

Ted's News

January 2017

Newsletters 2014-16

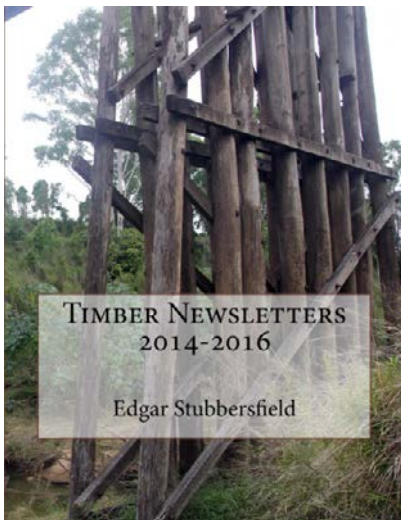
A Dreadful Deck in Canberra is Finally Made Safe

Choosing the Correct Decking Fasteners

Natural Images E Newsletter

Continuing Professional Development

Newsletters 2014 to 2016



If you enjoy reading my newsletters and find them helpful you can now own a copy of all the newsletters from 2014-2016. Purchase a hardcopy from [Amazon](#) or download a Kindle version. Just search under "Edgar Stubbersfield".

You can also purchase a PDF from me for only \$33.00. The PDF is searchable which makes it very easy to find something that you may have recalled reading years ago. Go to:- deckwood.com.au/timber-technical-design-guides

The first book of newsletters from 2010-2013 is also available.

A Dreadful Deck in Canberra is Finally Made Safe



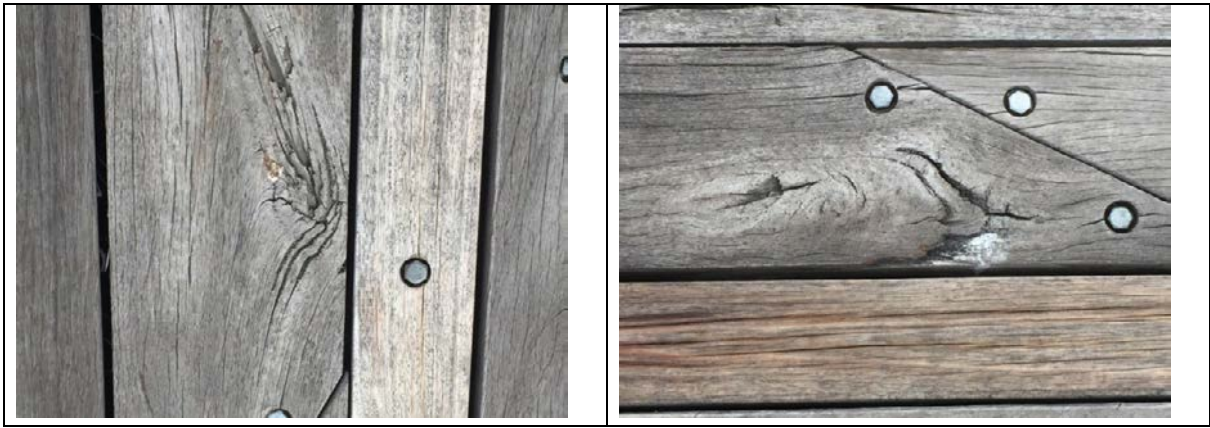
From the air, the deck in Queen Elizabeth Drive in Canberra looks stunning, but as our political masters keep telling us, "The devil is in the detail"! Back in 2005 I was asked to quote for the material but even a casual glance and some primary school arithmetic told me that it would not work. The timber specification, to my recollection, was 200x50 F17 spotted gum laid with a 5 mm gap. If you cramp your boards to remove any spring you have a target gap of 17 mm which is dangerous and way outside the disability code requirements. (the mathematics are $200 \text{ mm} \times 6\% \text{ shrinkage} = 12 \text{ mm}$ then add the laying gap of 5 mm). So I wrote to one of the professionals involved offering to help them make it a success but sadly it was rebuffed.



The inevitable happened. One of my readers was doing the circuit on his bike and the front wheel dropped down between the gaps and was injured as he went headfirst over the handlebars. The deck was then blocked off to bikes and should have been totally blocked off as it was dangerous. Of course, timber will have received the blame, not the design.



I visited Canberra again last Christmas and saw that the deck had finally been taken up and relaid with spacers inserted to take up the gaps.



As for the specification, much of the decking did not meet any F rating and, from what I could see, only lip service was paid to supplying to the nominated grade. You would expect that the contractor obtained three prices and took the lowest price. Those suppliers that quoted to supply to grade did not get a look in. There is no point nominating an F grade if you don't know what it actually looks like or if you are not going to enforce it. And decking has requirements that goes far beyond F grades!! Projects like this should require independent confirmation of grade, and not just to grade but to a suitable grade!! My book *Grading Hardwood* is a must if you are going to specify decking for a major project.

Back then, I would have assisted at no charge just to get my Deckwood specified now I charge to review plans but, as this project shows, it is money well spent.



The heart centre 300x300 seats were far from a success. Next month I will deal with how to make them perform as you expect. Again, it is just attention to detail.

Choosing the Correct Decking Fasteners

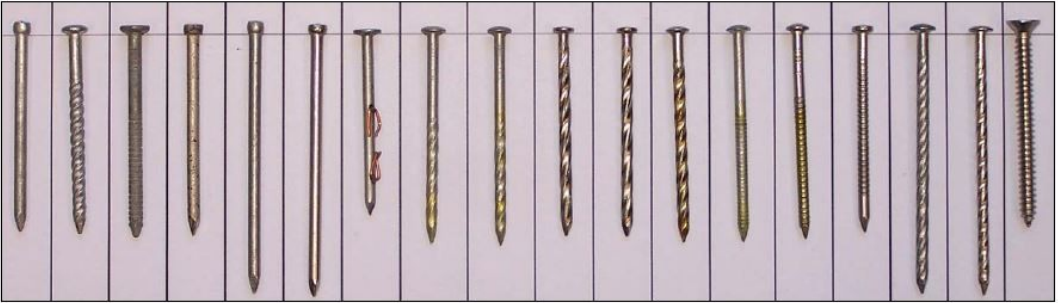
Part 3 of 2 - Nails

Two months ago I ran *Part One* on decking fasteners where guest author, Herb Kuhn, Managing Director of Simpson Strong-Tie Australia, spoke about the importance of understanding ductility when considering decking fasteners. [Here is the link to Part 1.](#) Herb had more to say in december about decking screws to steel so there was *Part Two*. [Here is the Link to Part 2.](#) I realised that whatever I said about using screws people will ignore it and still nail so here is some food for thought and that is why it is *Part Three* of two!



I designed a weather exposed ramp for a friend using LifePlus which was to be screwed to the joists. The builder was told to screw the decking, "Yes, Yes" and then when he found it was more expensive than nailing simply nailed the decking instead. So much so for a specification but he at least did hand nail it using a 50 mm domed head nail. While these nails work satisfactorily under a roof they are eventually forced out if they are weather exposed. Dome head also have the

disadvantage of preventing the deck being sanded at a later date.

	Hand Nail						Machine Nail											Screw
	Plain	Screw	Ring	Plain	Plain	Plain	Plain	Screw	Screw	Screw	Screw	Screw	Ring	Ring	Ring	Screw	Screw	Counter
Shank	Bullet	Dome	Flat	Bullet	Bullet	Bullet	Flat	Dome	Dome	Dome	Dome	Dome	Dome	Dome	Dome	Dome	Dome	sunk
Head type	HD-Gal	HD-Gal	HD-Gal	SS	HD-Gal	SS	HD-Gal	HD-Gal Ad	HD-Gal Ad	SS	SS	SS-Ad	HD-Gal Ad	SS-Ad	SS	HD-Gal	SS	SS
Nail material	50 x 2.8	50 x 2.8	50 x 2.8	50 x 2.8	65 x 2.8	65 x 2.8	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	50 x 2.5	65 x 2.5	65 x 2.5	8g x 50
Size	Hw	Sw	Sw	Hw	Sw	Sw	Hw	Hw	Sw	Hw	Sw	Hw	Sw	Sw	Sw	Sw	Sw	Hw
Timber Joist	1	2	3	21	4	22	5	7	20	8	11	9	10	13	14	15	16	19
Test																		
Shank dia (mm)	2.8	2.9	3.0	2.8	2.9	2.8	2.5	2.5	2.5	2.5	2.5	2.4	2.5	2.5	2.5	2.5	2.5	-
Thread dia (mm)	-	3.1	3.1	-	-	-	-	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.7	2.8	2.6	4.1
Length to head (mm)	48	48	49	48	63	63	43	50	50	49	49	51	50	50	48	63	64	47
Ave. withdrawal (kN)	2.6	1.9	1.6	1.8	1.1	1.0	2.0	3.0	1.2	3.3	1.6	2.0	1.6	1.8	1.7	1.6	0.9	10.8
Max (kN)	3.2	3.1	2.9	2.9	1.8	1.9	2.4	4.2	1.8	4.5	2.5	3.3	2.5	2.6	2.9	2.5	1.3	12.8
Min (kN)	1.8	1.0	0.7	0.7	0.5	0.4	1.2	1.8	0.7	2.4	1.1	1.0	0.5	1.1	0.7	0.6	0.6	8.2

Gun nails are another matter. The Forest and Wood Products Development Corporation funded a study into the effectiveness of different decking fasteners. [Here is the link.](#) The results are frightening as the summary of the findings above show. Two galvanised bullet head nails into a hardwood joist had an average withdrawal of 2.6 kN. Gun nails could be down to 0.9 kN!!! I had

a customer who absolutely insisted on gun nailing his deck. I found out the brand of the nail with the highest rating on this table and sold them to him. He did not thank me as the deck now creaks underfoot. Pneumatic nail guns may have added speed but at the expense of (according to many) quality. "A contractors selection of the appropriate fastening method remains a choice based not only on strength, but also on value and workmanship."^[1]

Compare the hold down of the best nails to an 8# screw at 10.8 kN and then consider that you will use a 10# on hardwood.

^[1] Sauter, David. *Landscape Construction*, 3rd Edition. (Delmar: Cenage Learning, 2011), 90.

[Natural Images E Newsletter Released](#)



My friend, Tony Neilson, a long standing identity in the timber industry publishing and conservation photo-journalist has just released a new E-Newsletter called *Natural Images*. It is intended for people with an interest in sustainability and the natural environment. The image above is from the first edition.

Birds – his favourite subject from nature – carry many of the site's messages: "For 100 million years they have been a great success story. Now, they are seriously threatened by the hand of man."

But there is much more to this site than bird images. So why not register now for the free monthly newsletter. The copy's good and the 'scenery' isn't too bad either. [Here is the link to register](#)

Continuing Professional Development Sessions

You know you have to do CPD so why not avail yourself of an expert in the timber industry who has written several books and given many presentations on the subject?

The full range of subjects I have available are:

Timber Preservation.

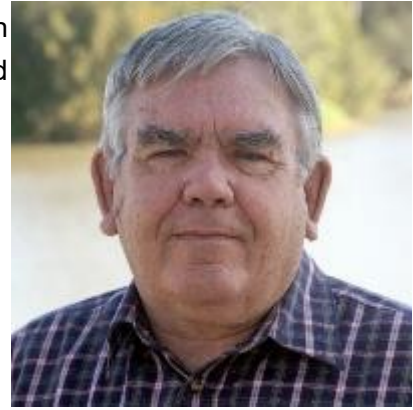
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