

December 2015 Newsletter

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Same Plans - Two Different Products

	
Custom post made by the author.	Lower price substitute used in next stage.

Our consulting engineer once told me "There is a lot less information in the plans that I prepare for you compared to the ones I give others". He explained how over the years he understood our fabrication processes so it would have all been superfluous. When you do not have this control and confidence, which you can't have when landscaping goes to public tender, you have to detail your plans so there is no "wriggle room". If the designer has a high expectation he/she should provide more than basic dimensions but provide fabrication details as needed to achieve the finish envisaged. A well detailed commercial product does not happen by accident with the lowest price tenderer! The two figures above illustrate how two very different aesthetics and qualities can be achieved from the one set of plans.

To assist you in assessing the extra information needed consider the differences between these custom bollards are:

- Sleeve nuts versus countersunk nuts
- Timber processed then treated versus treated then processed
- Tanalith E/ACQ versus CCA

- Grooved, assembled and then the tops cut versus all theoretical measurements
- One set in no fines concrete (not visible from image) and the other not, and
- Dimensions sanded off versus dimensions left on timber

Expert Witness

I am dipping my toe in the very muddy field of expert witness work. If you think I can be of assistance please contact me on 0414 770 261. I can write a very reasonable report

What does a London Bus have in Common with my Bridges?



I don't know how they did it but it seemed to always happen. I would queue at a bus stop in London for what seemed an eternity for a Number 19 bus (not for Soho but the British Museum) and then, all of a sudden, four would turn up in convoy. It is almost as if the old Routemaster had an inbuilt herd instinct.

We had a London bus experience this month when we shipped out three of the Warren truss bridges that were developed for me (see below). These three bridges were all sold to developers and were specified by wise engineers. We should really be doing it every month but everything is working against it with what I see as often very poor tender procedures from many local governments. When I see a council tender request now I can almost certainly say it is pointless quoting. At most what you usually receive is a satellite image with a rectangle drawn on it showing the length and position of the bridge. There usually is no cross section of the crossing, definitely no soil test, invariably no hydraulic information. Every tenderer is expected to obtain this before submitting the price. Every bit of responsibility is moved to the supplier and the cost blown out in the process through making assumptions in the supplier's favour. When there is an issue, trying to find 30 year old documentation, from companies that are probably no longer in business, is next to impossible so the responsibility comes back fully on the council in the end.

The most important thing about bridges is to purchase well and that starts with a very tight specification. In my book, Timber Footbridges, I have a chapter on the tender process including a specification and checklist. If you can't afford \$50 for the book I will send you that chapter for free. If you have seen what I have over the years you would understand my concerns.



The bridge where the sign to your left was installed [and can be seen at this link](#) had the best prepared tender documentation I had ever seen. The plans were not checked prior to receiving the bridge. You have to follow through which is why I developed the checklist.

This article is already too long. If you want to know why you should be specifying one of my truss bridges [see this link to the June 2014 newsletter](#) or call me on 0414 770 261. Take special note of the paint we use. It is absolutely brilliant. The decking in the bridge below is of course



25m truss at retirement village - Gold Coast - Installed Dec 2015



18 m truss bikeway installed at Landsborough in Dec 2015



20 m truss installed at Cooroy Dec 2015 - an OSA boardwalk will attach to both ends

Decay in Treated Pine





Recently at a CPD session I was asked about the durability of treated pine. The questioner told a story of a large job where treated pine was specified and used in accordance with the manufacturer's recommendations. The timber decayed and the rectification cost was staggering.

Treating pine is no guarantee of success, just as it isn't with hardwood. Consider the two packs of sleepers above. You can easily see that only a small part of the timber is actually treated. The heart of pine is just as untreatable as the heart of hardwood. The outside of the two packs is coloured green but not the bulk of the inside. It is still durability class 4 material being used where you need a class 1 and simply has to fail. The maximum amount of untreated heartwood should not exceed 20% but in these cases above it is probably 80%. This is why treated pine can decay.

If I was purchasing significant amounts of pine I would require the timber to be incised to a depth of 10 mm and treated to H4. The incising process allows the chemicals to penetrate the heartwood and the extra chemical cost is not significant.

Writers Block - it is real



I am still making hard weather of the fencing book. The book includes specifications so you avoid problems like the one above. Do you have any insights to share with me?