



June 2012 Newsletter

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Goodbye Outdoor Structures Australia, Hello Infrastruxion

Sadly Outdoor Structures Australia is closing. Hello Chris Blackledge and *Infrastruxion*

The opportunity has come for me to take a step backwards and I am going to seize it. Chris has been responsible for all the processing at our premises for the last sixteen months and wants to take on the challenge of continuing the work of supplying the best decking and landscaping products in the country.

Chris is purchasing the OSA equipment and taken a lease on our premises. He has also taking a license to all our IP. I am pleased to hand over to Chris an orderbook with excellent forward orders, the orders that I would have loved to have seen over this recession. The Outdoor Structures website will continue for the foreseeable future and the phone numbers have not changed at this stage.

Chris is the son of my good friend Evan Blackledge who has been involved in value added hardwood production for about 40 years. This means that Chris can draw on over 80 years experience.

It has been quite a ride since I started in 1997. We have done some magnificent projects and have made some friendships that I hope will continue. There have also been times of frustration and heartache. Back when I started, I realised that there were two big gaps in the market. These were, knowledge on how to design well in weather exposed timber and products that were appropriate. We seized that market with all our might, gained the knowledge and, I believed, changed timber specification and use for the better (in Queensland at least). I have very freely shared what I learnt with anyone who would listen. Some of you did listen.

I will be working as a consultant to Chris so not a great deal will change on a day to day basis. I plan to write the newsletters for Chris for at least six months more. Make the most of them. The subject matter is often chosen to keep you on good terms with your clients and keep you out of the hands of solicitors. I love writing. I am not particularly good at it but I still love it.

My little book on timber preservation is all but complete and will soon be formatted ready for you to read. I have other books I want to write on timber design and in my semi retirement hope it will be possible.

Consultancy Services Now Offered by Ted Stubbersfield

I am now free to offer consultancy services to anyone needing the skills we have developed over the last 37 years in the timber industry. Services we can offer are:

- Grading of timber to confirm supply to nominated grade
- Grading of timber to confirm supply to a suitable grade (not necessarily the same thing)
- Assessment of best building practice
- Assistance with detailing of designs
- Assistance with specifications
- Guidance as to why an existing timber structures is not performing satisfactorily and
- Sounding board to discuss concepts.

Many of you that have used our services before know we are very good at this. Weather exposed timber is very complex and it is dangerous to enter into this field without good advice and experience. Some in the timber industry are doing things that are just unspeakable and we believe we can help protect you. There is now a fee for this service.

Domestic Decking on Steel Joists



Fixings breaking in C section steel



Corroding C section joists Image courtesy of Contrast Constructions

How would you like to spend \$250,000 on a deck and then find that the screws are breaking and you have trip hazards on the deck? What about having your steel verandah joists corrode in a relatively short time? These are real but fortunately avoidable problems associated with steel joists.

When we wrote our LifePlus Decking Guide in 2004 we realised that many people wanted to put their decking on steel joists as they thought this would avoid the problems that can be associated with timber subframes. The problems with timber are well known and can all be designed around if you are prepared to take a little care. We explained how to do that in the guide.

We had no objections to using steel for joists but realised that the builder was swapping well known and solvable problems for problems that were less understood. At the time we wrote to Bluescope Lysaghts outlining what we saw would be the problems and asking how to design around them. The difficulties we saw were:

- Increased corrosion protection needed especially with new treatment chemicals,
- Lipped profiles allow moisture to pool,
- Lower torsional stiffness of c and z sections than hardwood; and,
- Screw fixings breaking when used in steel joists.

After about two years we finally received a verbal reply, They told us that they provided no warranty when their steel was used with external timber (i.e. because there is associated moisture). You will find a similar statement in the Bluescope 2006 publication Corrosion Technical Bulletin CTB 13.

That would be the end of the matter except that in the Bluescope Steel QuickaFloor construction guide it outlines how to make a veranda floor with their product and does not appear to mention that you are not to use timber decking. A phone call indicated that decking would have to be screwed or nailed with a hardened twisted shank nail as with the internal floor sheeting instructions. A publication I personally found more helpful was the Duragal Flooring System published by Onesteel. On pages 9 and 10 it gives design solutions for all the issues I sought guidance on.

By all means use steel joists but I am sorry, going to steel does not solve the problem of needing to take great care in detailing and construction. Speak to the joist supplier to get their written recommendations.

I would love to tell you about the \$250,000 deck at our national capital as the screws were just the start of the problem but not today. It would make you wonder why we use timber at all until we understand that plastic would have been worse. Tragically the asset owner will probably go to plastic next time thinking they had solved the problem only to find they had taken on a whole host of problems they had not expected.

Links

LifePlus Decking Guide

http://www.outdoorstructures.com.au/pdf/lifeplus_decking_guide_4.pdf

Technical Bulletin CTB 13

<http://steelproducts.bluescopesteel.com.au/files/dmfile/CTB13April2008.pdf>

Quickafloor construction Guide

<http://www.lysaght.com/files/dmfile/QuikaFloorConstructionGuidejune07.pdf>

Onesteel Duragal Flooring System

http://www.onesteel.com/images/db_images/productspecs/DFS%20Brochure.pdf

Turned Bollards

Project: Japanese Gardens, St. Stephens College

Architect: Burling Brown Architects

Builder: James Trowse Construction

Bollards: Outdoor Structures Australia

We supplied a modification of our Torr bollards to the Japanese gardens at St. Stephens College Coomera.

We also supplied the copper caps as well. The US manufacturer had never seen his product used this way and wrote saying Oh my... very impressed, but without your posts our caps have no place to go.

I am not sure whether it is our timber that makes the caps look good or the caps that make the timber look good.

Probably it's the combination of the two in some very clever architecture. Either way, talk to us about turned bollards. Chris has purchased a copy lathe and he soon hopes to be able to make bollards up to 1.5m at an economic price.



Why You Should be Reading our Newsletters

After one of our readers emailed me asking to delete them from our database as our newsletter was junk-mail. I complied but asked if she had actually read any of our newsletters. Here is the reply

My sincere apologies Ted. If there is one item I do NOT want excluded from our mailing list it is the information I receive from you. We have just gone to a new internet carrier for our web site and I did ask another staff member to please screen the spam from our mailing list i.e. the viagra advertisements and russian wife type emails NOT technical data sheets and critical information. I am very sorry and I also apologise for the wording in the bloody email which indicated that your info was junk.

Another example Ted, if you want something done right, do it yourself. I should have done the culling myself. Please delete this huge blunder from your mind, and please DO NOT delete me from your mailing list ?

Many thanks Ted.

Jackie.

Postscript on Identify and Assess That Defect

Sound Knot: At least it was when it was cut and that is how you have to imagine it when you grade it, not as you see it now. It measures about 60mm across a face of 145 when laid, i.e. 40% of the face. The allowance for knots in AS2082 in unseasoned timber for the different stress grades is:

Grade	Ironbark	Spotted Gum
F22	36mm (1/4)	21mm (1/7)
F17	48mm (1/3)	36mm (1/4)
F14	54mm (3/8)	48mm (1/3)
Deckwood	18mm (1/8)	18mm (1/8)

The knot illustrated meets no structural grade, even the lowest conceivable, and will continue to degrade.



I have since heard that the asset owner where all the images of subgrade decking were taken did actually care. I have heard that they are in discussion with the builder for replacements. This is only the second time in 15 years that I have seen this. Tragically the profile is a “rip off” of our Deckwood.

I hope to eventually write a book on AS2082 and it was very convenient for every conceivable natural feature to be found on the one deck. One board at 3.0m long had four natural features, each large enough to have sent the piece to the chipper.

Postscript on Don Lucas Reserve Upgrade

After the May newsletter went out I received the following comment:

Hi Ted,

My name is Jonathan Hyde, I have a small decking company down in Sydney and we were involved in putting together the boardwalk and other timber works in Don Lucas Reserve, Cronulla.

I wanted to say thanks for the newsletter, and also the design material you have on your website. I have been a carpenter for many years, and more recently as a builder, but I have learnt more about the actual performance of timber in an outdoor application since that project than everything prior.

On seeing the original plans, I knew that building it like a domestic deck in someone’s backyard wasn’t going to work, and I was also impressed with the specifications you supplied.

Once again thanks for the brilliant info on your site, and whenever I am involved in a project like this in the future I will be sure to recommend your company

Regards

Jonathan Hyde

Deckworks

There is nothing like our guides and our experience anywhere in the marketplace. I get so upset when I see decks and boardwalks designed that continually incorporate the same deadly sins of timber designs as it is so unnecessary. Please talk to us before you put pen to paper.



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 2010 Newsletter](#). Refer to the May OSA Newsletter when assessing the suitability of quotes.

Steel Bridge Quotation Request Form

http://www.outdoorstructures.com.au/bridge_request.php?Mode=st

Timber Bridge Quotation Request Form

http://www.outdoorstructures.com.au/bridge_request.php

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

Regards

Ted Stubbersfield, Director

OUTDOOR STRUCTURES AUSTRALIA

OUTDOOR STRUCTURES AUSTRALIA

E-Mail: ted@outdoorstructures.com.au

Web: www.outdoorstructures.com.au

Phone: (07) 5462 4255

Fax (07) 5462 4077

Old College Road Gatton, Australia

PO Box 517 Gatton Q 4343

Australia

ABN 29 713 463 351

