Ted's News May 2022

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All My Books Are Now Published in Australia

These newsletters only touch on matters dealt with in detail in my timber guides. Unfortunately, due to a glitch with Amazon, not all of them were printed in Australia. That has now been rectified and Amazon prime members should now receive a hard copy within a week. If you are a design professional these guides really should be in your library. Here is the link. Of course, PDFs can still be purchased from me.

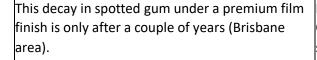
What Decking Finish Should I Use Not a Paid Advertisement



I cannot stress how important using an appropriate decking finish is. Castrol said it very well, "Oils aint oils." I am aware of two large sites in north Queensland where the life of the decking has been severely shortened by the use of film finishes. The decision was made to replace one deck after 13 years where it should have reached 25 or even 30 with the correct TLC and the other is showing distress after probably 19 years when a life of 30 was hoped for. Both were underperforming due

to, in my opinion, film-forming finishes. The shorter life was from an oil-based product and the longer but still unacceptable life was water-based. They both used premium products







Moisture trapped under a film finish deck in north Queensland caused accelerated decay around the screw holes.

When talking to another timber consultant about these decks. The comment was, "I am not surprised they are having trouble with the decking; I was up there a year ago and they had wrapped it in glad wrap." This was referring to the build-up of the film-forming finish. He went on to say that "It was bubbling and had moisture under it." Timber decking needs to breathe and shed its moisture quickly. This article will lead you through my own journey of discovery and leave you with at least the start of a decision-making matrix for you to make the best decision for your client.



Freshly constructed deck with CN Oil

I regularly supplied my commercial decking precoated all round with CN Oil (CN means copper naphthenate). It is a very robust product and, to my knowledge, is the only paint-on finish that actually is approved as a preservative. Its weakness is how to apply a second coat in an environmentally sensitive area and also it is not a finish I would use on a domestic deck. One of my good customers purchased some CN oil (not from me, mercifully) and sprayed it over an existing boardwalk and it knocked back the surrounding mangroves. All hell broke loose but, fortunately for the mangroves, they recovered. Sensing an opportunity, I asked Steven Koch of what was then Koppers Arch if his company would develop a decking oil for me that can used as the subsequent coating in situations that were over water and be a good domestic deck finish. His company manufactured the Tanalised range of timber preservatives I used, as well as CN oil. Steven had previously worked as a surface coatings research chemist and had been on top of the problem so he was the man for the hour and quickly educated me on what was necessary for successful coatings.

Lanolin was "on trend" and we first looked at that but, to keep mould at bay, it meant that too many undesirable additives had to be included and this defeated the object of the exercise. This type of product may have the wool grease component as low as 10% and the solvents as high as 60% so it is hard to see it as an environmentally friendly option. Lanolin worked well in a dry shearing shed but out in the weather is an entirely different matter. Linseed oil-based products were not even considered as their propensity to promote mould growth is the stuff of legend. I was once involved in a consultancy where the replacement cost was over \$100K due to mould growth! A product with high copper content that masqueraded as a "preservative" was also not seen as desirable as the copper can build up in the timber and cause it to darken.



Remember to specify oiled on all four sides prior to laying

Steven then developed Tanacoat for us which is an effective water repellent and UV blocker. The agents that do this are expensive and some decking oils have little or even none of one or the other. Tanacoat went through development. First it had the maximum water repellency that would

still be capable of being painted over. Then it quickly went to the maximum amount that could be carried in suspension but can't be painted over and now there is a low odour version. It worked very well but was not as robust as CN Oil but was the equal (in our opinion) to anything else on the market.

The purpose of this article is not to dictate that you must purchase Tanacoat but I would say that you need to purchase its equal for recoating. How you determine an equal is not easy. Decking finishes are not part of the Australian Paint Approval Scheme. I really need to give you a decision matrix to help you but it is beyond me, here are a few thoughts:

Product is film finish: I would reject

Product (other than CN oil/emulsion) claims to be a preservative: Require APVMA evidence **Products is seed-based:** I would not use it

Beyond that, I cannot help you. Needs an expert but these three points alone would have avoided some costly issues.

Index To Past Issues

If you are a new reader or just want to find details on a particular topic such as 150x150 mm posts, here is a link to an index to articles back to 2015.

Full-Day Courses



Don't embark on any major footbridge or coastal deck project before you do my full-day courses. These are serious courses that are unmatched in the value you will extract from them by delivering expensive infrastructure that ages gracefully and with little maintenance. They both start by going through a design checklist and explaining, line by line, why you must attend to that point. They then look at a number of case studies, showing good and bad practice.

Click here for the coastal decks brochure

Call me to discuss your training needs. These courses, which are eligible for CPD points, will give you an incredible understanding of good timber use. Call 0414 770 261 or email me.

Should Be Standing Room Only For This CPD



After a long hiatus due to Covid restrictions, CPD's are in full swing. You would think there would have been standing room only at this session. The Seven Deadly Sins with Practical Demonstration, but I guess they read the fine print. II is the sins of external timber design. Nowhere near as interesting but a lot more useful. I have added a second presentation that examines a "for construction" drawing with five of the sins. What has Campbell Newman and Laurence of Arabia got to do with timber? You may well ask and if you have the session you will know.

Some are still not aware that Wilson Timbers/Outdoor Structures will have me come to your office and deliver one or two of my CPD sessions for free? We can even deliver them remotely on Teams if you are further away. These are serious training times with real learning outcomes. The only condition is that, with travel, we can do it in a day from Gatton in Queensland. Here are the nine courses available:

Topic 1: Timber Preservation
Topic 2: Hardwood Grading

Topic 3: Timber Decks - Designing for Durability Topic 4: Utilising Small Diameter Hardwood

Topic 5: The Seven Deadly Sins of Timber Design

Topic 6: Timber Joints

Topic 7: Architectural Timber Battens

Topic 8: Timber 101 (Optimally Topics 8 & 9 to be presented together)

Topic 9: Boardwalk Design (Optimally Topics 8 & 9 to be presented together)

Topic 10: Timber handrail design

<u>To learn more about these courses visit my website</u>. <u>Contact Stuart Madill by email to arrange a time</u> or call his mobile 0403 385 707. <u>It is also available on eClassroom</u>.

Need a Timber Consultant or Expert Witness?

I have over 45 years of experience in the industry and can assist you with many of your timber needs.

Inspection – I can assess timber products on their performance, fitness for purpose or cause of failure. I also examine whether best practice was used in design and construction. I have recently completed inspections on boardwalks, bollards, support beams and external timber furniture.

Grading - Quite literally, I have written the book on the subject. Recent experience has shown that up to 30% of timber supplied may not be to grade.

Design - I can provide detailed technical drawings and advice. I can also review already prepared drawings.

Reports - I have authored many books on timber and can prepare a report providing recommendations and practical instructions on to how to rectify issues.

Trainer and Presenter – I can provide tailored training to meet your CPD needs and also have experience at lecturing to universities and presenting at conferences.

Please note as I am now employed as a Senior Timber Consultant with the firm BCRC all large and complex consultancies and requirements for an expert witness will be handled in conjunction with them. Existing consulting arrangements remain unchanged and I am also available to assist on small projects. For more information see www.bcrc.com.au or <a href="https://doi.org/download

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