Ted's News
February 2022

New Timber Guide Proposed

With *Timber in Playgrounds* put to bed, and a contract on hand for *Ephesus, The Nursery of Christianity*, I am giving thought to my next project which will likely be *Utilising Small Diameter Hardwood.* Respected architect, and friend, Ralph Bailey and I are considering this book. We would love to hear your experiences, good, bad, or indifferent. It could either be with round, sawn, or veneer. I have been putting this book off for years. It is a good thing too as the resource has changed from being oriented from sawn production to potentially veneers for engineered timber.

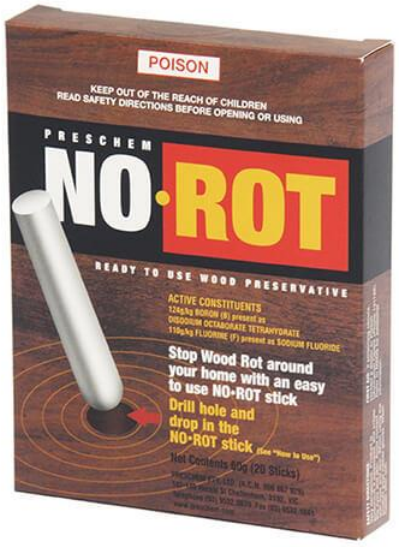
Do End Sealants Work?

I must have hit a nerve with the January newsletter as openings were up by an additional 30%. Last month's issue had images of some pretty sad LOSP treated pine handrails that were failing after only 3 years. In that newsletter, I explained how that treatment process was developed for finished products such as window components and not items that were cut on-site. Click here for the article. One of my readers posed a question that everybody else probably thought was too silly to ask (and I include myself). Do end sealants actually work?

So I did some extra homework and it appears that there is a "gap in the knowledge." I know the manufacturers of Enseal well and I was told that they are not getting feedback about failures. That is a good start. But no one could point me to a document that affirmed their success. To the rescue Jack Norton, AKA Captain Preservation who has just started a trial to determine the effectiveness of end sealants. Answers are expected in three years. Jack explained that a lot will depend on how much is applied and how many coats among other things. Makes sense. Till then one of your options is the follow the manufacturer's instructions to the letter. The instructions for Enseal are:

Hold can 15 to 20 cm from the surface. Apply the product liberally onto the freshly exposed surface until the solution ceases to absorb readily and just starts to run on the surface. Coverage should be up to 2 m2 per can depending on wood condition and grain

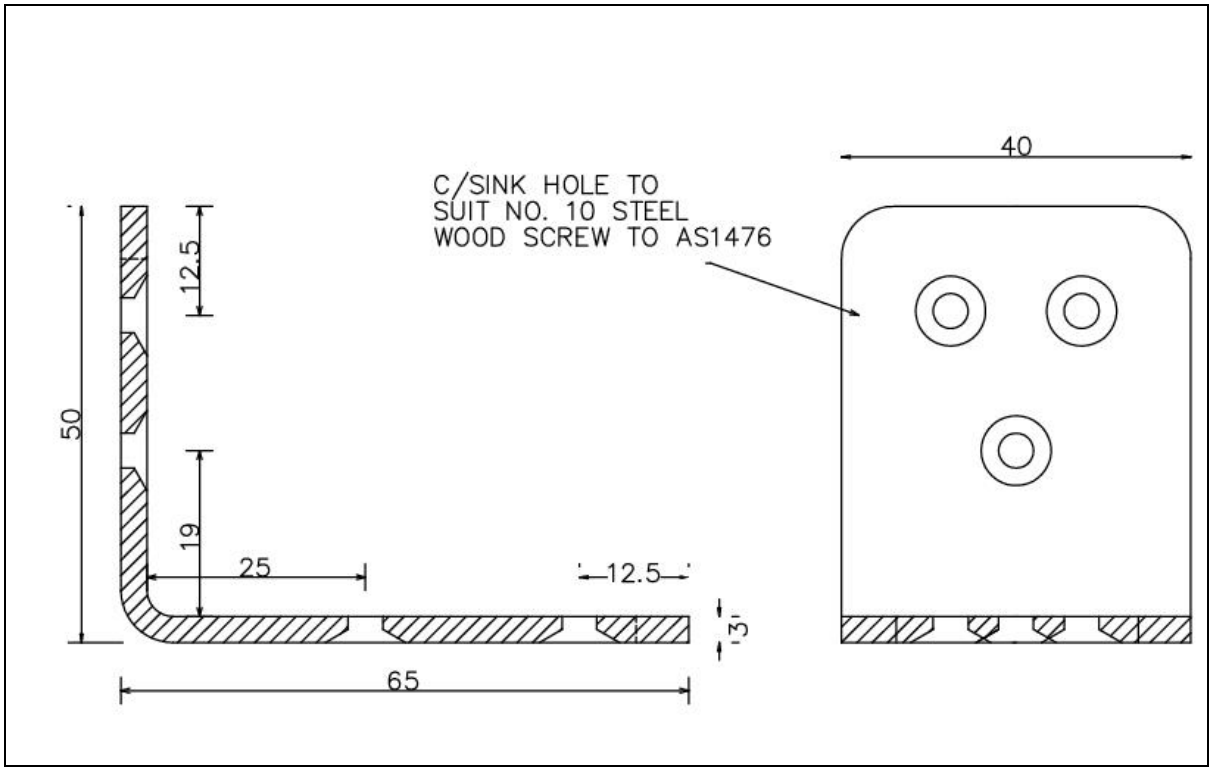
orientation (end grain will be most absorbent). Allow 2 days drying time before applying primer, paint or other sealants on the resealed timber surface.



So there is supposed to be a two-day delay between cutting the handrail to length and installing it. This old cynic can't imagine that it has ever happened yet! A better option is to adopt a belt and braces approach which involves following the instructions on the can to the letter but also installing a Preschem No-Rot solid wood preservative stick in the end prior to painting. It might be easier to purchase this product direct but it is available through Mitre 10.

Your third option, and the only one I would consider, is to use F22 spotted gum or ironbark. \

Suggested Connection of a Handrail to a Post.



I was never happy with handrail connections commonly available, particularly tenons as, after time, you invariably find decay in the posts associated with them. Granted it may take a very long time with royal species hardwood but it still seems to happen. Standard brackets were visible and unsightly. A long time ago I experimented with a bracket that was hidden and hopefully avoided the decay issues of a tenon. I thought it had some potential. There may be someone out there that can develop it. What I have drawn is not certified.

35 Metre Clear Span Timber Highway Bridge

Not a paid advertisement

Before

After

My friends at Wood Research and Development/Timber Restoration Services sent me information about a recently completed 35 metre span road bridge that they designed and constructed in Canada. It replaced a steel and concrete bridge that was damaged by a truck accident and the ravages of a climate that is harsh on both concrete and steel. After two years out of action, the province put out a tender for bridge replacement and made the tender available for all products including timber. Timber Restoration Services (TRS) along with Wood Research and Development (WRD) were awarded the tender for both supply/design and installation

The timber structure is 35m long by 7.6m wide and is designed for heavy truck loading along with a very high-capacity crash-proof rail system. The substructure is of driven timber piles with a timber back wall and the superstructure is comprised of eight only 1.56 m deep High Strength Fiber (FiRP®) glulam beams. Laminated deck panels sit on the beams. This lightweight option not only provided for a cheaper alternative but also added longevity. Everything was premanufactured off-site and then treated ensuring uptake in the horizontal through holes. All fasteners where possible, are horizontal or vertically from underneath to help with moisture penetration into the bright wood. This method extends longevity and also allows for an accelerated schedule during installation on site.

For a longer article with more images click here
Here is a link to a video of the girders being placed
Here is a link to a 40 metre clear span highway bridge

For more information, in Australia, contact Patrick Bigg on patrick.b@timberrestorationsystems.com.au Internationally, refer to the Timber Restoration Systems website.

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.

Full Day Courses

Don't embark on any major footbridge or coastal deck project before you do my full-day 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.

Click here for footbridge course brochure

Click here for coastal decks brochure

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 email me.

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 www.bcrc.com.au or download their capability brochure here.

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