

OUTDOOR STRUCTURES

Outlasts and outperforms

October 2014 Newsletter

Written by Ted Stubbersfield

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Dear Reader

[Dance Floors and Decks](#)



Cloudland ballroom c.1950 image courtesy of State Library of Queensland



Dressed copy of my decking



Slip resistance test

I know I am showing my age but, I can remember a time when women danced with men and you actually held each other. You actually moved around a dance floor instead of standing in one place. I never got to Cloudland but I did my time at country dance halls and loved the gypsy tap. The most popular halls were the ones with the fastest floors, always improved by the liberal application of Pops (sawdust soaked in kerosene and linseed oil and then dried). "Moved" is not the right word, with leather soles on the bare boards you would glide above the surface. Litigation following injuries on "sped up" floors saw many fine floors coated with polyurethane.

How do you make a good dance floor? You start with a log of a species with natural oils such as spotted gum or tallow wood or crows ash and then cut over thickness boards grading them to ensure they were of the very best quality. You would carefully dry the boards and then machine them with so they were thicker than normal and ensuring the tongue was offset low to enable you to sand the floor many times over its life.

How do you make a verandah board? It is the same as making a dance floor except you don't use crows ash as it is too expensive. The boards are standard size and the edges are square. The top is exactly the same as cloudland ballroom except for the gaps. Now you can get away with that under a roof where it stays dry. Somewhere along the line someone thought it was a good idea to take a dance floor, move it outside into the weather, speed it up with water and then allow frail boned grandmothers free access to it. It was grossly irresponsible. A designer could be expected not to know this but not a sawmiller. All of us, when we produced flooring or decking in spotted gum, would strap it tight with steel bands and then tie it on the truck with ropes to deliver it. You would pray that there weren't any steep hills as the boards would slip backwards out of the packs. (webbing straps put an end to that). A producer did not have to know about disability codes and slip resistance or do tests with a pendulum tester, if he stopped to think his experience told him it was dangerous. I did make the connection one day and stopped supplying dressed face boards in the weather opting only for a natural sawn finish.

We recently looked at a job where my whole decking system had been adopted even down to copying the profile of Deckwood but they made one change, they produced the decking with a dressed face. Deckwood (and LifePlus) is not just a shape, though that is part of it, neither is Deckwood (and LifePlus) a comprehensive system of building weather exposed decks. An important part of Deckwood (and LifePlus) is the integrity to take you by the hand and say "Don't do this". One small change is enough to keep up the solicitors payments on the BMW for a long time. Please talk to us if you want to change something and we can talk you through the consequences.

How Not to do a Handrail Post



Not one thing about this post is right

This image shows why in the end I gave up and left the battle to younger men like Nigel Shaw, CEO of Outdoor Structures Australia. Consider the six failures in this item.

1. Timber Quality. The post has a large loose gum vein that has opened up along the length. This is a piece that should have been specified as exposed grade and in that grade not one millimetre of loose gum vein is permitted. In an F17 structural grade the permitted amount is 1/6th of the length. This post would have started as a 1.5m so even then it should only be a maximum of 250 mm long. I imagine I, and other reputable suppliers, priced this job and went to the builder with a price of say \$30 per metre for in grade material. The builder would have taken one look and said, "You are too dear, I can purchase this for \$25 per m". It is a good deal for the miller as this piece should have gone down the chipper. Inspections for conformance to grade should be done more often. (Incidentally I can do this now I am a free agent).

2. Builder's care. Had the builder simply taken this piece and turned it 180 degrees and placed the split outwards, the visual effect would have been far different. He may not have understood what he was looking at, i.e. what an open gum vein is and it would not have looked like this when installed, but pride in what you are building tells you that it will look a lot better if you place it away from view. It got so bad that I had to start putting labels on reversible products stating what side had to be placed away from view as I could not trust people to look at two sides.

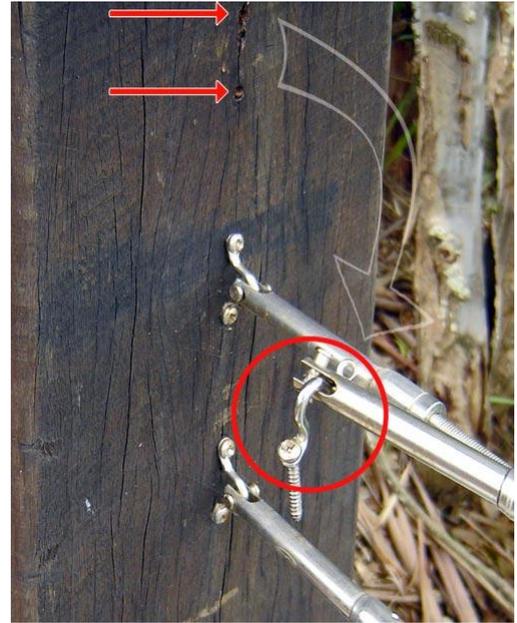
3. Top Fixing. The screws fixing the rail to the post are just driven through the rail into the end grain of the post. Bad practice will always beat you. Moisture works its way down the screw holes and it just has to deteriorate. The only way to fasten a rail sitting on top of a post is with brackets from underneath. The image on the right is from a boardwalk where the long run of handrail is fastened the way I recommend. Then one day someone added an approach handrail and just fastened it from the top. It did not work. I covered good detailing on handrails in the [July 2014 newsletter](#).



4. Handrail is flat. By not allowing the top surface to shed moisture the timber deteriorates

far more quickly. Either sloping the rail or using one of our moisture shedding profiles would significantly improve the life of the rail without increasing the cost. Again this is covered in the July 2014 newsletter but there is a better picture in the [August edition](#).

5. Termination of wires. Frequently we see on the drawings some lines with an arrow saying "stainless wire rope" perhaps a size and a spacing but generally a specification that you can drive a bus through. This image is a good example of why firm direction has to be given. We built a bridge for a client to their drawings which terminated in eyed coachscrews as illustrated above. The post split and we were asked to fix it. We thought it was a design fault but we held our peace and fixed it. We later were asked to build another bridge with the same detail and so we asked for the detail to be changed. They would not and the post again split. We were asked again to fix it but this time refused to do it for free. Of course we never got another job from that company.



On my website I have an AutoCAD block which you can save to your computer and just drop in your drawings where everything is detailed. [Click here for the link](#)

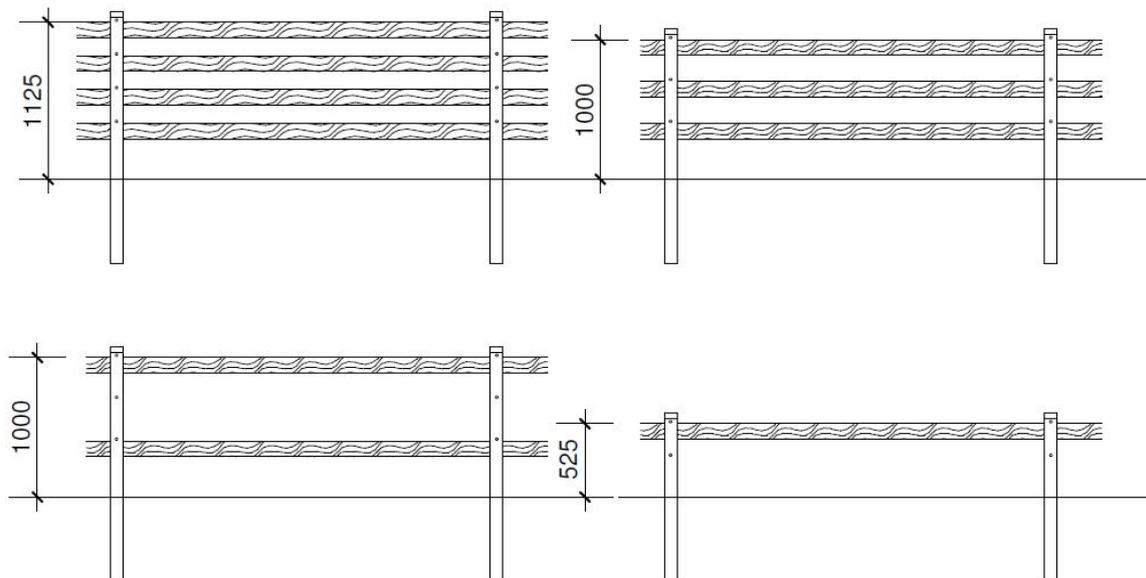
6. Film Forming Finish. You can see that moisture is getting under the film at the join. This is going to promote degrade at the end grain, check out the images in the [May 2014 newsletter](#). Also when the film breaks down, and it does not take long in our high UV, you have to sand the coating off before you can apply a new coat. We recommend Tanacoat, a penetrating oil with water repellents and UV blockers.

There is not one thing here that is difficult and could not have been fixed on paper - including confirmation grading as part of the specification. I would have also added the use of a volute washer so the handrail would not have needed retightening. Talk to us next time you are designing in timber. We can help you turn the ordinary into the extraordinary with our knowledge of detailing [and specialised products](#). There is a book below on commercial barriers.

New Barrier Fence Here



The dimensions of the Australian version of the fence built by our friends at [Kurata Co., Ltd](#) in Japan for the Nihon Daira Zoo near Shizuoka have been settled upon. They are summarised below in the drawing below. If you have any interest contact me or Keith Smith.



Be Courageous Spending your Clients Money

Over the years that we were supplying spotted gum to Japan I never ceased to be amazed at the creativity of the Japanese architects and the fearless attitude they took to spending their clients money. As I am approaching old age I am hit with the wisdom of the saying that old age is not for the fainthearted. To the young Architects and Landscape Architects out there reading this, don't wait till you get to be my age to be courageous.

Spend your client's money courageously because if you get results like these below he/she will thank you. We will thank you if you spend it with us!!



While it seems pretty obvious that the Japanese designers did not give (at time) much thought about code compliance, or at least our codes, the look is good.

[OSA Decking Chosen over Plastic for Cooktown Deck](#)



Replacement Deck Sovereign Hotel, Cooktown

Credits

Client – Sovereign Resort Developments Pty Ltd
Design – MMP Architects, Cairns
Construction – MTC builders, Cooktown
Lifepus Decking – Outdoor Structures Australia

Long lasting decks are very hard to build in the tropics and it was not surprising that the original deck which was only 15 years old and built from treated pine had to be replaced. While the timber was still generally intact it had become very distorted (twisted and bent) and was looking very 'tired'. During the construction of a replacement deck the opportunity was taken to make the deck larger and of a different shape.

The architect, Peter Pierce of MMP Architects initially looked at plastic decking but rejected it due to its lack of strength, poor appearance compared to timber, serious question marks over durability, and cost etc. Peter said of the OSA deck that "It's looking great. The contractor did a fantastic job, particularly in regard to compliance with your recommendations for fixing etc.". Most importantly the client is very happy with the result.

Contact [Peter Pierce](#) of MMP Architects for more information about this project and the successful use of OSA timber decking on other projects in the tropics.

Timber Induction Course

My first induction course is coming fairly soon. I have had some useful feedback about possible content for them. If you have any thoughts on this and how it might suit your organisation please contact me. Topics could include but not be limited to:

- Timber Preservation.
- Hardwood Grading.
- Timber Decks – Designing for Durability,
- Utilising Small Diameter Hardwood.
- The Seven Deadly Sins of Timber Design.

[Blog being written for Timber+DESIGN Magazine](#)

My eight blog written for Timber+DESIGN web magazine is on joist width on external structures. . Timber+DESIGN is a very useful magazine for those interested in timber that has been used imaginatively.

[Click here for a link to the website of Timber+DESIGN magazine.](#)

[Blog on surface finish of decking](#)

[Blog on whether decking should be a product in its own right](#)

[Blog on whether plastic decking all its cracked up to be](#)

[Blog on H4 and H5 treatment](#)

[Blog on whether to use stainless or galvanised fasteners.](#)

[Blog on using the correct decking fastener.](#)

[Blog on timber finishes on external timber](#)

To be on the mailing list, contact Kay Phillips [through this link](#).

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

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