

OUTDOOR STRUCTURES

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December 2012 Newsletter

Written by Ted Stubbersfield for

INFRASTRUCXION PTY LTD

Contents

[Use the Right Product When Building a Deck](#)

[Construction Timbers in Queensland](#)

[Report on Bridge Inspection Course](#)

[Timber Preservation Guide is all but Ready](#)

[Consultancies by Ted Stubbersfield](#)

[Two Great Timber Courses from University of Tasmania](#)

[Quote Request for Steel Bridge](#)

[Quote Request for Timber Bridge](#)

Dear Reader

Use the right product when building a deck



Last month I was contacted by a very unhappy owner of a new deck within 2 Km of the ocean. He had good reason for concern and with his permission I am sharing just some of the points I raised. As always the guilty have been protected as the location is not identified while the innocent suffer. Was it ever otherwise?

My friends at Pryda manufacture quality products. They are my friends as they manufactured Pole Cats under license to me for years. The issue is the need to use appropriate products. Their guidelines require stainless products in this location. (If you don't know how far from the coast you should be specifying stainless, purchase my Timber Preservation Guide) The lightly galvanised joist hangers will rust and, if not caught in time, the joists will spill out, similar to the deck fatality in Ascot a few years ago. The builder also used class 3 screws on the deck. Climaseal 3 by Buildex, which is a better product, is only

rated for 7 years in this locality. There were no notations on the plan to use appropriate products.

The designer also only noted F14 hardwood on the plans, nothing more. The builder only ordered F14. So what did he get when he purchased the lowest price product that met that specification? The outside of the log is evident (wane) and it is clear that the sapwood directly behind it is untreated. If it is blackbutt the untreated timber is only rated for a 15 year structure in "Construction Timbers in Queensland" not 50. But is it blackbutt? Blackbutt and New England blackbutt (lower durability and much higher shrinkage) can't be told apart as sawn timber. After only four months the 75mm timber is down to only 63mm!

The point is, your drawings need extreme detailing. We all tend to cut and paste our common details but you need one set for coastal areas and one for non coastal. Purchase my *Timber Preservation Guide* for distances and my LifePlus decking Guide for the detailing you should have on your plans.

You have in your mind a certain end result and a certain life expectancy. To get that you need to be detailing and specifying your decks with our guides in one hand, and our products nominated. We are the only Company in Australia that consistently asks the builder how he is going to use the timber. It is much simpler if everything is right. I really despair for our industry. Basic knowledge is simply not there. If you write a specification that you can drive a bus through, rest assured that the builder will. He will purchase the lowest price item that meets your specification and generally not know any better.

A while back I had an architect ring me who was very upset. She had done all that I recommended even to specifying LifePlus used in accordance with the LifePlus Decking Guide, but the builder had completely ignored everything. But she was now in the driving seat when insisting on rectification and the builder could not argue.

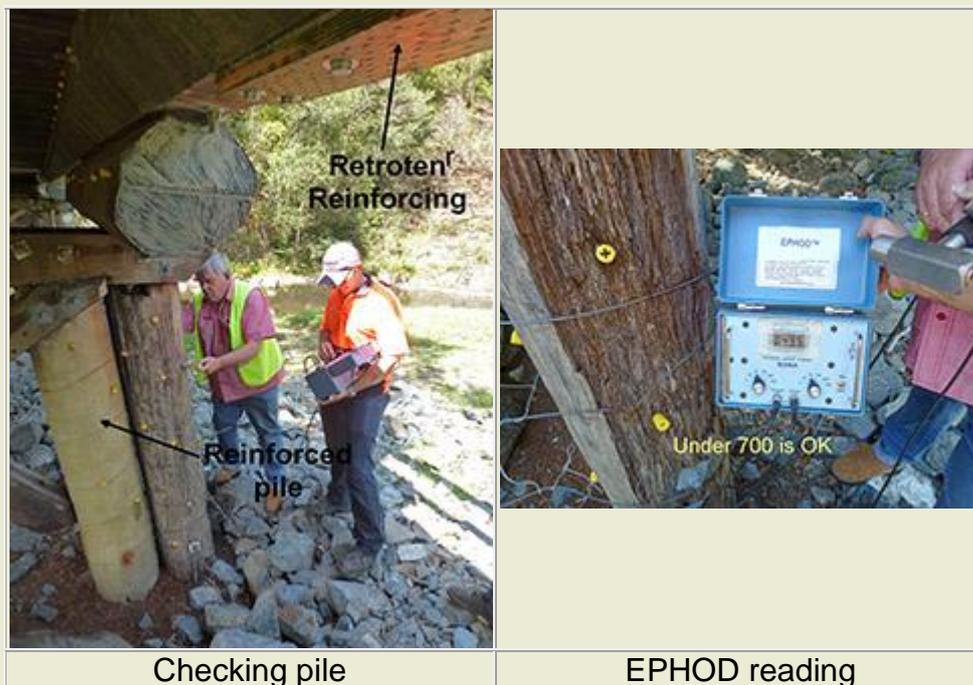
Construction Timbers in Queensland

A very useful set of publications that you should have in your library is Construction Timbers in Queensland by Gary Hopewell. Mercifully they are available for free but you can purchase hard copies as well. The errors we often see could have been picked up by referring to these books.

Here is the link

<http://era.deedi.qld.gov.au/2036/>

Report on Level 1 Bridge Inspection Course



Checking pile

EPHOD reading

(Not a paid commercial)

I cannot remember ever having attended a course that was as useful as the Level 1 Bridge Inspection Course held by Timber Restoration Systems at Surfers Paradise this month. There were 2 full days (7:30 am to 5:00 pm) of lectures and bridge site inspections by Dr. Dan Tingley. The images above were taken at the site of a restored bridge on the Tallebudgera valley, one of four being restored for Gold Coast City Council (GCCC). Instead of replacing these bridges at a cost of millions they were renovated to T35 standard for a small fraction of the price.

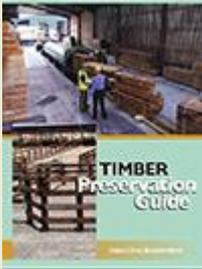
The left hand image shows me checking the soundness of a pile using the patented non-destructive inspection (NDI) device known as EPHOD™. By measuring the time a shock wave takes to pass through a member, (readings are taken 60 degrees apart), an accurate picture is gained of the inside of the pile. The right hand image shows the EPHOD™ instrument that displays the times measured between the timber element to be taken. Core sampling can miss a lot of possible decay and does not tell you how sound the remaining timber is. This pile looks dubious but tested sound. You can see the Retroten(r) high-strength reinforcement that is adhesively bonded to the underside of the girder. One pile has been repaired with a fibreglass wrap. The yellow plugs hold in diffusers that inhibit fungal growth when the conditions are right. .

This is not just a course for bridge carpenters but for engineers and bridge builders also. What material, other than timber, allows you to overload to 10 fold, be mistreated, used with bad practice and still give good service after being restored with high strength fibres and structural adhesives? Imagine what it will do if used correctly. I am going to have to rethink a lot of what I do.

[Publications by Ted Stubbersfield](#)

Many of my readers would know that I have been working on a series of Timber Design Files. The first draft of the Timber Preservation Guide is finally out of the graphic artist and there is just a bit of tidying up now. They should be up on Amazon in near future. The book

entitled Boardwalk and Deck Design Essentials just needs some polishing and it will be ready for the graphic artist also. If you are designing a deck or boardwalk you should not be doing so without these in your hands. They are only \$33 each for the digital file at the moment. Contact me for purchase details or see below.

Timber Preservation Guide	Deck and Boardwalk Design Essentials
	
Table of contents	Table of Contents
Order Guide	Order Guide

All our guides can be seen at http://www.outdoorstructures.com.au/timber_guides.php

[Consultancy Services by Ted Stubbersfield](#)

When I started offering my expertise on a consultancy basis I really wondered if you could make a living doing this. The more so as I was doing it for free for years to assist in obtaining orders. I am still wondering! But there is no doubt in my mind that you should be able to make a good living. The stories I am now hearing are frightening. You do not have to accept substandard material and performance. I am here to help you from the design stage through to final completion.

In our area of expertise, often, with timber design, it is the art that proves more important than the science. Weather exposed structures normally do not fail because of incorrect member size calculations, but because a myriad of small points of detail are not taken care of.

As a Timber Design Assistant we offer:

- The provision of high quality technical guides on timber design.
- The review of professional drawings to identify potential timber design issues that may impact service life
- The preparation of proposed AutoCAD cross sections of structures
- To be a sounding board for ideas
- Lectures and presentations
- The assessment of best practice in construction.

As a grader I can assist with grading for confirmation to a nominated grade but more

importantly I can assess whether timber is graded to an appropriate grade. Often these are not the same thing. Contact me on 07 54625532 or by email (edgarstubbbersfield@gmail.com) to discuss how I can be of assistance to your organisation.

Two great timber courses by University of Tasmania

Two very useful timber related courses are to be run by the University of Tasmania

Applications are open for the Centre for Sustainable Architecture with Wood's **Graduate Certificate in Timber, (Processing and Building)**. If you are interested you need to:

- Apply** As soon as you can through the Apply-by-web facility, through the 'Apply Now' link at: <http://www.postgraduate.utas.edu.au>
- Notify** Email Timber@arch.utas.edu.au and notify us that you are applying
- Enrol** Once you have accepted your offer, enrol as soon as possible in order to access the aroundcourse content.

Who can apply

The course is open to those with a degree or an acceptable combination of training and experience.

There is a structured pathway for experienced applicants without a degree.

Design and Digital Fabrication with Timber Studio 14-16 January 2013

The University of Tasmania's CSAW has an exciting summer workshop on offer: This three-day intensive studio offers participants hands-on experience of digital design and fabrication processes with timber. Participants will conceive, parametrically model, prototype, fabricate and erect geometrically complex wooden structures in full size.

I wish these courses were around when I was young, but then when I was young we sent telegrams. The contact details are:

Janice Bowman
Centre for Sustainable Architecture with Wood (CSAW)
School of Architecture & Design
University of Tasmania
Locked Bag 1324
Launceston TAS 7250

Ph: 61 + 3 6324 4470
Fax: 61 + 3 6324 4088

Bridge Quote Requests

Infrastrucxion Pty Ltd

If there is any doubt that OSA make the best kit E-Mail: Chris@Infrastrucxion.com

bridges in the country look at the [Berrinba Wetlands Project](#) . Not all bridges are equal. After encountering three bridges in one month that did not meet the Bridge Code I wrote the [May 2012 newsletter](#). Refer to it when assessing the suitability of quotes.

Web: www.outdoorstructures.com.au

Phone: (07) 5462 4255

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Australia

[Steel bridge Quotation Request Form](#)

[Timber Bridge Quotation Request Form](#)

ABN 90 234 979 738

More information:

If you have timber road/rail/heritage bridge issues,

we suggest you talk to:

Mr. Dan Tingley

Senior Engineer

Wood Research and Development

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