

February 2015 Newsletter

Written by Ted Stubbersfield

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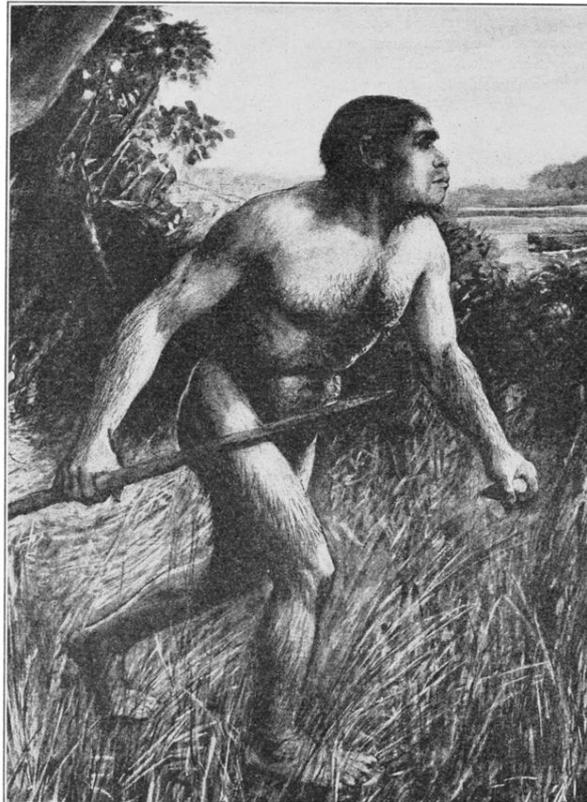
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Dear Reader

[Missing Link Found in Gatton](#)

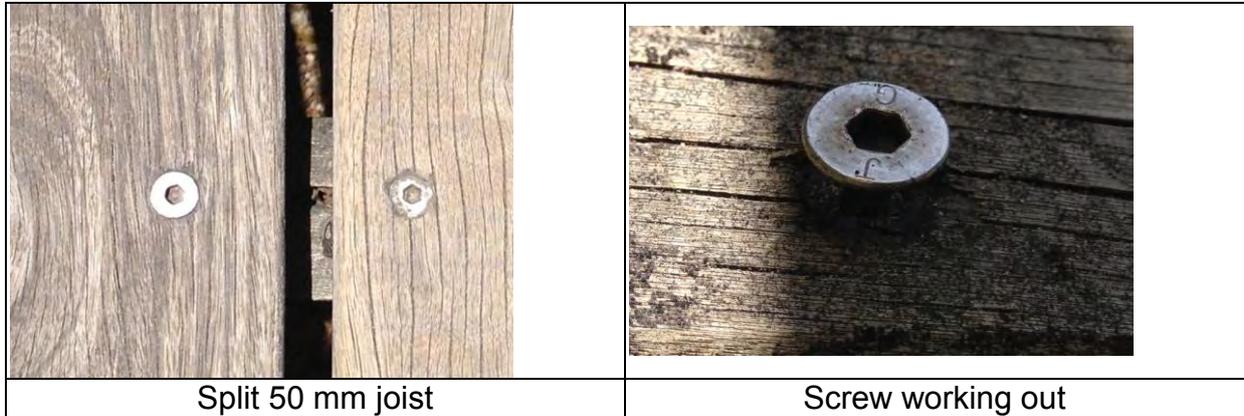


Yes, the missing link has been found in Gatton. Nothing as dramatic as as the find of the half ape, half human ancestor (Eoanthropus dawsoni) in Piltdown England in 1912, but the missing link to a report on thermally modified wood. [Here is the link now.](#) The Piltdown man was a paleoanthropological hoax which left the experts with very red faces. The lesson, don't be gullible and check your facts carefully. Wanting it to be so does not make it so. Missed my comments from January on thermally modified wood - [click here.](#)

3D Printing Explained in 60 Seconds

As many readers know I am excited about the potential for 3D printing. Dr Jennifer Loy has sent me a link to her 60 second introduction to 3D printing to share with you. [Here is the link](#) It is going to be an everyday part of your profession at least for my younger readers. [Click here for a back issue dealing with 3D printing showing bollard tops.](#) [This link has advice from Dr Jennifer on how to get started on 3d printing.](#) Her contact details are in the back issues.

50 mm Joists - A Reminder



Following a recent consultancy involving a structure with 14# screws and 50 mm joists it is prudent to raise the subject of narrow joists again. My guides are very clear - If you are face fixing Deckwood it goes on a 75 mm joist, the screws are in a staggered alignment and fully predrilled. No ifs buts or maybes. Still I see people trying to re-invent the wheel and substitute 50 mm with a case just last month. If 50 mm was suitable we would have said so. It not that the narrower joist is not strong enough it is just that they do not work. The screws are in a straight line and so split the joist.

In the left hand images above taken at a boardwalk that is about 11 years old you can see how badly split the joist is. You will never fit another deck on it as internal decay will have started. The right hand image shows a screw in the same deck that is coming out (not clear - granted but trust me). The boardwalk has to be regularly inspected for these raised screws which are replaced with longer screws to avoid trip hazards. The cost of a trip and fall insurance claim causes the expense of an upgrade to a 75 mm joist to pale into insignificance. But why lay out your joists at 450 mm like a domestic deck when the decking will normally span at least 600 mm? Use less joists with a wider spacing and the impact at construction is not significant. Alternately, use 50 mm and fasten from underneath (which is probably better).

Flinders Range Increased and Improved



[Last months newsletter showed the Flinders seat](#) both as stand alone or in conjunction with our Continuum shelter. We have tweaked the design a little since to make them even more comfortable (no, they were not uncomfortable before) and added a stand alone seat without backrest. If you go to the [designers tools section of our website](#) you will find images (not updated yet but they are very close to the current design) updated pdf and updated dwg file.

Timber Induction Course eligible for CPD Points

The guidelines for Engineers Australia and the Board of Architects Queensland allow me to award CPD points for the induction course or individual presentations. The same goes for landscape architects. These are available to deliver at your office or university. Ring me for a quote on 0414 770261

Timber Preservation.
Hardwood Grading.
Timber Decks – Designing for Durability,
Utilising Small Diameter Hardwood.
The Seven Deadly Sins of Timber Design.
and a new one Joints.

Nigel's First Boardwalk and it's a Beauty



Site address, Pioneer Park Harley St at Shailer Park

Asset Owner: Logan City Council
Landscape Architect: [Tract Consultants](#)
Main Contractor: [Water and Carbon Group](#)
Drafting of Boardwalk: [Ted Stubbersfield](#)
Drafting of Shelter: [Lockyer Drafting Design](#)
Engineer for OSA: David Strohfeldt
Construction: McGrath Property Renovations

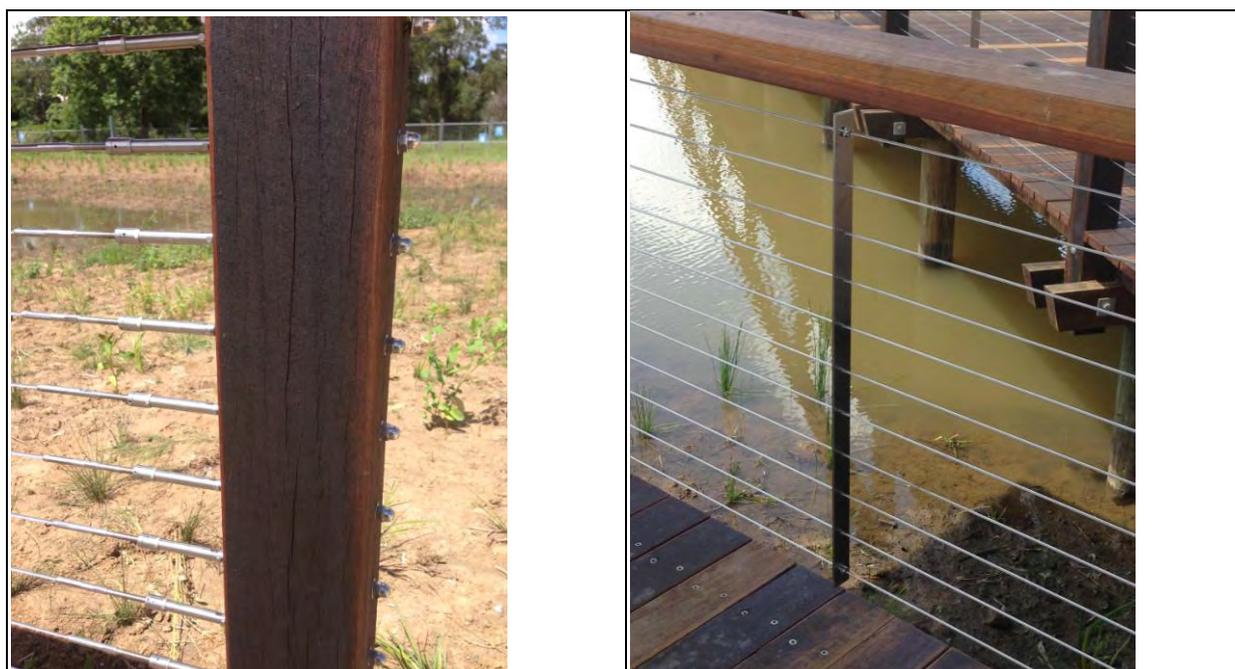
We were approached by Richard Garnham, Senior Principal Landscape Architect at Tract Consultants to assist with a boardwalk at Pioneer Park, Shailer Park in Logan. We originally provided Richard with a proposed cross section and he later provided me with a CAD drawing showing the alignment of the

works, finished heights etc. We then provided a kit price including certification which was accepted.

Going from a producer of lineal decking to supplying engineering and a complete hardware and pre-cut timber kit was a learning kit for the new OSA team but the lessons were learnt and the outcome is magnificent. A boardwalk like this does not happen by accident but through careful attention to detail. As we look at some of the details you will understand why we get so frustrated with clients who only look at the bottom line when assessing a tender. Incidentally I do assess tenders as a consultancy and it is money well spent.



Our handrail connections are different to our competitors. The image on the left shows the use of a structural plate over the join in the joists and a volute washer under the nut and square washer. The volute washer will take up 25 mm of shrinkage meaning the handrail post does not need to be re-tightened. The handrail is secured from underneath which extends the life of system. Note the use of Lonza CN Emulsion and the 75 mm wide joist. Notice the brackets are stainless steel.



We use Ronstan fittings. I once built and installed a number of steel posts which were designed around an imported brand of components but when the rigger came to run the wires nothing fitted! When rung, the importer said, "Our catalogue was right once." I was finishing my Commercial Barrier Guide at the time (have you purchased it yet) and realised we needed to add a comprehensive section on wire rope. The system we have used was developed, I am told, by Ronstan in conjunction with Brisbane City Council. When someone wants a boat winch cable and snips the wire the expensive fittings are left behind. This system spans up to 20 m. (Not a paid advertisement)



If you don't fully detail what fittings to use you will find that the riggers will use the most inexpensive system there is, such as this saddle which has failed. We had a case where this was fully detailed and the rigger still used saddles but we were able to touch him on the shoulder and tell him to fix it. It is critical that you remain in the drivers seat.

To assist you we have on our website a CAD drawing that is fully detailed. for both a 20 m and a 10 m system.

[Click here for the link.in our design tools section](#)



An OSA Boardwalk terminates correctly with a concrete back and side wall. This keeps soil away from timber and allows inspection. When I was selling bridges I would be told that my bridge price was good but my installation was much dearer. There was a very good reason. The image to the right shows how

not to do it, The soil encroached around the bridge as it has to, no inspection is possible and H3 timbers are used in what is now a H5 application. Attention to detail rewards you in the end.



The shelter is a scaled down version of our Lindsay lean [click here to see standards](#), simple but effective. Notice also that the handrail (Model HR14569) has a radiused top so it sheds moisture. Do you want more information on the moisture shedding profiles we produce. Email me

The gentleman on the right is Chris Rogers, Sales Manager of OSA and on the left is Keith Smith, the Business Development Manager. Want more information or to talk to us about your future boardwalk needs call Keith on 0403 601 030.

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

My eleventh blog written for Timber+DESIGN web magazine is on alternatives to timber joists. [Click here for the link](#). 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](#)

[Blog on whether to use 50 or 75 mm joist](#)

[Blog on whether to use lineal or set length decking](#)

[Blog on collapsing decks](#)

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

[A Special Note for my Baptist Readers \(and Historians\)](#)



I have recently edited some documents for some friends and put them in book format. These documents cover the journey in the 1870's from Hamburg to Brisbane and then from Brisbane to the "howling wilderness" of Kalbar in Queensland by the Rev, Herman Windolf. The journals are fascinating reading and the emigration Museum in Hamburg couldn't believe their good fortune when they received a copy. Herman was the first German Baptist pastor to come to Queensland. The struggles and heartbreaks of our pioneers and their fortitude is beyond my comprehension. The Queensland State Library was a brilliant source of images - all free. [The book can be purchased from](#)

[Amazon](#)

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:

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Senior Engineer
Wood Research and Development
1760 SW 3rd Street,
Corvallis OR 97333
Office 0011 1 541 752 0188
Fax: 0011 1 541 752 0195
Cell: 04 5957 6314 Or 04 28983328
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