

# Ted's News

December 2021

[Shelter Shed Design Service](#)

[Index to Past Newsletter Articles](#)

[Considering the Presence of Sapwood in your Design](#)

[Coastal Decks Course](#)

[My Latest Published Book](#)

[We Can Start CPD Courses Again](#)

[More Shelter Shed Designs Available](#)



[Three months ago I introduced the first three shelter shed designs, This was followed up each month by a further three](#) and now with this month there are a total of twelve designs available and more to come. The lead image is of typical shelter from the Hume range. These are 4.0 metre wide and normally either 4, 6 or 10 metres long. The other images show a simple two cubicle toilet block with a storage area first used in Grantham after the devastating floods. The building measures roughly 4.3x4.3 m and the roof is 5.8x5.4 metres The other design featured above is a simple 3x3 metre hip shelter

When operating Outdoor Structures Australia, my previous business, I developed a range of very impressive public structures such as park and bus stop shelters as well as toilets. When designs were prepared, almost all had a materials list and full cutting details. My philosophy was that the plans had to be "bulletproof" so I could point a contractor to a pile of material and ask him to prefabricate it and erect it without them having to ask a question. You can now have access to these plans, not just as PDFs but most also in CAD format that can be modified for your own needs. They incorporate all of my superior detailing that set our product apart from our competitors.

[Here is the link to my website with more information including purchasing options and prices.](#)

Even more designs will be added in the future.

### Index to Past Issues

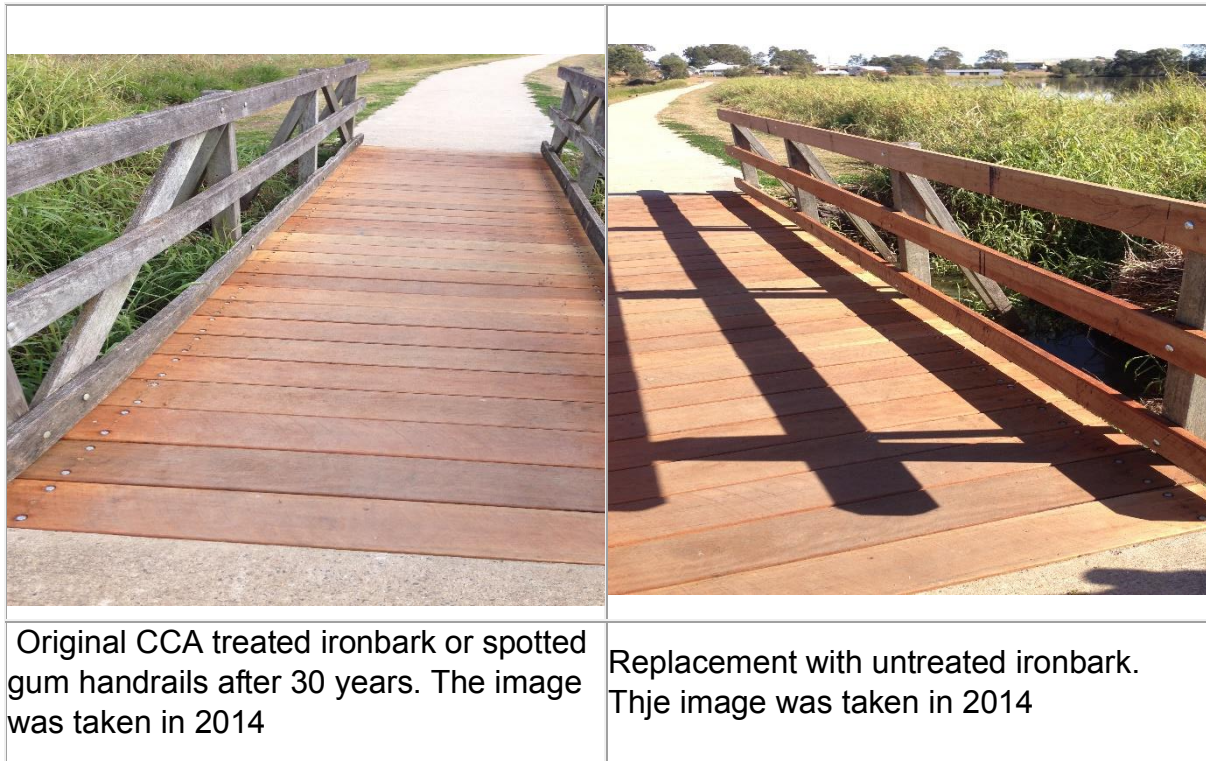
If you are a new reader or just want to find details on a particular topic such as 150x150 mm posts. [Here is a link to an index to articles back to 2015.](#)

### Considering the Presence of Sapwood in your Design



Untreated Ironbark Sapwood has Decayed on this Handrail

It is little understood that the untreated sapwood of durable timbers such as ironbark should only be considered as durable as the untreated sapwood of low durability pine. The image above, taken in 2021 shows that sapwood in an ironbark bridge rail has decayed. This is on one of the first bridges I built in about 1985 and which happened to be sited across from my home. I have been able to closely watch its performance and adjust my practices as I saw the effects of aging on the construction detailing.



The original handrail was square dressed and arrised 145x45 with the sapwood CCA treated to H5 (H3 would have performed as well.) It still looked quite reasonable from a distance in 2014 after almost 30 years. The more stressed decking looked a little sad though it could still carry a horse. So why was the handrail replaced?



The top surface had degraded and it looked like it needed replacing. In reality, the handrails could have simply been rolled over and the underside made the top. Observing this top surface degrade over the years led me to ensure that all my handrails shed moisture (and you should too.) [You will learn this in my guide to commercial barriers for only \\$22.](#) There had been no degradation of the sapwood unlike that in the new rails. So why weren't the new rails

likewise treated? Because *AS2082 Timber—Hardwood—Visually stress-graded for structural purpose* has never required sapwood that is not *Lyctus* susceptible to be treated. So this needs explanation.



Attack on lyctus susceptible sapwood



Nonsusceptible blackbutt verandah joist has decayed

### Different process but same end result

Some species, such as spotted gum and tallowwood have starch in their sapwood. When sawn, this sapwood is attacked by the lyctus beetle which lays its eggs in the sapwood. the larvae hatch out and feed on the starch turning the sapwood to powder. (AS2082 lists whether a species is susceptible to lyctus attack or not.) There was strong legislation in both Queensland and New South Wales to protect consumers from susceptible timber but, tragically, they have now been repealed. It doesn't matter if the member is exposed or protected up in a roof, the end result is the same. The untreated sapwood disappears. AS2082 says that untreated lyctus susceptible sapwood in most grades should not exceed one-half of the face. The image of lyctus attack shown above is likely to is not wildly out of grade for F17 to AS2082 as it permits lyctus susceptible sapwood if it is not more than one third of the edge and up to half the face!!! This introduces us to the difference between being to grade and fit for purpose. I would not like a critical nailplate holding in untreated lyctus susceptible sapwood.

But, take a species like blackbutt, the sapwood is not susceptible to lyctus, and should you use it internally it does not degrade and as it dries, it is very hard to tell the sapwood from the heartwood. That changes when you use it externally. Irrespective of the heartwood of Blackbutt being Durability Class I above ground, all sapwood, irrespective of species is durability class 4. The image of decayed sapwood in blackbutt above is from a verandah joist that was in a saddle. The sapwood decayed as it was exposed to the weather and many of the joists in this deck had a similar problem. The deck had to be replaced. The small cost associated with treating was saved and may have been enough for the sawmiller to win the order but at what cost to the client and the reputation of the designer and builder! The timber met the grading requirements of AS2082 but was unfit for purpose! Sapwood is easily distinguished when freshly sawn so those pieces needing treatment could have been segregated at that time. It is obvious that the end result of having untreated lyctus susceptible sapwood and untreated non-susceptible sapwood when used externally is the same even though the process is different.

So, returning to our lead image and your takeaway from this article, the timber with untreated ironbark sapwood met the requirements of AS2082 when produced and graded but it was unfit for purpose as the sapwood covers almost all the top face. If graded now it would have to be rejected. Those bridge handrails, like the blackbutt verandah joists, should have been ordered as having the sapwood treated to H3. Any

external hardwood should be treated to H3. Requiring Australian hardwood free of sapwood is not an option.

## Full Day Courses



**The Footbridge Purchasing and Inspection Course** run by Edgar (Ted) Stubbsfield is intended for those responsible for the specification, purchasing and ongoing maintenance of footbridges. The course will enable participants to:

- Prepare an appropriate specification
- Assess suitable product to purchase
- Recognise where corners are cut
- Ensure value in purchasing
- Know quickly where to inspect
- Recognise suitable timber for bridges

I can offer valuable assistance to your organisation by empowering your people to recognise an appropriate low maintenance footbridge from one that requires expensive rectification over a shorter life span.

On retiring from Outdoor Structures Australia, a company I founded in 1997, I have been concentrating on publishing guides on external timber and steel use and educating professionals in that field. You can now take advantage of my experience gained building low maintenance steel and timber bridges.

I have extensive expertise in exposed timber applications. This knowledge was developed initially through a number of formal research projects followed by years of observation. I acquired a deep of understanding of the issues relating to designing, supplying and constructing fully weather exposed timber and timber and steel structures including bridges.

With over 40 years experience of supplying timber and timber and steel products, I have supplied some outstanding low maintenance footbridges. Conversely I have also witnessed many structures that simply should never have been purchased.

This course is centred on a checklist that can be used as a specification and also a confirmation that common shortcuts that affect longevity have been addressed. Through hundreds of images the importance of each line of the check list is explained. Participants will recognise what good practice is and how important it is to ensure it is used.

**Contact Details**  
Mobile: 0414 770 261  
Email: edgarstubbsfield@gmail.com



**The Coastal Deck Design Course** run by Edgar (Ted) Stubbsfield is intended for those responsible for the specification, purchasing and ongoing maintenance of boardwalks and decks with emphasis given to the more difficult coastal environment. The course will enable participants to:

- Prepare an appropriate specification
- Assess suitable product to purchase
- Recognise where corners are cut
- Ensure value in purchasing
- Know quickly where to inspect
- Recognise suitable timber for decks

I can offer valuable assistance to your organisation by empowering your people to recognise an appropriate low maintenance deck or boardwalk from one that requires expensive rectification over a shorter life span.

On retiring from Outdoor Structures Australia, a company I founded in 1997, I have been concentrating on publishing guides on external timber and steel use and educating professionals in that field. You can now take advantage of my experience gained building low maintenance steel and timber bridges.

I have extensive expertise in exposed timber applications. This knowledge was developed initially through a number of formal research projects followed by years of observation. I acquired a deep of understanding of the issues relating to designing, supplying and constructing fully weather exposed timber and timber and steel structures including decks.

With over 40 years experience of supplying timber and timber and steel products, I have supplied some outstanding low maintenance decks and boardwalks. Conversely I have also witnessed many structures that simply should never have been purchased.

This course is centred on a checklist that can be used as a specification and also a confirmation that common shortcuts that affect longevity have been addressed. Through hundreds of images the importance of each line of the check list is explained. Participants will recognise what good practice is and how important it is to ensure it is used.

**Contact Details**  
Mobile: 0414 770 261  
Email: edgarstubbsfield@gmail.com

# Footbridge Course

# Coastal Deck Course

Don't embark on any major footbridge or coastal deck project before you do my full-day courses. These are serious courses that are unmatched in the value you will extract from them by delivering expensive infrastructure that ages gracefully and with little maintenance. They both start by going through a design checklist and explaining, line by line, why you must attend to that point. They then look at a number of case studies, showing good and bad practice.

[Click here for footbridge course brochure](#)

[Click here for coastal decks brochure](#)

Call me to discuss your training needs. These courses, which are eligible for CPD points, will give you an incredible understanding of good timber use. Call 0414 770 261 or [email me](#).

## We Can Start CPD Courses Again



Did you know that Wilson Timbers/Outdoor Structures will have me come to your office, subject to the ever-changing regulations, and deliver one or two of my CPD sessions for free? We can even do it with Teams if you are further away. These are serious training times with real learning outcomes. The only condition is that, with travel, we can do it in a day from Gatton in Queensland. Here are the nine courses available:

- Topic 1: Timber Preservation
- Topic 2: Hardwood Grading
- Topic 3: Timber Decks - Designing for Durability
- Topic 4: Utilising Small Diameter Hardwood
- Topic 5: The Seven Deadly Sins of Timber Design
- Topic 6: Timber Joints
- Topic 7: Architectural Timber Battens
- Topic 8: Timber 101 (Optimally Topics 8 & 9 to be presented together)
- Topic 9: Boardwalk Design (Optimally Topics 8 & 9 to be presented together)

[To learn more about these courses visit my website.](#) [Contact Stuart Madill by email to arrange a time](#) or call his mobile 0403 385 707.

### Need a Timber Consultant or Expert Witness?

I have over 45 years of 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.

**Trainer and Presenter** – I can provide tailored training to meet your CPD needs and also have experience at lecturing to universities and presenting at conferences.

Please note as I am now employed as 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](http://www.bcrc.com.au) or [download their capability brochure here](#).

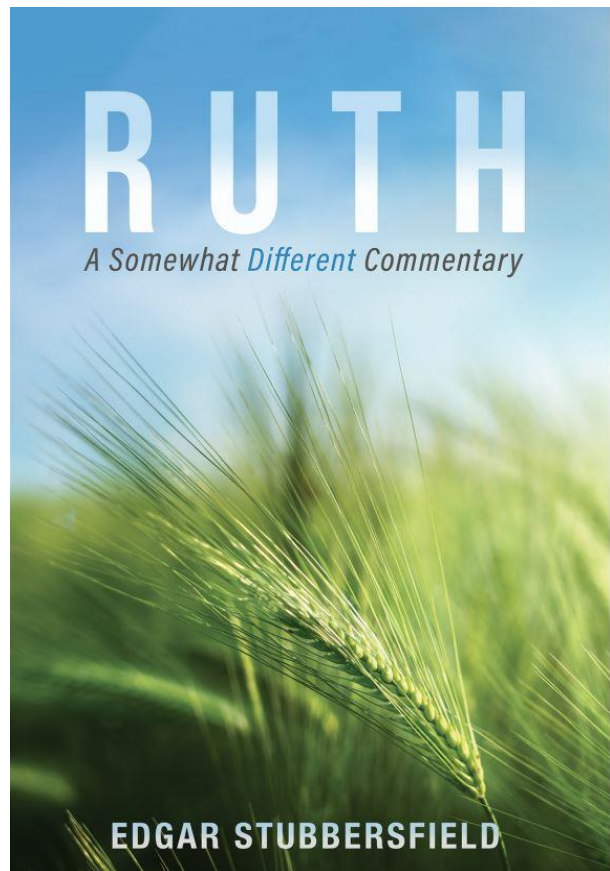
### Something for my Christian Readers

Last month I introduced my commentary on the Old Testament Book of Ruth which was published by the American publisher Wipf and Stock. They have now issued a press release with an interview with me

[Ruth Press release](#)

The Book of Ruth is a story from the late bronze age of a stony-broke foreign widow who marries the richest man in town. It is an old story with themes that are so modern. You would be doing me (and yourself) a great favour by going to your local Christian bookshop and ordering a copy (it is available through Koorong). While there, ask them why aren't they stocking it. Incidentally, the ISBN is 9781666716313.

[Overseas readers can order direct from the publisher.](#)



This really is something special - see what award-winning authors have said about it:

**Gary Crew**, Professor emeritus of Creative Writing and Literature, University of the Sunshine Coast and four times winner of Australian Children's Book of the Year. *"This is an excellent exposition of the book of Ruth. It is logical, detailed, and readily accessible. I was both astonished and delighted by the research undertaken and how clearly it was expressed."*

**Stuart Piggin**, Director, Centre for the History of Christian Thought and Experience, and author of Australian Christian Book of the Year in 2019 and shortlisted in 2020. *"Most Bible commentaries are so cluttered with technicalities and problems that they leave us with hot heads and cool hearts. Ruth has the reverse effect. It reveals the hidden God and how his loving-kindness is made manifest in a world of need, through respect for and practical care of the poor, foreigners, women, and children. Here a biblical story of consummate artistry receives profound treatment from one who is himself an exceptional storyteller and wordsmith."*

Not bad for my first published nontimber book! Incidentally, the story centres around the barley harvest hence the cover image.

### [We Can Start CPD Courses Again](#)



Did you know that Wilson Timbers/Outdoor Structures will have me come to your office, subject to the ever-changing regulations, and deliver one or two of my CPD sessions for free? These are serious training times with real learning outcomes. The only condition is that, with travel, we can do it in a day from Gatton in Queensland. Further away,? Why not use Teams. Here are the

nine courses available:

Topic 1: Timber Preservation

Topic 2: Hardwood Grading

Topic 3: Timber Decks - Designing for Durability

Topic 4: Utilising Small Diameter Hardwood

Topic 5: The Seven Deadly Sins of Timber Design

Topic 6: Timber Joints

Topic 7: Architectural Timber Battens

Topic 8: Timber 101 (Optimally Topics 8 & 9 to be presented together)

Topic 9: Boardwalk Design (Optimally Topics 8 & 9 to be presented together)

[To learn more about these courses visit my website.](#) [Contact Stuart Madill by email to arrange a time](#) or call his mobile 0403 385 707.

## 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 to 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](http://www.bcrc.com.au)

Edgar Stubbersfield

Mail: [edgarstubbersfield@gmail.com](mailto:edgarstubbersfield@gmail.com)

Web: [www.deckwood.com.au](http://www.deckwood.com.au)



Phone: 0414770261