

Ted's News

January 2019

[A Dear Lord Give me Strength Moment](#)

[When is Kiln Dried Timber not Kiln Dried](#)

[Guide to Wood Construction Systems](#)

[This may Make a Steel Joist Work](#)

[Continuing Professional Development Courses](#)

[New CPD Course - Footbridge Fundamentals](#)

[Timber Consultant](#)

[Bridge Quotes](#)

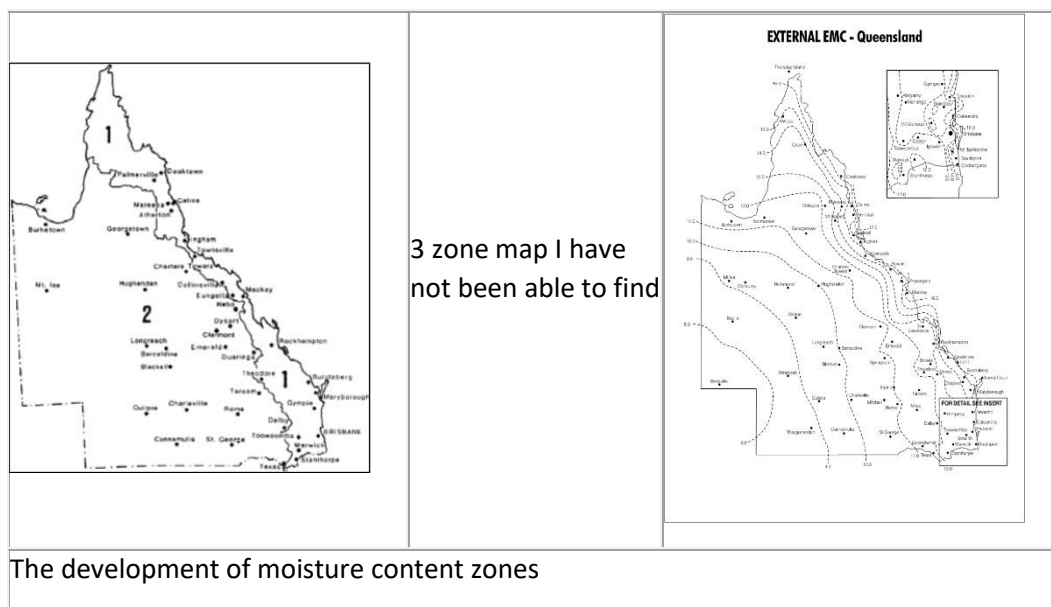
[A Dear Lord Give Me Strength Moment](#)



When employing an assistant some years back I told him, "People who work for me tend to become religious very quickly." He asked, "What do you mean?" I told him, "It will not be too long before I hear you say, "Dear Lord, give me strength." I had a "Dear Lord, give me strength" moment recently and it is pictured above. And, yes, the whole deck is joined like that. It hardly needs comment but for the uninitiated go to my [June 2017 newsletter](#) and scroll down to Joining Decking on Commercial Deck.

The ends will rot out and the asset owner will blame timber not the construction practice that breaks every rule of good design. Timber is no different to steel or concrete, there are things you do at your peril.

When is Kiln Dried Timber Not Kiln Dried?



Calling timber kiln dried when it has not been dried to a moisture content suitable to the location where it is going to be used will engender a false sense of security for the builder and owner. Half dried timber should not be used

In my opinion, the old Timber Utilisation and Marketing Act from Queensland and the similar Act from NSW were very important for protecting the end users of timber. Since their repeal, I have seen evidence that things have slipped and the specifying of moisture content of flooring and decking is one area where this is especially the case. [Here is a link to the old knowledge on specifying moisture content in the form of the Queensland Forestry Departments Technical Note 23 'Equilibrium Moisture Content of Timber.'](#) While there were general moisture contents mentioned in the Queensland Act there was a further three link chain of responsibility:

- The specifier had to determine if the general M/C ranges were suitable and then nominate a moisture content.
- The manufacturer had to manufacture to that moisture content and finally
- The builder had to confirm that the timber was supplied to the nominated moisture

Now we find that specifiers increasingly just say moisture content to AS 2796.1 and think that all is well. Wrong!!! Take light domestic decking. It can be dried to a moisture content range of between 10 to 18%. Now let's say someone specifies 136 mm wide x 19 mm decking to go to Springsure where the external EMC is 11% and it is dried to the upper limit of the range it is going to lose 7% moisture. Now spotted gum shrinks 0.38% for every percent of moisture change so that is 3.5 mm shrinkage after laying and it could do some dreadful things in the process. This timber is only half dried.

Strip flooring has a tighter MC range from 9 to 14%. [A very useful discussion on the MC of strip flooring is found on the Qtimber website.](#)

The lesson is, take control of your moisture content and have onsite checks before it is laid. [Here is a link to the more detailed EMC map.](#) Oh, and don't specify 136x19 decking, it will bite you even in a more coastal region - see [June 2013 newsletter and go to Can I Help a Damsel in Distress.](#)

Guide to Wood Construction Systems



Wood Construction Systems

The Natural Design Guide issued by Forest and Wood Products Australia

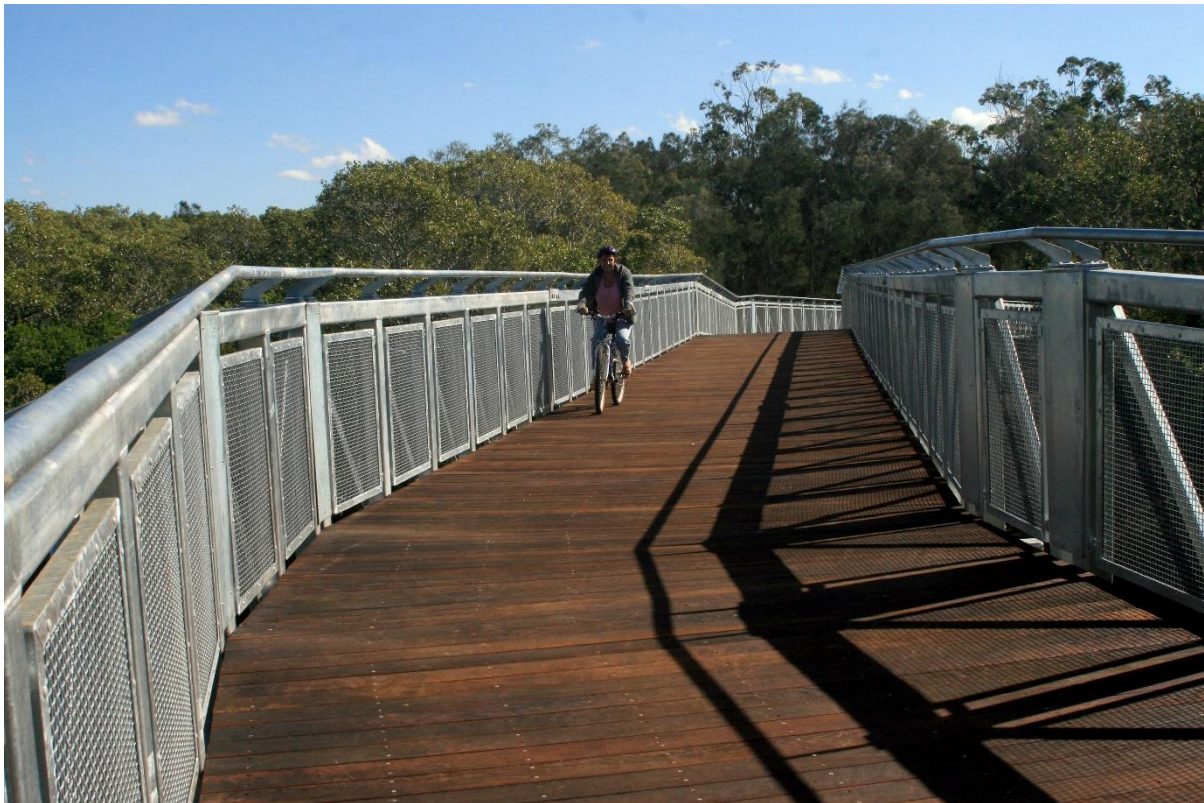
Forest and wood Products Australia have released the first guide in the world to contain tall timber structures intended to be used for teaching in universities. Associate Professor Greg Nolan of UTAS School of Architecture authored much of the guide with engineering assistance from my good friend Dr. Dan Tingley of Wood Research and Development. The guide has two multi-story case studies which were developed for inclusion by Wood Research and Development Engineers under the guidance of Dr Tingley. You can download the guide from the Wood Solutions website.

This new guide will assist practicing structural engineers and other building design professionals to confidently develop conceptual structural designs for timber-rich buildings and structures. As many design professionals working on commercial scale structures are typically skilled with concrete and steel structures, this guide takes a whole-of-process approach to the selection of timber-rich structural systems.

This guide explores available structural systems, connections and material options, and design approaches before providing a concise reference on the technical aspects of wood and timber products. It references other WoodSolutions Design guides and sources that can assist professionals developing their concept designs into detailed structural solutions.

Want training in timber - see Timber Structures Course below.

You Can Make Steel Joists Work



Galvanised truss bridge with Deckwood fastened to heavy galvanised joists
Timber supplied and fitted by the author.

Last month I had a section advising strongly against the use of steel joists for decks but I explained the steps you would have to go to hopefully make it succeed. [Follow this link.](#) In that article I was referring to the lightly galvanised C and Z sections. You don't have the same issue with heavy section size, largely because you have a decent galvanised coating. The instructions for using timber on heavy sections, taken from one local government (and used successfully in the project illustrated above) are:

"Where timber planks are to be fixed directly to steel, Kiln Dried timber is required. For Timber to Steel use the Simpson Strong-Tie TBG Series to suit the plank and underlying steel joist thickness

or similar approved by the Designer." It further specified the use of Denso tape to insulate the timber from the steel.

CPD Sessions



Here I am having a "spirited" time delivering Designing for Decks for Durability at the offices of BSPN Architecture earlier this month.

Why avail yourself of a CPD course sponsored by Ted Stubbersfield? Simply, because they are very good and the free offer will end soon. Here are two references received this month:

From a recipient at Cornell Engineers: We started with Ted's Timber 101 class. It really was a great talk. Can totally recommend it to all engineers, designers and architects.

From a recipient at BSPN Architecture: Thanks for speaking with us again – your talks are always very informative.

There are only two conditions and these are that I can travel there and back in a day and that OSA be allowed to give a sales pitch. These are exactly the same presentations I would give if you paid. It sounds like a good deal to me. Here is a [link to the courses I have available](#). I suggest External Timber 101 would be a good start. The learning outcomes are:

- Know the resources needed for a successful design
- Understand the difference between pine, cypress and hardwood
- Understand the importance of selecting the right species
- Understand the importance of selecting the right part of the tree.
- Understand the importance of preservation
- Understand why natural feature must be limited

These are informative seminars with serious learning outcomes and, if required for CPD points, I can provide a test and a certificate. Call Stuart Madill on 0403 385 707 to arrange a free session and for paid add free talks call me on 0414770261 to arrange a convenient time for your "Ted talk".

Footbridge Fundamentals



Here I am delivering the topic *How to avoid problems with footbridges and bikeways* at my first footbridge fundamentals course at City of Gold Coast. The course covers the fundamentals of what to look for in the design, why a thorough specification at the tender process is important, what to look for when inspecting the structures and lessons learned from several case studies. Phone me on 0414 770 261 to arrange a session [or email](#). It is presented either a full day or two half days.

Content of bridge fundamentals course

Grading hardwood

How to avoid problems with footbridges and bikeways

Doing the inspection

Case histories

Lessons from London Millennium bridge

Berrinba Wetlands

3 bridges closer to my home

Sundry horror images

To have a single CPD session, *How to avoid problems with footbridges and bikeways* free in your office contact [Stewart Madill](#) of OSA on 0403 385 707. Same conditions as above.

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.

Grading - Quite literally, I have written the book on the subject

Design - I can provide detailed technical drawings and advice.

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



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