that is fit for purpose.

Remember that by saying F14 hardwood you have not ensured you receive even one of the four essentials. That's why I can write a meaningful and achievable specification for you.



You have to have a fair idea that something is wrong when you see sawing as bad as this. It is not clear in the right-hand image that the angle of the saw marks are running in both directions. It looks as if it was done on a buzz saw on a farm somewhere. So, it would explain what inappropriate material was sold.



Of course, we have the ubiquitous timber post in concrete. This is guaranteed to rot them off prematurely by trapping moisture between the timber and the concrete. On the other side of this fence, which won't stop anything, is a most likely fatal drop. I could have added images showing problems with the post top and screwing positions and then there is the paint used! But I think you have the picture by now. And somebody paid good money for this fence and someone is going to blame timber when all that was needed was to do a little homework.

Now, none of this is secret men's business. You would pick this up by reading Timber Queensland's guide, timber residential fences. It is only four pages and half of that is pictures and it's free. If you really want to do it well you need to purchase <u>my guide to</u> timber fences. (It also covers commercial fencing). It will set you back \$33. Chicken feed compared to replacing this fence prematurely and minuscule compared to the cost if someone goes over the edge.



Compare that outcome with these almost 30-year-old traffic barriers I supplied opposite my house. The driver hit the accelerator, not the break (the risk at the above carpark) but the bollard drove the radiator into the motor and stalled the engine. the car was written off with the subframe damage. And it is not designed as a crash barrier!



What Brand Paint Should I Purchase?

I have three pieces of hardwood handrail that paint doesn't like sticking to so they have to be repainted. I don't know the species. But what brand do I use? All men might be created equal but paints definitely aren't. Surely one of our "certain unalienable rights" is to know we are purchasing a product that will not fall off after six months! And yes, I remember fence paint that did just that unless you hosed it off beforehand!

Years ago, Steven Koch, our sales representative at the time with Koppers Arch who manufactured our timber preservatives, developed Tanacoat decking oil for us. He had worked as a surface coatings research chemist and he did an amazing job with Tanacoat as anyone who has used it would agree. So, when I was writing my guides and wanted the right answer about paint that went beyond what was readily available, I always picked his brain. He had stressed to me the need to only purchase products with the Australian Paint Approval Scheme (APAS) logo on the can. He was adamant that I cannot judge a can by its cover or by its price tag. You can only judge a paint by whether it can prove that its product meets the specification and whether the manufacturing facilities are such that the required quality can be produced without variation.

To quote from the APAS website, "the Australian Paint Approval Scheme (APAS) is an independent 3rd party conformity and product pregualification scheme that tests and certifies all types of surface coating materials and associated products. [They provide] 'verification of conformity', whereby the extent to which a products specified requirements is systematically examined. . . . Verification procedures involve regularly repeating tests devised specifically to ensure that the product, service, or system continues to meet the initial design requirements, specifications, and regulations as time progresses. APAS performs all of the pregualification work so that you, the asset owner, does not need to do so, saving the Members of this scheme considerable time and money."

The problem was that when I went to Bunnings and Mitre 10, not one can carried the logo! They used to! That put paid to what I thought was going to be a simple operation. They can't all be duds so I did it the hard way and checked out the products on Bunnings' shelves with the list of certified paints on the APAS website. Whole manufacturers were missing. That is not to say they will fall off in six months, they may in fact be fine. But for me, that piece of paper that says it



Rust coming through after six months

has been independently tested and certified takes away the risk that it may in fact fall off in six months as the above image shows. (I lost that job by \$200 and I would have used PPG's PSX 700).

Rather than write more about this, I suggest that you spend time on the APAS website and familiarise yourself with it. This organisation is run by the CSIRO for the government stakeholders who have a vital interest in ensuring a satisfactory life is achieved in their projects. It should be part of your due diligence. If you have questions, I am certain Elenora Stepanova, the Lead Auditor would be happy to talk to you. <u>Here is an email link</u>. Her phone number is 03 9545 2624.

You will get a good rundown on paints and oils in my <u>guide to architectural battens</u> for \$55. (Mind you, if you have anything to do with battens and don't have this book already you really have to ask why not.)



What Decking Finish Should I use?

That, my friends, is going to have to wait till next month. the newsletter is getting to long. Call me if you need to know something before that.

Index to Past Issues

If you are a new reader or just want to find details on a particular topic such as 150x150 mm posts, here is a link to an index to articles back to 2015.



Should be Standing Room Only for this CPD

After a long hiatus due to Covid restrictions, CPD's are in full swing. You would think there would have been standing room only at this session. The Seven Deadly Sins with Practical Demonstration, but I guess they read the fine print. il is the sins of external timber design. Nowhere near as interesting but a lot more useful. I have added a second presentation that examines a "for construction" drawing with five of the sins. What has Campbell Newman and Laurence of Arabia got to do with timber. You may well ask and if you have the session you will know.

Some are still not aware that Wilson Timbers/Outdoor Structures will have me come to your office and deliver one or two of my CPD sessions for free? We can even do it with Teams if you are further away. These are serious training times with real learning outcomes. The only condition is that, with travel, we can do it in a day from Gatton in Queensland. Here are the nine courses available:

Topic 1: Timber Preservation

- Topic 2: Hardwood Grading
- Topic 3: Timber Decks Designing for Durability
- Topic 4: Utilising Small Diameter Hardwood
- Topic 5: The Seven Deadly Sins of Timber Design
- **Topic 6: Timber Joints**
- Topic 7: Architectural Timber Battens
- Topic 8: Timber 101 (Optimally Topics 8 & 9 to be presented together)
- Topic 9: Boardwalk Design (Optimally Topics 8 & 9 to be presented together)
- Topic 10: Timber handrail design

To learn more about these courses visit my website. Contact Stuart Madill by email to arrange a time or call his mobile 0403 385 707. It is also available on eClassroom.

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Full Day Courses



Don't embark on any major footbridge or coastal deck project before you do my fullday courses. These are serious courses that are unmatched in the value you will extract from them by delivering expensive infrastructure that ages gracefully and with little maintenance. They both start by going through a design checklist and explaining, line by line, why you must attend to that point. They then look at a number of case studies, showing good and bad practice.

<u>Click here for footbridge course brochure</u> <u>Click here for coastal decks brochure</u>

Call me to discuss you training needs. These courses, which are eligible for CPD points, will give you an incredible understanding of good timber use. Call 0414 770 261 or <u>email me</u>.

Need a Timber Consultant or Expert Witness?

I have over 45 years of experience in the industry and can assist you with many of your timber needs.

Inspection – I can assess timber products on their performance, fitness for purpose or cause of failure. I also examine whether best practice was used in design and construction. I have recently completed inspections on boardwalks, bollards, support beams and external timber furniture.

Grading - Quite literally, I have written the book on the subject. Recent experience has shown that up to 30% of timber supplied may not be to grade.

Design - I can provide detailed technical drawings and advice. I can also review already prepared drawings.

Reports - I have authored many books on timber and can prepare a report providing recommendations and practical instructions on to how to rectify issues.

Trainer and Presenter – I can provide tailored training to meet your CPD needs and also have experience at lecturing to universities and presenting at conferences.

Please note as I am now employed as a Senior Timber Consultant with the firm BCRC all large and complex consultancies and requirements for an expert witness will be handled in conjunction with them. Existing consulting arrangements remain unchanged and I am also available to assist on small projects. For more information see <u>www.bcrc.com.au</u> or <u>download their capability brochure here.</u>

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