

Ted's News

June 2021

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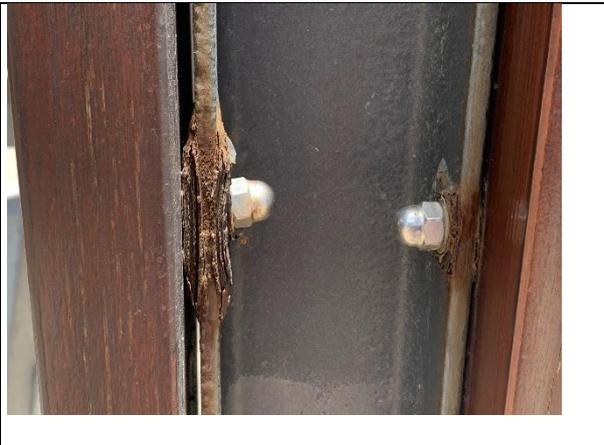
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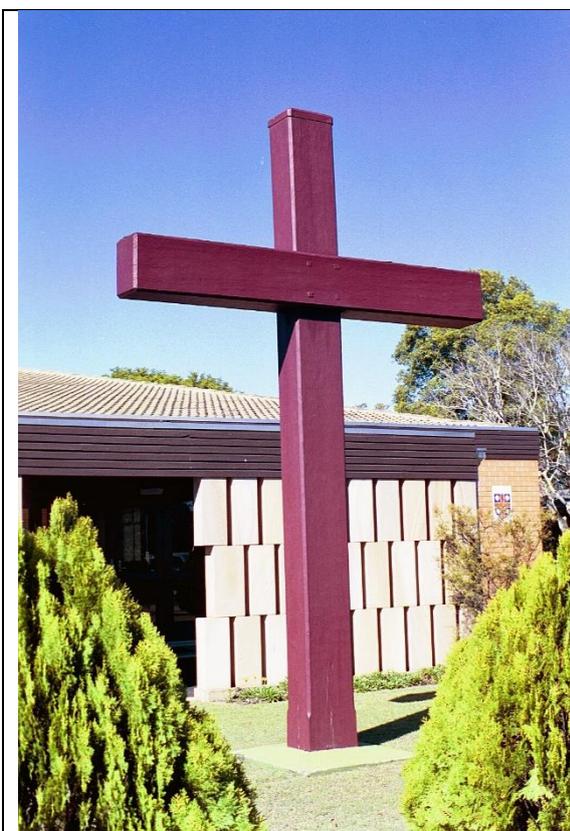
In April I asked my readers what was going on and how should this application be detailed at this site at the Gold Coast less than 200 metres from breaking ocean where painted steel is corroding badly around the stainless bolts. We are dealing with about as difficult an application as you can experience. Thank you to all who replied and I will summarise the opinions. Now I am assuming that the steel is galvanised and the paint was applied over it and possibly done on site. I may be doing everyone involved a grave disservice but it will suffice for the argument. Clearly we have galvanic action which is compounded by the salty air and spray and the galvanising may have exacerbated matters. The dissimilar metals are not insulated from each other so the steel column is sacrificing itself to protect the stainless steel fixing. Tightening the bolt could have damaged the paintwork and any insulation it provided as also could running a drill through a painted hole. (We always marked, removed, drilled then installed).



The bolt needs to be stainless as was used, so my suggestion for similar project would be to rely on a factory painted finish, not on galvanising. One such product would be [PPG's PSX700 with a zinc rich primer](#). (I used this product very successfully on [my truss bridges](#), ask Matt Hollywood of PPG for more info 0477 730 595) This would then be used in conjunction with a shouldered or "top hat" washer made from nylon for very positive insulation. I had no problem finding suppliers on the net and this image is from [Supreme Fasteners and Components](#).

I will conclude with some words of wisdom from Paul Callum, Director, Structures at Bligh Tanner, "It can be difficult to catch all these situations e.g. gutters / downpipes etc. and are more prevalent in coastal as everyone is aware that stainless should be used where exposed but of course there are always these little spots that can catch you out."

Lay Your Design Sins at the Foot of the Cross (Revisited)



The Cross donated by our family in 1967 to St Albans Church, Gatton



View of the cross section 100 above groundline after removing for safety

Our family donated the cross at St. Albans Anglican Church in Gatton when the present building was constructed in 1967. It was made from 300x200 ironbark and set in concrete. which we all did back then. The Architect very wisely had a good slope on the concrete directing moisture away from the base. But eventually time took its course and decay set in - read about it here [May 2018 newsletter](#) Subsequent probing and drilling at ground line showed the timber to be very soft. Wisely the cross was removed with a view to reinstating in a metal base. The above image on the right shows how, just 100 mm above the groundline, the timber is sound and would have no trouble being in position for 100 years. So, half glass full says 50 years' service is great, half empty says it could have gone 100 years. There is a good discussion on how to engage with the ground in my guide [Timber in Playgrounds](#) and is covered in my CPD course, *Timber Joints*. But now, I give more emphasis on not installing in the ground for something that is critical, and especially if it is free standing.

It is worthwhile comparing this success, and I think you would have to call it a success, to a failure a short distance away where bollards are decaying at ground line because of poor design choices. [June 2018 newsletter](#)

Staying One Jump Ahead of the idiots



Tree of Knowledge - Barcaldine



Timber Roller Coaster - Southport

There is a very remarkable timber structure in Barcaldine commemorating the "Tree of Knowledge" where it is said the Australian Labour Party had its roots. There are over 1000 pieces of 125x125 hardwood hanging from the top. [You can read about it in my guide, Architectural Timber Battens](#). If one fell, it doesn't bear thinking about. One day someone found a nut and washer on the concrete. The memorial was closed down and for three days a friend examined every piece only to come to the conclusion that the village idiot (or an equally stupid tourist) had thrown them on the ground for some fun. Now that timber roller coaster at SeaWorld on the gold coast has quite a few nuts, many times what was used at Barcaldine. What would you do if you found one or two on the ground? What a job trying to find which bolt it came from or was it only just a disgruntled employee knowing how to inflict maximum pain for minimum effort.

If you ever designing or building a large timber structure, it is worth considering how do you keep one jump ahead of the idiots. In a case like this I would be ensuring that there was some way of clearly identifying the nut used during construction from one purchased at the local bolt and nut store. (And of course, they may have done this.) It could save a lot of grief.

[Subscribe to a Very Useful Durability Newsletter](#)

I know that most of my readers professional lives do not revolve around timber so the new durability newsletter from [BCRC](#) which includes concrete and steel will be very useful to you. While I have a number of longstanding clients here in Queensland, all my expert witness reports and out of state work is done through the durability specialists BCRC. Here are link to the second edition. The subjects are:

- [An Approach To Rehabilitation Of Magnesite Affected Structures](#) by **Marton Marosszeky** - Director, BCRC
- [Lifecycle Costing for Proposed Defence Marine Facility](#) by **Faiz Khan** – VIC Manager, BCRC
- [Timber Grading in Heritage Structures](#) by **myself**

To subscribe to this useful newsletter, [click here to send through your contact details](#)

[Index of Newsletter Articles](#)

Are you aware that there is an index for the newsletters from 2015 onward? [Here is the link.](#)

The Text of the Latest Guide is Finalised (Almost)

Ralph Bailey and I finalised the text of *Timber in Playgrounds* and I put it up on Amazon for anyone who wants hard copies. Then one council with hundreds of playgrounds were so impressed that they offered to have their inspectors give further suggestions. Of course, we are delighted. The one thing we want is for this guide to be useful. After visiting one particularly poor timber playground, Ralph reminded me, this book is about saving lives, not making money.



Until those absolutely final suggestions are through, I won't send updated copies through to people who have already purchased a pre-release copy. [Here is a case history of a playground that is done very well.](#)

[Order your PDF copy of the guide here.](#) The document can be updated at no extra cost when finally finalised.

You can [order a paperback version](#) from any of Amazon's international stores but you will need to go to the US or UK store to [purchase the hardcover edition](#).

Need a Timber Consultant or Expert Witness?

I have over 40 years' 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 how to rectify issues.

Please note as I am now employed 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

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