April 2014 Newsletter

Written by Ted Stubbersfield

Dear Reader

Timber Queensland Flooring and Decking Seminar

On April 1, the ABC aired a timely reminder on substandard decks, sadly it was no April Fool's Joke. Click here for the link. How serious is this problem? Archicentre have recently issued a press release saying that in their opinion there are probably 12,000 life threatening decks in the country, now that is not dodgy decks, but decks that have the potential to kill. Their press release 10 years ago gave the figure at "only" 8000, this is a 50% increase. Has there been a 50% increase in the number of decks over 10 years or has the incidence got worse. I put that question to Ian Agnew of Archicentre Brisbane. Hopefully we will have the answer for next month

On the same day as the ABC feature, Timber Queensland held a seminar in Brisbane on flooring and decking where about 250 people heard excellent presentations on how to design decks well. Here are links to two of the PowerPoint's

Colin McKenzie - Decks BCA Compliant and Fit for Purpose
Ralph Bailey - Designing Better Decks

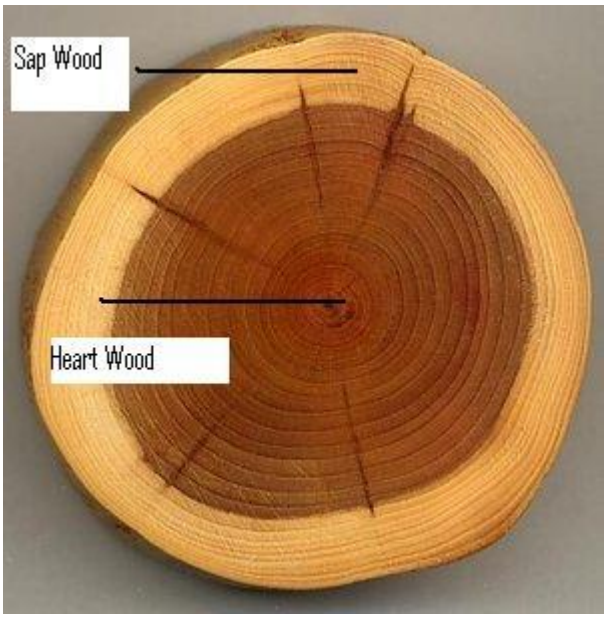
For more reading on deck collapses look at earlier newsletters

Deck Collapses - February 2010
Coroner's Report Released on Deck Fatality at Yeppoon – October 2012
Yet another Deck Collapse - March 2013

I was talking to one of the delegates about our LifePlus and Deckwood products and he commented "Now all I have to find is a client prepared to pay the extra". My response was that. "All you have to find is a client who won't sue you if goes wrong" To emphasise this point a presentation on litigation against builders was given by Craig Sawford, CBP Lawyers. It should have driven complacency from all attending but I am afraid I am pessimistic on such matters.

A Look at Wood Durability

This article has been contributed by Jack Norton who formerly headed up the timber preservation section of the DPI. Jack is well known in the Queensland Timber Industry and has been a friend of many years. When not masquerading as a mild mannered public servant he was known as Kaptain Preservation (dare you follow the link). Now in retirement he provides expertise on timber treatment processes and chemicals, advice on durability, development of specifications and standards, product quality assessments and training. His warning about using durability levels from overseas sources is extremely important. Jack can be contacted on 0418 989 398.



Once timber is put into service, it is exposed to attack by a insects and decay (or rot). These biological hazards can be controlled by design and detailing, the use of naturally durable wood or preservative treatment. In this article, we will look at natural wood durability and how knowledge of the durability of a species influences how the timber might be used.

All commonly used species of timber have two major zones; sapwood and heartwood. The sapwood is the outer band that carries water and nutrients up and down the stem.

In the heartwood, the fluid pathways that once carried water and nutrients are filled with resins, extractives, waxes and other materials and it is these resins and extractives etc that give a species its resistance to attack by insects and decay. (Ted Here - see the images in the July 2013 newsletter)

Intuitively, most people will know that if hoop pine and ironbark are put in the ground, the hoop pine will decay (or rot) before the ironbark. The ironbark is said to be more durable than hoop pine.

Australian Standard AS5604 **Timber – Natural durability ratings** defines 'natural durability' as "the inherent resistance of a timber species to decay or to insect or marine borer attack". This standard classifies 360 species of timber according to the following classification (Table 1)

Table 1 Natural durability classification in Australia		
Class	Probable in-ground life expectancy (years)	Probable above-ground life expectancy (years)
1	More than 25	More than 40
2	15 to 25	15 to 40
3	5 to 15	7 to 15
4	0 to 5	0 to 7

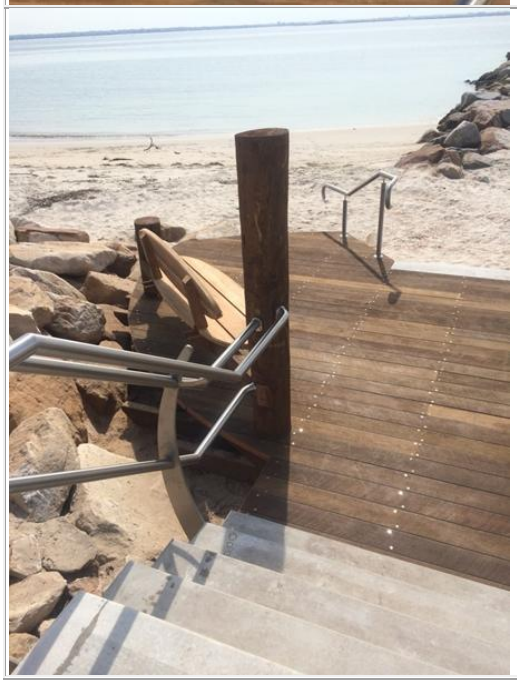
It is important to note that natural durability ratings apply to material from heartwood only. The sapwood of all species of timber is deemed to be non-durable and needs to be impregnated with wood preservative chemicals to increase its durability. Heartwood can not be effectively protected/impregnated by wood preservative chemicals and so you can not change its natural durability.

Another point worth noting is that the classifications shown in Table 1 are decay related classifications. As far as durability against insects and termites are concerned, a species is either resistant or not resistant. This information is also presented in AS5604. Engineers and building specifiers use these natural durability ratings when designing structures.

It is hard to compare Australian durability ratings with those used by other countries. Examination of the information in Table 2 shows that durable timbers (class 1 and class 2) are expected to perform a lot longer in Australia than in other countries. As a result, care should be used in applying durability classifications from over seas to construction specifications in Australia.

Class	1	2	3	4	5
	Probable life in years				
Aus A'Gnd	> 40	15 to 40	7 to 15	0 to 7	
Aus I'Gnd	> 25	15 to 25	5 to 15	0 to 5	
EU	> 5	3 to 5	2 to 3	1.2 to 2	< 1.2
China	> 9	6 to 8	2 to 5	< 2	
Japan	> 9	7 to 8.5	5 to 6.5	3 to 4.5	< 2.5
Malaysia	> 10	5 to 10	2 to 5	< 2	
Bangladesh	> 3	2 to 3	1 to 2	< 1	
Tanzania	> 10	5 to 10	2 to 5	1 to 2	< 1
Brazil	> 8	5 to 8	2 to 5	< 2	
USA	????????				

A Nice Project at Kurnell



Credits

Asset Owner: Sutherland Shire Council
Design: Sutherland Shire Council
Construction: Cooper Constructions
Timber: Deckwood and Joistwood

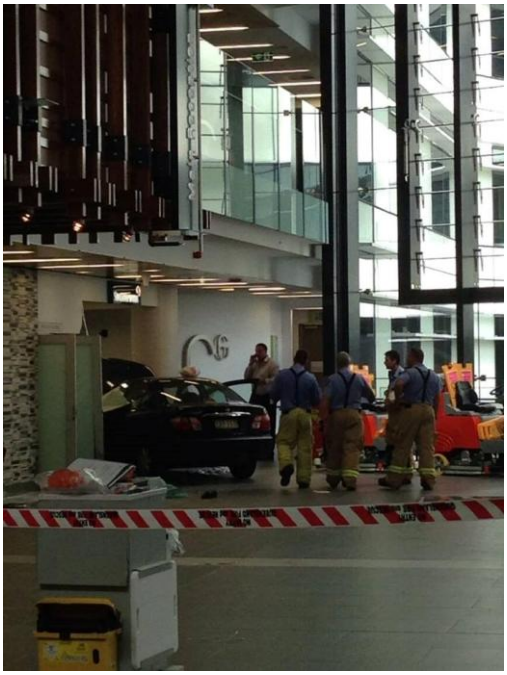
A project does not have to be large to be pleasing. This small deck at Silver Beach, Kurnell is a good example. It was built on the foreshore at Kurnell using our Deckwood and Joistwood. One of the unusual aspects to this is that the client required that the timber be inspected for grade by an independent grader. There should be more of this. More to the point, the council had the wisdom to ensure that it was being grading to an appropriate standard. Of course, we can help with both determining what that grade should be and with grading.

For more details on this project contact Blake Spurrier Cooper Construction Services, Unit A4, 13-15 Forrester Street, Kingsgrove, NSW 2208. t: 02 9502 2586 f: 02 9502 2686 m 0422 408 581 M: 0422 408 581

To reinforce the importance of grading see

Identify and Assess that defect May 2012
Case History showing Unsuitable Decking Sept 2013

Bollards Need to be Fit for Purpose



The ABC news on the 7th April also showed footage of an accident where a car crashed through a bollard into the foyer of a new public building. Several people were injured. There is a perception that if you put a point on a piece of timber it was a bollard but as my *Guide to Bollards, Traffic Control and Fencing* establishes that different applications need different products. In the video below you can see a policeman carrying away what was an attractive but hollow bollard that has sheered off during the accident.

http://www.abc.net.au/news/2014-04-07/several-injured-after-car-crashes-into-gold-coast-hospital/5372194

This video shows what is possible in a bollard to stop ram raids.
https://www.youtube.com/watch?v=6FeJCIX-Sjs

Bollards are not as simple as you may think. Talk to us, we will help you come up with a bollard that is buildable, durable and fit for purpose.

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:

Infrastrucxion Pty Ltd

E-Mail: Chris@Infrastrucxion.com
Web:www.outdoorstructures.com.au

Phone: (07) 5462 4255
Fax (07) 5462 4077
Old College Road Gatton, Australia
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