

# OUTDOOR STRUCTURES

*Outlasts and outperforms*

## January 2013 Newsletter

Written by Ted Stubbersfield for

## INFRASTRUCXION PTY LTD

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Dear Reader,

### [OSA Products have always been available](#)

We are finding that some builders and landscapers, obviously not my readers, are telling specifiers that OSA is no longer trading and that their products are no longer available. It is only half true, OSA has stopped trading but its products continue. True, I got sick and tired of doing battle with users who would substitute without approval with material that may or may not have been equal. Invariably it wasn't. It takes a younger man than I to keep doing it. Chris Blackledge, a younger man, has a licence to my IP. The products have always been available and my old phone numbers and email addresses have always worked. If you need substitutes checked for conformance to specification, I am happy to help.

### [F17 is an Almost Useless Specification](#)



These images show a spike pushed into a decaying hardwood joist, one from the top and one from the side. The job was 2 1/2 years old

Consider these images taken at a problem site we had a connection with for a consultancy. The images are used with the owners permission. To cut a long story short, it appears that, only a few years ago, the builder ordered F17 KD hardwood for framing on a patio. He did not understand that F17 is a useless specification for timber in decks. F17 just says how strong the timber was on the day of processing. It says nothing, absolutely nothing, about durability, stability, shrinkage or appearance. When the owner complained about the timbers performance, apparently the builder said "just keep the paint up to it". May the Good Lord give us strength - did you miss the newsletter about a deadly deck at Yeppoon - here is the link:

[http://www.outdoorstructures.com.au/pdf/osa\\_newsletter\\_10\\_12.pdf](http://www.outdoorstructures.com.au/pdf/osa_newsletter_10_12.pdf) The dead giveaway that you have a problem is the orange fruiting bodies coming out the side of the timber.

You have got to ensure that high natural durability is specified and here some suppliers are not doing the right thing if you are not very careful with your specification - see [http://www.outdoorstructures.com.au/pdf/etdn\\_7.pdf](http://www.outdoorstructures.com.au/pdf/etdn_7.pdf)

There is the misconception that F17 is going to be an amazing piece of timber. Far from it. In unseasoned spotted gum it has 60% of the strength of solid timber, which is OK structurally, but with unseasoned ironbark is equal to only 48% of the strength of that timber free of any defects. If iron bark is kiln dried, F17 then is one grade below anything that was ever considered for sale - about 30% the strength of solid timber. That is below hippie grade. The increase in strength that is achieved when hardwood is kiln dried is why low strength (and low durability) Victorian Ash achieves F17. It might work in a roof truss but it won't in a deck in Queensland or, for that matter, anywhere else except the arctic. That is why Deckwood is an appearance and a performance specification. Still we see people trying to help us by saying "F17 Deckwood". Please don't do this, you are mixing two incompatible philosophies of grading. It is either Deckwood by OSA or its licencees or you try to plot your course through AS2082. Joistwood by OSA or its licencees takes care of the durability of the structural timber also.

Need help with a timber problem? See consultancies below.

## Rotary seeks donations for Grantham Flood reconstruction



Outside and inside the Grantham butter factory

Few of my readers would be unaware of the horrific inland tsunami that tore through the Lockyer Valley two years ago. Many lives were lost in Grantham, a community just a few minutes away from the Infrastrucxion office. The response throughout Australia and even internationally was stunning. An impressive gift is from the joint Rotary Clubs of Toowoomba who are turning an historic but very derelict butter factory into a community centre. Drive past and you would wonder what is happening but inside!! The Rotarians have spent over \$1.5m establishing, not just a community centre, but a refuge in the event of another flood. Because of its refuge function It is planned to build a commercial kitchen inside the building.

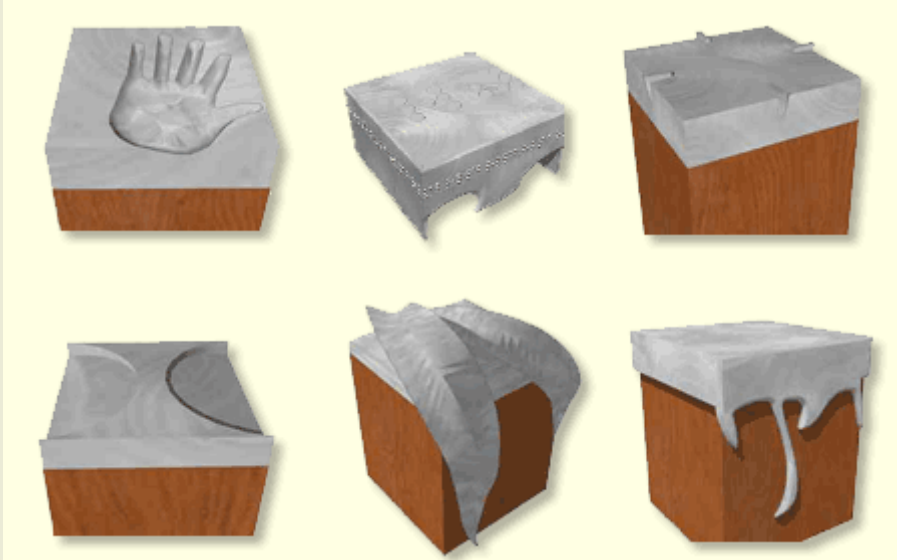
The Rotarians need your help to find the remaining \$130,000. Donations can be made to the Rotary Club of Toowoomba South Inc. P.O. Box 460, Toowoomba 4350 or ring Bill Mason on 0418 495 589 or even myself on 07 54624255.

For more images see <https://sites.google.com/site/toowoombasouth/Grantham-Butter-Factory-Project/Project-PhotosSlide-Shows>

See their latest newsletter <http://www.outdoorstructures.com.au/pdf/grantham-butter-factory-update-01-13.pdf>

Old OSA newsletters on the Grantham floods  
[http://www.outdoorstructures.com.au/pdf/osa\\_newsletter\\_10\\_11.pdf](http://www.outdoorstructures.com.au/pdf/osa_newsletter_10_11.pdf)  
[http://www.outdoorstructures.com.au/pdf/osa\\_newsletter\\_01\\_12.pdf](http://www.outdoorstructures.com.au/pdf/osa_newsletter_01_12.pdf)

### [Seminar on Direct Manufacturing Through 3D printing](#)



Over the years I have seen some really great ideas from architects and landscape architects not come to fruition because fabrication requires expensive tooling. Take for example this absolutely magnificent range of post caps for our pioneer posts designed for me a few years back. The cheapest die for the simplest shape was going to be \$7,500. Divide that by, say, 200 items that is only \$37.50 per cap. The aluminium cap was very inexpensive once you had a die so, with that number, it was actually less expensive even with tooling than fabricating a cap from stainless plate. The only failure in the scheme was that an order for 50 pioneer post bollards was rare and that is not to mention the delay in fabricating a die. 3D printing completely bypasses conventional manufacturing processes.

Jen Loy, the Convenor 3D Design at the Queensland College of Art, Griffith University Gold Coast Campus is heading up a seminar on the subject. It will be held between 10.00am – 2pm (including refreshments) in Brisbane at The Edge, 13 February 2013. The Edge is on South Bank, linked to the State Library, overlooking the river. At this seminar you will learn from international and local experts about how 3D printing (now available in plastics, metal and ceramics) may be applicable to you. I plan to be there and if you are a local designer you need a very good reason not to be there. It is going to be the future.





Fully functioning bumper 3D printed



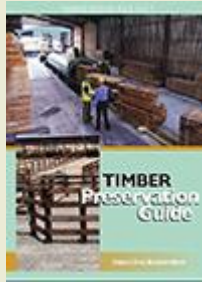
3D printed titanium plates for scanned face of patient with bone cancer

For more information visit

[http://qmisolutions.com.au/wp-content/uploads/2012/12/Additive-Manufacturing-Forum\\_13-February-2013.pdf](http://qmisolutions.com.au/wp-content/uploads/2012/12/Additive-Manufacturing-Forum_13-February-2013.pdf) or contact Jen at [j.loy@griffith.edu.au](mailto:j.loy@griffith.edu.au)

I met Jen when she was doing her PHD and came to OSA to see our amazing products, have you discovered them yet? be very careful with substitutes. Talk to us when someone wants to do it as it might "bite" you. When a job came up with a couple of hundred pioneer posts the landscaper talked the owner into substituting, perhaps there was more profit in an alternate product. When it performed exactly as it had to, there was one very upset developer.

## Timber Preservation Guide Finished



The Timber Preservation Guide is finally completed and professionally formatted. I have been selling far more of my Deck and Boardwalk Design Essentials than the Preservation Guide. I assume this is because people think treatment is simple. If it was I would not have spent hundreds of hours writing this guide to assist you. This guide will help you understand the interaction between good detailing and appropriate treatment. It will also help you avoid specifying and relying on treatments that simply cannot be achieved. The Deck guide does not cover treatment, intentionally. Check out the table of Contents

### [Table of contents](#)

There are four ways to purchase the Timber Preservation Guide.

#### **Using a Credit Card:**

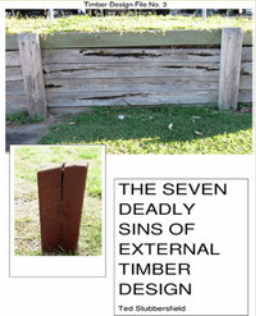

1. As a [Amazon Kindle eBook](#) for US\$33.00
2. As a [Amazon Paperback](#) for US\$33.00 + postage from US.
3. Not a member of Amazon? Purchase from [Createspace Estore](#) for US\$33.00 + postage from US.

#### **Direct Deposit:**

4. Paperback posted from Australia for quicker delivery \$37.50 + \$10.00 Express Postage (within Australia). Email [edgarstubbbersfield@gmail.com](mailto:edgarstubbbersfield@gmail.com) or call 07 5462 5532 and we will advise payment details.

**Already purchased a draft?** Go to the Dropbox folder and download the latest file. Do not release the file outside of your office. I am only releasing the file to earlier customers.

There are two guides having their final edit. I am fairly well advanced on "Understanding AS2082."

<p style="text-align: center;"><b>The 7 Deadly Sins of Timber Design</b></p>	<p style="text-align: center;"><b>Deck and Boardwalk Design Essentials</b></p>
	
<p style="text-align: center;"><a href="#">Table of contents</a></p>	<p style="text-align: center;"><a href="#">Table of Contents</a></p>
<p style="text-align: center;"><a href="#">Order Guide</a></p>	<p style="text-align: center;"><a href="#">Order Guide</a></p>

All our guides can be seen at [http://www.outdoorstructures.com.au/timber\\_guides.php](http://www.outdoorstructures.com.au/timber_guides.php)

### [Level 1 Bridge Inspection Course](#)

(Not a paid Advertisement)

The results of the level 1 bridge course I attended is in. Apparently I achieved 99%! I think it had more to do with my handwriting being so bad that Dr. Tingley could not be certain I got the answer wrong. The course was brilliant and hope to do the level 2 course one day. Look for the next advice of another course.

### [Le Mémento du Forestier](#)

I have been asked to co-author two chapters in the revision of a prestigious international publication Le Mémento du Forestier. I have one chapter, an introduction to outdoor structures at the review stage. Fortunately this chapter is in English, my schoolboy French is a "little" rusty. to say the least.

### [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 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 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. (accessed from our website on a pay per view or membership basis)
- 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 ([edgarstubbersfield@gmail.com](mailto:edgarstubbersfield@gmail.com)) to discuss how I can be of assistance to your organisation.

## Bridge Quote Requests

If there is any doubt that OSA make the best kit 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.

[Steel bridge Quotation Request Form](#)

[Timber Bridge Quotation Request Form](#)

### 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

1760 SW 3rd Street,

Corvallis OR 97333

Office 0011 1 541 752 0188

Fax: 0011 1 541 752 0195

Cell: 04 5957 6314 Or 04 28983328

[dant.tingley@gmail.com](mailto:dant.tingley@gmail.com)

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