# Ted's News

November 2023

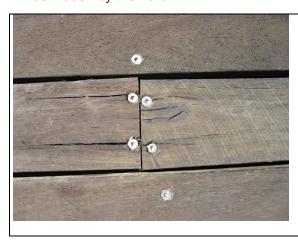
Fastener End Distances
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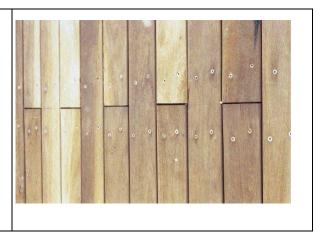
### Fastener End Distances





I saw this job recently. The battens on the left are fastened about 450 mm from the end and have moved badly. Those on the right-hand image are fastened about 150 mm from the end and are stable. Unsupported ends have a mind of their own and you need to consider this distance in your design. If I was designing a boardwalk without a kerb I would not have any more than 150 mm beyond the screw, if it had a kerb I would allow the length to extend to 200 mm as the movement will be hidden by the kerb.





On the other hand, the end distance can be too small as the image on the left shows. The countersunk heads have split the decking because they are right at the end and this is what you end up with if you try to use lineal decking and try to join it on a 50 or even 75 mm joist. The other image shows how to join set-length decking on a double joist.

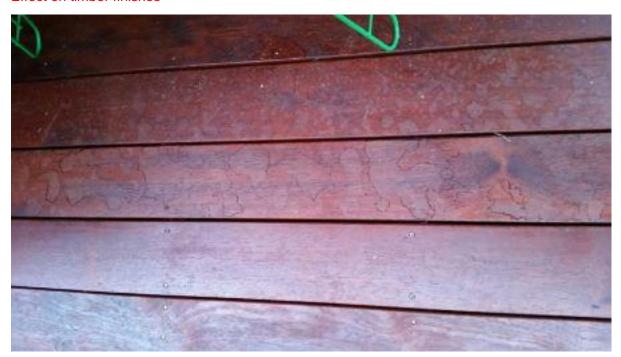
**In summary**, I would put the screws for battens no closer than 75mm from the end and generally no more than 150 from the end. For decking when there is a join, make the maximum 100 mm, For another newsletter on end clearance see <u>March 2022 newsletter</u>, It is discussed in my guide, <u>Timber Joints</u> (\$55) Here is the <u>Table of Contents</u>.

# Care Needs to be Taken Using Kwila/Merbau

Intsia bijuga is a hardwood that occurs naturally from as far afield as Tanzania, and Madagascar east through India and Queensland, Papua New Guinea, and the Pacific Islands. It is known by many names such as kwila, merbau and locally as Johnstone River Teak. Merbau/kwila is a durability one above ground species which means it doesn't make a bad decking though getting it processed into something nonstandard can be a problem (and you do need nonstandard). Let's consider the issues.

#### High tannin content when compared with other timbers

#### Effect on timber finishes



The tannin content is so high that many producers of timber finishes require a period of preleaching. For Tanacare/Tanacoat it is three months (same for Tallowwood) Other manufacturers require six months! The tannin is water soluble so a few good rainstorms do the job. If there is a drought you need to hose it down a few times or better, use a proprietary cleaner. But whatever you do, whether it is a penetrating oil or a paint, check the manufacturer's recommendation.

#### Effect on fasteners

A useful CSIRO guide to the potential of corrosion of the <u>fasteners is found here</u>. It is classed as a 2 on a scale of 1 to 3. It is not especially aggressive if it stays dry. It is similar to spotted gum in this respect. But if there is any moisture use stainless.

#### Low inground durability

#### Embedded posts

A durability one above ground timber should be an in-ground one or at worse, a two. Kwila/merbau is an outlier in that it is a three. That means it should not be used in ground contact.

Consult <u>Construction Timbers in Queensland</u> for its durability and legal use as a post. It should only be used in a post-support.

#### Housed joints



The lower durability of the timber when constantly wet means you should be very cautious of weather exposed housed joints. The image is from a set of steps made from kwila/merbau.

Alternatively, you could always use spotted gum or ironbark because of it generally higher durability, lower tannin content, and the ease of having custom processing.

# Horse Fencing and A Blast from the Past.

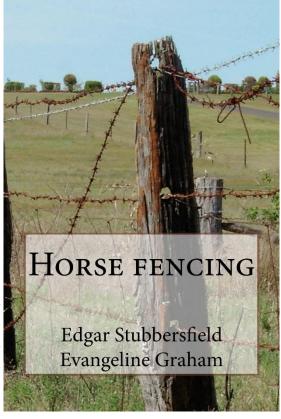


Back in about 2000 I had a good customer, Koichi Suzuki, originally from Japan but then living in Brisbane. We caught up to reminisce and see if I could help some friends of his wife who have a sawmill in Indonesia. Back then, he recalled, I was the only one who could supply the quality of timber demanded by the Japanese market. To be honest, half the trick was a rubber stamp that said "This side down" in Japanese. He is holding one of my guides *Horse Fencing*. There is a story behind that

book. (Incidentally, the flooring is crows ash and the panelling is silky oak).



I had supplied large quantities of timber rails for cattle and horse fencing including for abattoirs (above) and horse studs. But these were always sold on price to a client's specification and design. My dear old dad, Lord rest his soul, advised me to use 150x50 for cattle and 125x50 for horses and use spotted gum as it will spring and not break if hit hard. Koichi was approached by the owner of a racehorse stud in Japan and asked for advice on the best layout of horse fencing. With animals that had cost in the millions, I saw the potential of a claim that could bankrupt me but also a potentially large order. With the help of the head of Equine studies at UQ Gatton, my daughter Evangeline wrote a very good report. Common layouts risked either breaking a leg or breaking a neck. The report guided the owner through the decision-making process. I later expanded and published this book. Here is a link for the PDF (\$22) here is the Table of Contents Hard copies are available on Amazon.



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Topic 3	Timber Decks - Designing for Durability	
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Topic 5	The Seven Deadly Sins of Timber Design	eClassroom link
Topic 6	Timber Joints	eClassroom link
Topic 7	Architectural Timber Battens	eClassroom link
Topic 8	Timber 101	eClassroom link
Topic 9	Boardwalk Design (recommend delivered with Timber 101)	
Topic 10	Timber Handrail Design	
Topic 11	Timber Bollards	

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Are you aware that <u>Wilson Timbers/Outdoor Structures</u>, who I am affiliated with and are suppliers of quality timber, will have me come to your office (in person or remotely) and deliver one or two of my CPD sessions for free? The only condition for in-person presentations is that, with travel, we can do it in a day from Brisbane in Queensland. <u>Contact Stuart Madill by email to arrange a time</u> or call his mobile 0403 385 707.

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