

Ted's News

May 2020

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| <p>Outdoor Timber: Design</p> | <p>Architectural Timber Battens</p> |

Face to face training is going to be difficult for a while yet. Fortunately, [eClassroom](#) has two of my CPD courses that you can undertake in the safety of your home, [Outdoor Timber: Design and Specification](#), and [Architectural Timber Battens](#). Coming soon to eClassroom will be three new courses - *Designing for Durability* which explains how to lay out a commercial deck, *The Seven Deadly Sins of External Timber Design* and *Timber Joints*. Hopefully all will be ready for the last-minute rush to get CPD points.

Spotted Gum Decks in Japan



Spotted Gum Deck at Hachihoh Hospital, Aomori Prefecture in Japan

Years ago, I developed a friendship with Mr. Kurata of Kurata Co and now also with his daughter Miss Kurata. Kurata Co come to external timber from a totally different direction to me. They were furniture manufacturers in Shizuoka City, Japan, an area renowned for its cabinet making skills and they bought all that precision to their external timber work. I recently received some images of a spotted gum deck they completed in February this year at Hachihoh Hospital, Aomori Prefecture in Japan. After prefabricating the deck to the millimetre in their factory, it was shipped the 900 km to site. Prefabricating the deck offsite meant the time on site (4 days) and conflict with other trades was minimised. From their furniture experience they are skilled in CNC production. The finish to their projects is in a league above what we would expect in Australia.

Things to note about this job that you won't see in Australia:

- The construction is in an earthquake zone so the posts just sit on plinths
- It was snowing at the time, so prefabrication was done in a warm shed
- All fasteners are from below.
- The curved skirting board.

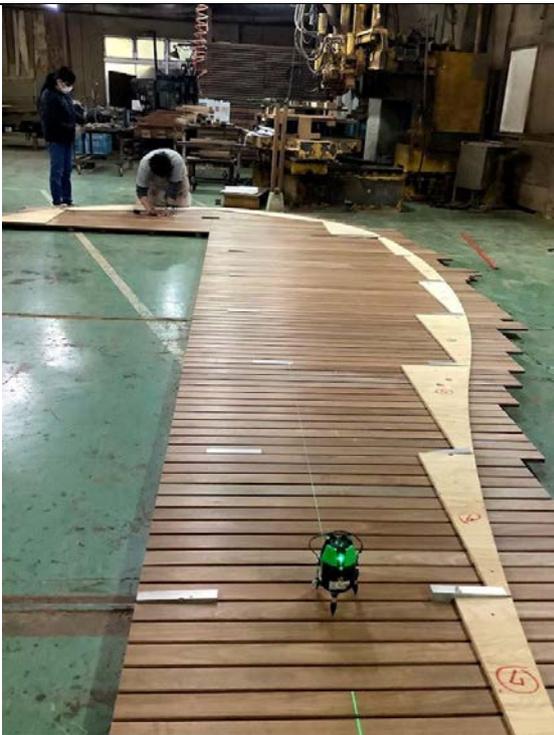
[Read more about the project in Miss Kurata's own words.](#)



Job site, note snow



Marking out the deck



Marking out the deck



Deck after trimming



fastening decking from underneath



Posts on Plinths



Posts on Plinths



Finished Deck

Here are links to two other Kurata Co spotted gum jobs I have featured:

https://www.deckwood.com.au/pdf_newsletter/2018/timber-technology-newsletter-04-18.pdf

https://deckwood.com.au/pdf_newsletter/2016/timber-technology-newsletter-04-16.pdf

And here is a deck they built in a tea plantation in Japan



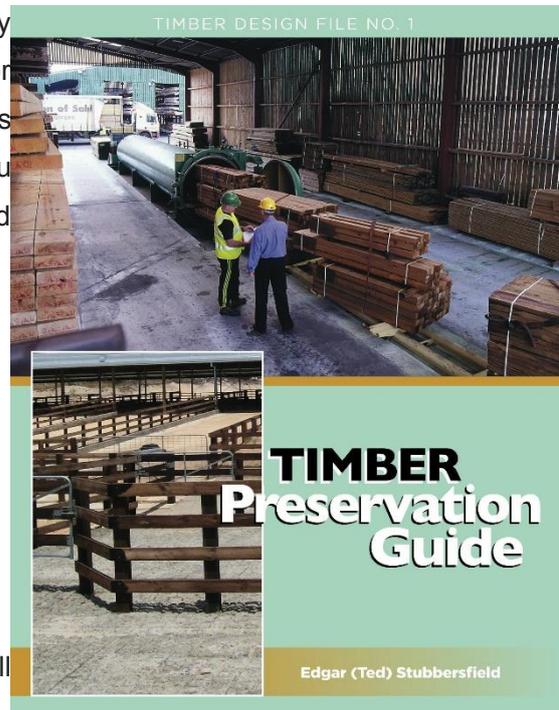
Revising My Timber Preservation Guide

A lot has happened in the 8 years since I wrote my Timber Preservation Guide and it is well overdue for a revision. I would be grateful to receive any stories and images of successes and failures. Can you help? I would like a picture of unpainted LVL used for verandah joists.

Since then some of the changes have been:

- Revised standards
- Codemark timber
- Increased use of dipping and spraying and
- introduction of modified wood

I hope you can help. Purchasers of the old guide will get a revised copy at no extra expense on request.



Krause Bridge – Lessons in Longevity

Not a paid advertisement





Compacted rubble overlay and single span deck boards = deteriorated deck



New deck fastened from underneath

The rich history surrounding country towns in South Australia’s Barossa region means that the bridges needing maintenance often have a long history associated with them. In 1873, the community railed against the local District Council after flooding stopped the farmers from crossing Duck Pond Creek to get to the markets and sell produce. It was reported on February 3 1874, the bridge was completed and as reported “I am glad to say that the long-delayed bridge near Krause’s has at length been constructed. It appears to be a good, substantial piece of work, and will prove a great convenience to the residents.” (Krause owned property next to it so from being called “the bridge near Krause’s “, it eventually became known as Krause bridge).

For over 146 years, Krause Bridge has stood the test of time until in 2018, The Barossa Council had to close the bridge to traffic due to its deteriorated state. Removing the compacted rubble overlay for repairs, the Council discovered the decking timbers were segmented short lengths across the deck. This caused two deleterious effects: the short span from girder to girder reduced the overall load capacity of the bridge and each break in deck length allowed water to easily penetrate the deck directly to the girder. The degradation of the deck planks was accelerated by the compacted rubble overlay since the overlay trapped moisture and the timber surface could not dry quickly.

The Barossa Council determined that Krause Bridge required a complete restoration: the stone abutments were loose and unstable, the tree log girders were decayed and the deck plank timbers that were overlaid with compacted rubble were severely deteriorated. Timber Restoration Systems was commissioned to restore the bridge and upgrade it to a 15-tonne traffic live load capacity. The skewed bridge span was 7m with a 4.1m wide trafficable deck. With an eye on longevity and performance, Timber Restoration Systems approached the project applying its standard of good construction practices: horizontal connections, no vertical surface penetrations and all joints and

cut surfaces coated with Copper Naphthenate oil (CN - fungicidal treatment) and then Anchorseal® (paraffin-based sealant).



Existing bridge before rebuild

Poor maintenance practices over time enveloped the timber girders and damaged the stone abutments.



Canadian Cut with side face for post fixing.

Good construction practices: Slope cut girder ends (1:6), applied CN oil and Anchorseal®

The 360mm diameter log girders supplied were Durability Class 1 hardwood H5 CCA treated with a Canadian Cut seat applied to the top surface for ease of placing the deck planks. The outer girders were side cut a minimum of 200mm wide face for the posts to be flush finished and bolted. The 200x100 deck planks were affixed to the girders from underneath thereby removing the pathway for moisture to penetrate the deck planks or the girders underneath. Without moisture

penetration into the girder heartwood, the lifespan of the girders effectively doubles. The lack of surface penetrations also means that deck planks will require minimal Council maintenance since there is little opportunity for moisture to stay trapped within.

The bridge was installed in a week after the abutments were restored. For more information please visit www.timberr.com or contact Davide Maggiolo davide.m@timberrestorationsystems.com.au

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 to 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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