



## February 2011 Newsletter

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Deck Over A Recess With Limited Clearance



Support studs for joists



Joists ready for Decking

### ***Laying Deckwood on Concrete with Restricted Clearance Underneath***

We have from time to time been asked to provide solutions where Deckwood needs to be laid on an already constructed concrete deck where there is as little as 100 mm recess in concrete slab. This is not an ideal arrangement but can be made to work satisfactorily.

While our hardwoods do not particularly mind getting wet they need to dry quickly and this does not happen if joists are screwed directly to the concrete. Clearance under the joists and a self draining fall on the slab to the outside are essential.

The way OSA dealt with this on one project was as follows: The 100x50 Durability 1 In Ground joists (which were laid on their flat) were sized to 45mm. In the project illustrated they were pre-drilled and countersunk at our workshop prior to delivery.



Completed Deck

The joists were laid out and the positions of the supporting studs marked, the builder then drilled into the slab and epoxied in short lengths of 12mm stainless threaded rod and nuts were then run down the stud. The shrinkage was then calculated (45 joist +35 decking = 80mm shrinking 6% = approx 5mm) and the nuts set to a level where the deck would be about 2.5mm (1/2 of the shrinkage) above the existing deck. We were able to achieve a gap of about 20-25mm under the joist. Protruding studs were cut off and then dampcourse and CN emulsion were added to the top of the joists. Decking was then laid without a gap.

So, while it is not an ideal arrangement it can be made to work. It is much better to talk to us beforehand though.

### Links

Deckwood Selection Guide. [http://www.outdoorstructures.com.au/pdf/deckwood\\_selection\\_guide.pdf](http://www.outdoorstructures.com.au/pdf/deckwood_selection_guide.pdf)

Complete Project <http://www.outdoorstructures.com.au/gallery.php?gid=95&SID=2>

## ***Volute Washers, a Useful Piece of Hardware***

Many designers are not aware of a very useful item of hardware for timber engineering called a volute washer. I first became aware of them many years ago when I was producing power poles and crossarms.

These washers were used on pole hardware to take up the shrinkage in unseasoned timber so retightening would not be needed over a 30 year service life. They will take up about 25mm of shrinkage. We use them on all our timber handrail posts on our bridge and under large kerbs (125x125 and bigger) on our bridges.



The volute washer is a coil of 6mm approx stainless spring steel wire that compresses within itself. It is available in a range of sizes to suit 12, 16, 20 and 24mm bolts. The washer needs a square washer under the nut. When we use them on a painted surface we use a large square washer under the volute washer itself to prevent damage to the paint.

With the brand we use, the m12/16 washer we use measures approx 65mm across and about 30mm high and the m20/24 washer measures 85x35. Remember that you need longer bolts.

## ***Timber Utilisation and Marketing Act Repealed***

As possibly one of the most short sighted acts of the Queensland government, the Timber Utilisation and Marketing Act was repealed last year. This is going to eventually see a lowering of the standard of timber supply and design in this state. There was widespread agreement that the existence of this Act led to a higher standard of design in Queensland than in states that do not have a similar act. Queensland specifiers should remove any reference to this act in their specifications. It does not bode well for the future.

This is going to impact on moisture contents, timber treatment and the use of lyctus susceptible timber. An example is that under the Act a treater had to prove that he could treat to a given hazard level, now he only has to say he can. There is a world of a difference between the two.

# Case History Thursday Island Foreshore



Thursday Island Foreshore deck and bollards

Client:	Torres Shire Council
Project Managers & Engineers:	PDR Engineers
Landscape Architect:	RPS Group (Cairns office)
Landscape Contractor:	Digit Landscapes Pty Ltd (Cairns office)
Deck Superstructure Design:	PDR Engineers
Deck and handrail systems:	Outdoor Structures Australia
Bollards and totems:	Outdoor Structures Australia



Handrail Details



Totems

Construction of the Thursday Island Foreshore was completed by Dig It in 2010. For OSA the project involved two decks right on the foreshore, a large number of bollards and some totems. The decks are standard OSA construction with P8 handrail (stainless version) modified to take our Bluewater rail. The 150x150 bollards are a size we do not like using but we tamed the heart by making a scaled down Pioneer Posts.

**We have a few samples of the Bluewater rail that we can ship out for inspection. Ring Andre on 07 5462 4255.**



Bluewater profile ex 200x75

## Links

Further images can be found at <http://www.outdoorstructures.com.au/gallery.php?gid=105&SID=1>

Warning on 150x150 in landscaping [http://www.outdoorstructures.com.au/pdf/etdn\\_5.pdf](http://www.outdoorstructures.com.au/pdf/etdn_5.pdf)

Commercial Barrier Guide <http://www.outdoorstructures.com.au/pdf/commercial-barrier-guide-10b.pdf>

## ***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 2010 Newsletter](#). Refer to the May OSA Newsletter when assessing the suitability of quotes.

See our [Steel Bridge Quotation Request Form](#) and our [Timber Bridge Quotation Request Form](#)

### **Steel Bridge Quotation Request Form**

[http://www.outdoorstructures.com.au/bridge\\_request.php?Mode=st](http://www.outdoorstructures.com.au/bridge_request.php?Mode=st)

### **Timber Bridge Quotation Request Form**

[http://www.outdoorstructures.com.au/bridge\\_request.php](http://www.outdoorstructures.com.au/bridge_request.php)

Regards

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