

# Ted's News

## October 2019

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Last month I was called to a problem with some laminated beams. The architecture was stunning but laminated beams were used externally, which is permissible with resorcinol glue under certain situations, but these were coated with a clear finish. This product, an organic oil, allegedly cost \$115 per litre, about 7 times the cost of Tanacoat I expect. The info sheet said that the expensive oil had no biocides or preservatives. Lo and behold, there was mould under the clear finish. It simply has to happen in our climate. There are three technical guides than that could have been called upon to cause you to make you think long and hard about the wisdom of applying a clear finish. These are:

[\*Glued Laminated Timber Association of Australia \(GLTA\), Technical data Sheet 2 - Glue Laminated Beams in Exposed Situations.\*](#)

This publication says on page 2 “Clear finishes are not recommended for timber used in exposed applications due to an absence in UV filters and a propensity to break down readily in exposed situations.”

[Forest and Wood Products Australia's Market Access & Development July 2008 Guide to the specification, installation and use of preservative treated engineered wood products](#)

This publication says on page 29 “Selection of the appropriate finish depends upon the desired appearance, cost and intended maintenance regime.” It further warns about the risks of film breakdown saying, “Cracked or deteriorated finishes can allow wetting of the wood substrate and in turn prevent the wood redrying. This can result in accelerated decay where the wood substrate is of low natural durability or not adequately treated with robust preservatives.” It goes on to say that clear finishes have very high maintenance costs.

[Hyne's Technical Data Sheet 6 - Hyne Timber in Above Ground Weather Exposed Applications](#)

This publication says on page 1, “Hyne Beam 17C (Pine - H3) full penetration treatment, painted, faced with sheeting in sun exposure and end/top capped.” This is expanded on page 2 where it says “Shielding of the beam from free moisture or direct sun. The use of metal, fibro or plastic shields on the exposed faces or ends of beams is required to help maintain the beam in an unstressed dry condition.”

You should have the message that it's not the best idea to use a clear finish on laminated timber used externally. While I can't share the images from that consultancy with you, on the same day I did see another application of laminated timber posts with a clear finish. I can at least show them. The film is breaking down after a relatively short time and the glue line is starting to delaminate in some of the posts - remember, these are new posts. In my opinion, the very minimum these laminated posts should have had is a multi-coat paint system and a stainless steel cap to the top. Someone, somewhere, said these 90x90 mm laminated posts which I gather sell for about \$33.00 a metre were a better option for the client than a solid 100x100 F17 appearance grade ironbark or spotted gum at about \$44 per metre. They at least would have been happy with just a weathering cut on the top and give 50 years' service unpainted and 100 years painted. They become very, very good value. It's not rocket science.

Oh, and you learn not to do this in my Coastal Decks course making it good value too. Whatever I charge for the course will be a pittance compared to replacing those posts.

What also is good value is having me cast an eye over the drawings while everything is just lines on paper, and also for a check over of construction before final signoff

### Don't Do Silly Things Joining Timber



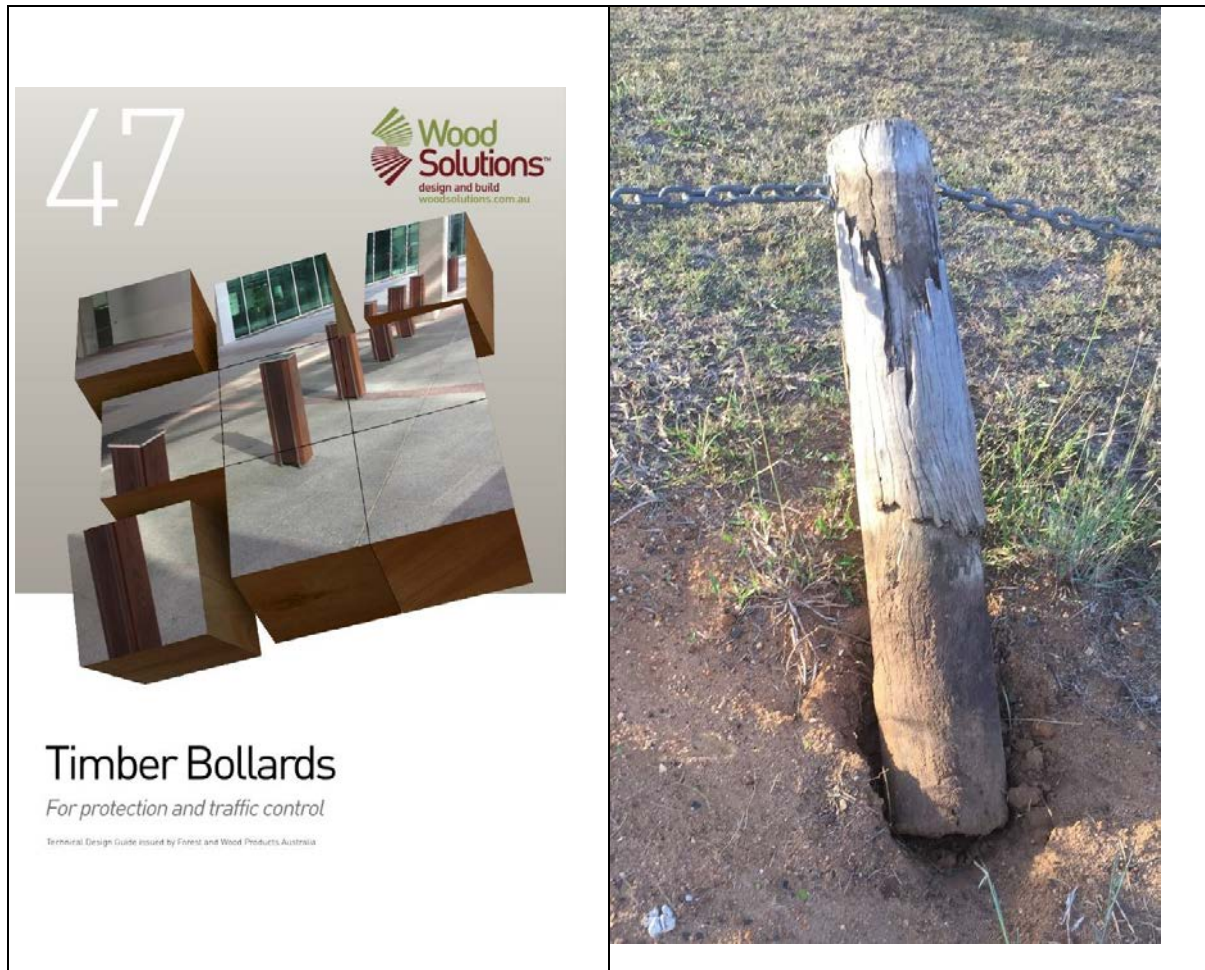
Graeme Morris, of Info Design Online, who as been running my website for many years sent me some pictures of some very silly things he saw recently. After reading my newsletters before he posts them, he instantly recognised bad practice. What can I say about the left hand image? Words simply fail me. Someone actually thought it was a good idea and somebody actually did it. The steps need a few comments though. Moisture enters the end grain about eight times faster than through the side grain so when using timber externally you have to protect end grain. It is not likely that these steps were over 6.0 m long and you can get steps that long if you order in time. You have to be organised to do that and pay the extra it costs. If you have to join, I would not put the two step supports in the centre but on the outside of the RHS. The reason?

- It gets the bolts further from the end
- it allows a 5-6mm gap at the join
- The gap is self-cleaning

The decay at the end near the bolts validates my argument that you need to add an extra 50 mm to your end clearance when using timber externally.

If you need a website you can do no better than to talk to Graeme at [Info Deign Online](#). Ph: 0418 185 388s

## How Deep do Bollards Have to be in the Ground?



Another consultancy I cannot show pictures from, involved bollards that were only in the ground 300 mm!! The failing bollard on the right was in the ground 450 mm so you can imagine what 300 mm was like. Vehicles that backed into the bollards in question simply pushed them over. Now almost everything you need to know about timber bollards is in Wood Solutions guide No 47. [Just go to their website](#), log in and download, it is brilliant. It is easier to just ring Stewart at Outdoor Structures Australia (0403 385 707) and you will get what I recommended in the guide. Basically, the Wood Solutions guide just documents my successful practice and will teach you what you should not be accepting. The key knowledge you need is summarised in a checklist that goes through hardwood, cypress and pine by the different sizes.

I said it "almost" had everything. I have sent through further information on detailing the caps for the next revision. If you need help in between time I can assist.

## [Architectural Batten Course coming to eClassroom](#)



Following the success of my CPD course [Outdoor Timber: Design and Specification Basics](#) with eClassroom I have agreed to increase the number of CPD courses available from them. My Architectural Timber Batten course will cover all the information you will need to design them well. [Don't forget, there is a book on the subject as well.](#) Hopefully by next newsletter it will be up. I saw this job in Toowoomba Recently. The architects were Sims White who have their own offices in the building.

## [My Refresher on Laminated Beams](#)



A long time ago, when I was sawmilling and had a planing mill, I investigated manufacturing laminated beams through a course run by Timber Queensland. Even then, few people were interested in purchasing high quality timber suited to the application - it all came down to price for an F14 specification - I had to get out of that market and value add. I learnt from that course that none of the individual steps was difficult but getting them all to come together perfectly, every single time, I decided was not for

me. Glue lamination couldn't be an add on to my business. For it to succeed it had to be the sole object of ones focus.

I thought it was time to do a refresher on laminated beams so I took the free CPD course run by Hyne, a change to being on the receiving end. Here I am with Jason Caldwell of Hyne looking at their soon to be released beams without the dark resorcinol glueline. [Here is the link](#). Yes, my home is timber. The panelling is silky oak and the mouldings are crows ash.

### Coastal Deck Course

Thanks for the day course on coastal desks and boardwalks. All of us who attended gained useful knowledge about working with timber, and I think the cost of the course will easily be recouped through that translating to better outcomes on the ground. All the additional information on fixings and metals with the focus on local conditions was invaluable. It was especially helpful to have plenty of time for questions and answers with a mix of designers, project delivery and maintenance officers able to ask questions and discuss ideas and solutions.



**Clare Staines** | Senior Landscape Planning Officer  
Parks Asset & Capital Planning  
Sunshine Coast Regional Council

The main part of the day takes you through the design checklist in my Deck and Boardwalk Design Essentials, line by line and explains and illustrates why that line is there and why that aspect of the design must be attended to. There are three supplementary sections:

- A look at the alternatives to traditional hardwoods and discuss their weakness and strengths (if they have any)
- A look at two very different boardwalks in Cairns and discuss the strengths and weaknesses of each design
- A look at boardwalks I built at Point Cartwright in 2000 and Jacobs Well in 2003

Unlike the free CPD sessions, there is a charge for this course but it is "very small bickies"

compared to what you could spend if you get the basics wrong and end up with a very unsatisfactory result. From the course you will see just how logical everything is. Contact me on 0414 770 261 or [email me](#)

### Need a Timber Consultant or Expert Witness?

I have over 40 years' 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 how to rectify issues.

Please note as I am now employed 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 [www.bcrc.com.au](http://www.bcrc.com.au)

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