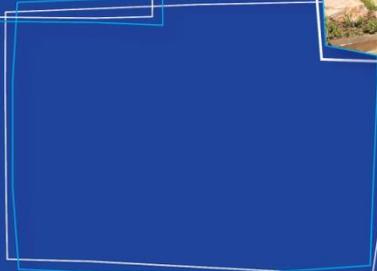
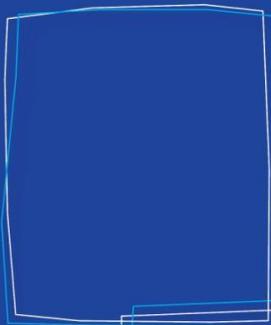
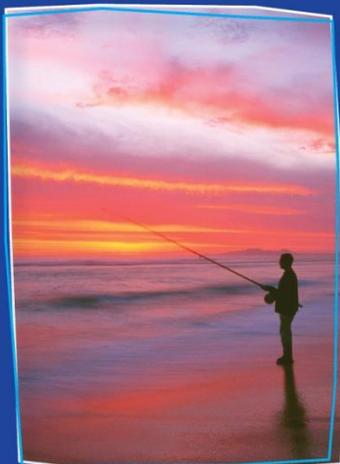




Brief Report Condition of Esperance Tanker Jetty Timbers



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Brief Report on the condition of jetty timbers arising from the partial uncontrolled collapse on the 9th September 2017.

The partial uncontrolled collapse of the Esperance Tanker Jetty gave us the unexpected opportunity to visually assess the condition of the timbers arising from this event.

1 Deck planks

Deck planks that were previously covered in concrete topping were found to be generally in worse condition than the planks recovered from the partial deconstruction of 2013.

Many of the planks broke into pieces, which cannot be fully attributed to the collapse event, since they were in a very rotted and distressed condition on their upper surfaces. This was in keeping with the advice Shire was given by a number of jetty restoration contractors and Engineers in 2014 and 2015. The reuse of jetty deck planks in any future decking application, even if turned upside down, seems unlikely to result in a compliant structure.

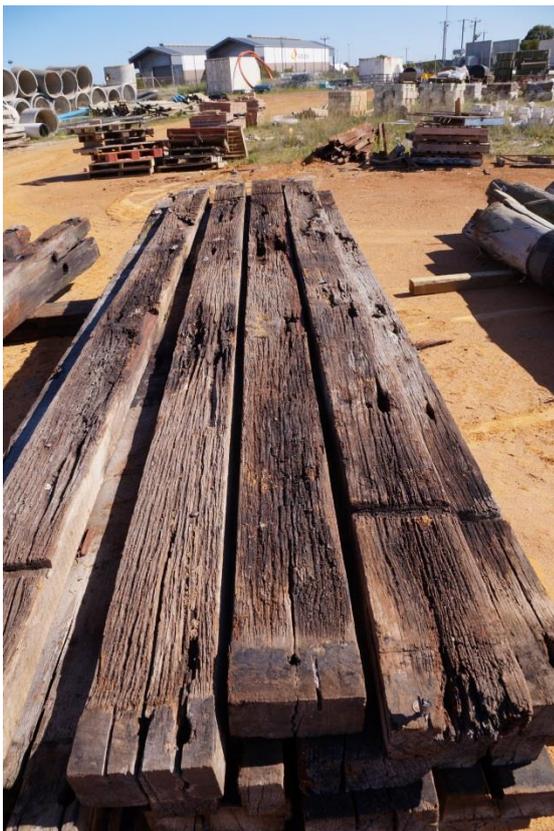


Image 1 - Deck Plank 1



Image 2 – Deck Plank 2



Image 3 - Deck Plank and Corbels

2 Outer Stringers

Outer stringers were found to be severely rotted through the various fixing points such that significant cavities running vertically through the timbers were observed. Many of the outer stringers broke in the collapse event, partly due to the unusual loads applied during the collapse, but mainly due to their rotted, decayed condition.



Image 4 - Outer Stringer 1



Image 5 - Outer Stringer 2

3 Inner Stringers

Inner Stringers were generally in fair condition on first examination. Closer inspection revealed rotted pockets or cavities running vertically through the timbers, in particular at the locations where corbels had been bolted. It may be that lengths of double stringer of lengths up to 3.5 metres would be salvageable, possibly longer if a heritage timber Engineer was willing to certify them. Most of the inner stringers, in particular the railway line double stringers, were recovered whole.



Image 6 – Inner Stringer 1



Image 7 – Inner Stringer 2



Image 8 – Inner Stringer 3

4 Single Corbels

Single corbels were generally split vertically and longitudinally where fixing bolts appear to have corroded and expanded.

5 Double Corbels

Double corbels (railway line corbels) were found to be in generally better condition; however pockets of rot around fixings were present.



Image 9 - Single Corbel 1



Image 10 - Single Corbel 2



Image 11 - Single Corbel 3



Image 12 - Double Corbel 1

6 Half Caps

Half caps were found to be almost entirely rotted in parts and may not be fit for any reuse.



Image 13 - Halfcap 1



Image 14 - Halfcap 2



Image 15 - Halfcap 3

7 Piles

Piles were noted to be very severely degraded at sea bed level, Teredo worm attack having left very little of the pile cross section intact. It should be noted that many of the piles found to be compromised in this manner had been visually assessed in previous underwater inspections as being in good to fair condition, whereas they were all in condition 7 – 'Failed / Greater than 50% loss of section' on the WSCAM scoring scale of 1-7.



Image 16 - Pile 1



Image 17 - Pile 2



Image 18 - Pile 3



Image 19 - Pile 4



Image 20 – Pile 5