

Comet Tales & Walking Trails



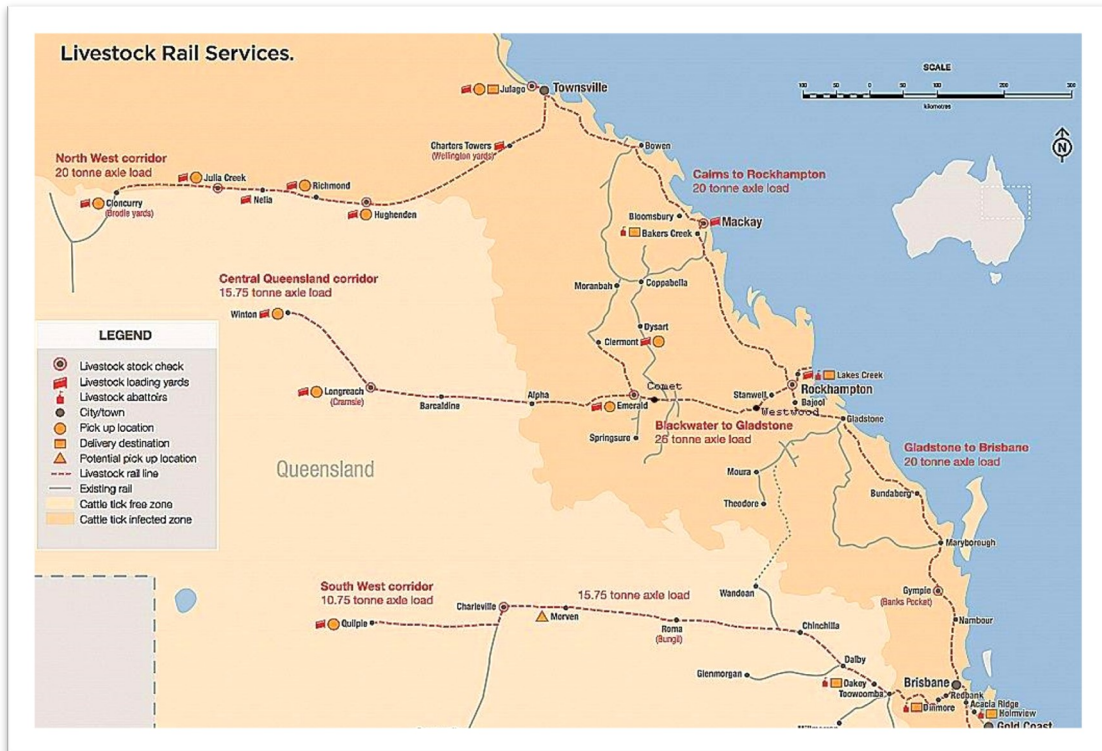
COMET RIVER STEEL RAIL BRIDGE

The remarkable steel bridge over the Comet River
Story told by Rosemary McLeod
Local Comet resident.
Australia Day 2020

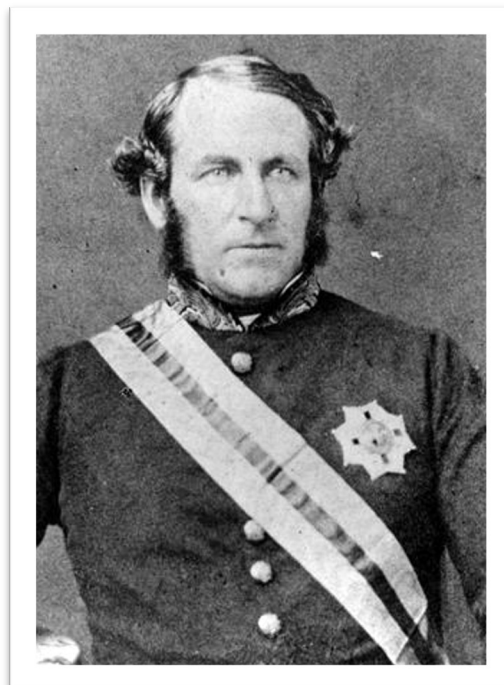


I'm Rosemary McLeod, and today I want to tell you about the remarkable steel Rail Bridge over the Comet River.

But before I do that, let me tell you a little about the Rockhampton to Longreach railway line.



Now, the construction of this new railway line was given approval by the Queensland Government in 1864, with the first sod turned by the Queensland Governor, Sir George Ferguson Bowen, on the 28th September the following year.



Henry Plews, who was the chief engineer of railways at this time and gave the new line the pretentious name of Great Northern Railway, even though it travelled through the centre of the state.

There were many delays in the construction of the rail line as far as Westwood, just 40km west of Rockhampton.

The first contract failed, due to lack of finance and the next contract for the construction went over budget.

However, work on the line finally reached Westwood in 1867, where it stagnated for the next six years due to the financial depression in the colony.

By 1872, the government was looking to extend the line to the west. The state's economy had improved, possibly due to the fantastic strike on the Gympie gold fields.

So, Robert Ballard was engaged by the government to extend the line to the west as far as Longreach.

We know that he was very experienced in railroad construction, having built the very difficult railway line, from the town of Ipswich up the exceedingly steep Range to Toowoomba.



Ballard planned to build the line as cheaply as possible by using local timbers in the construction, thus cutting costs.

ROBERT BALLARD / STATE
LIBRARY OF QUEENSLAND

In January 1873, the work commenced on the continuation of the rail line to the west, which officially reached Cometville on the 1st March 1878.

While the work was being carried out here, tragedy struck in the form of five men tragically killed at Comet River overflow No 1, or Murdering Gully as it is known locally.

The work train was returning to town in the afternoon, when some of the men were swept off a wagon by a steel cable.

This cable had broken loose from a derrick at the work site on the bridge at Murdering Gully.

These injured men were taken to the government store in Cometville, where the railway doctor, Dr. McNeely, cared for them.

It was a sad day, and the whole town turned out for the burial of the men. After a solemn service the men were interred in the Comet cemetery.

Unfortunately, another man died on the train taking the injured to the hospital in Rockhampton, and he was buried in the Blackwater cemetery.

The rail line reached Emerald in 1879 and Longreach in 1892.

COLONIAL TELEGRAMS.

[FROM OUR OWN CORRESPONDENTS.]

QUEENSLAND.

**TERRIBLE ACCIDENT ON THE RAIL-
WAY EXTENSION.**

FIVE MEN KILLED.

EIGHTEEN OTHERS INJURED.

COMETVILLE, November 6, 5:45 p.m.

A RAILWAY accident occurred at No. 1 bridge on the construction works, beyond the Comet, at ten minutes to five o'clock this afternoon. One of the guys gave way as the ballast train passed under, sweeping all the men off the last truck. About twenty were wounded, some fatally. Two are now dead.

The sufferers are being attended by Dr. M'Neely at the Government store.

Now, let's get back to our subject of the steel rail bridge.

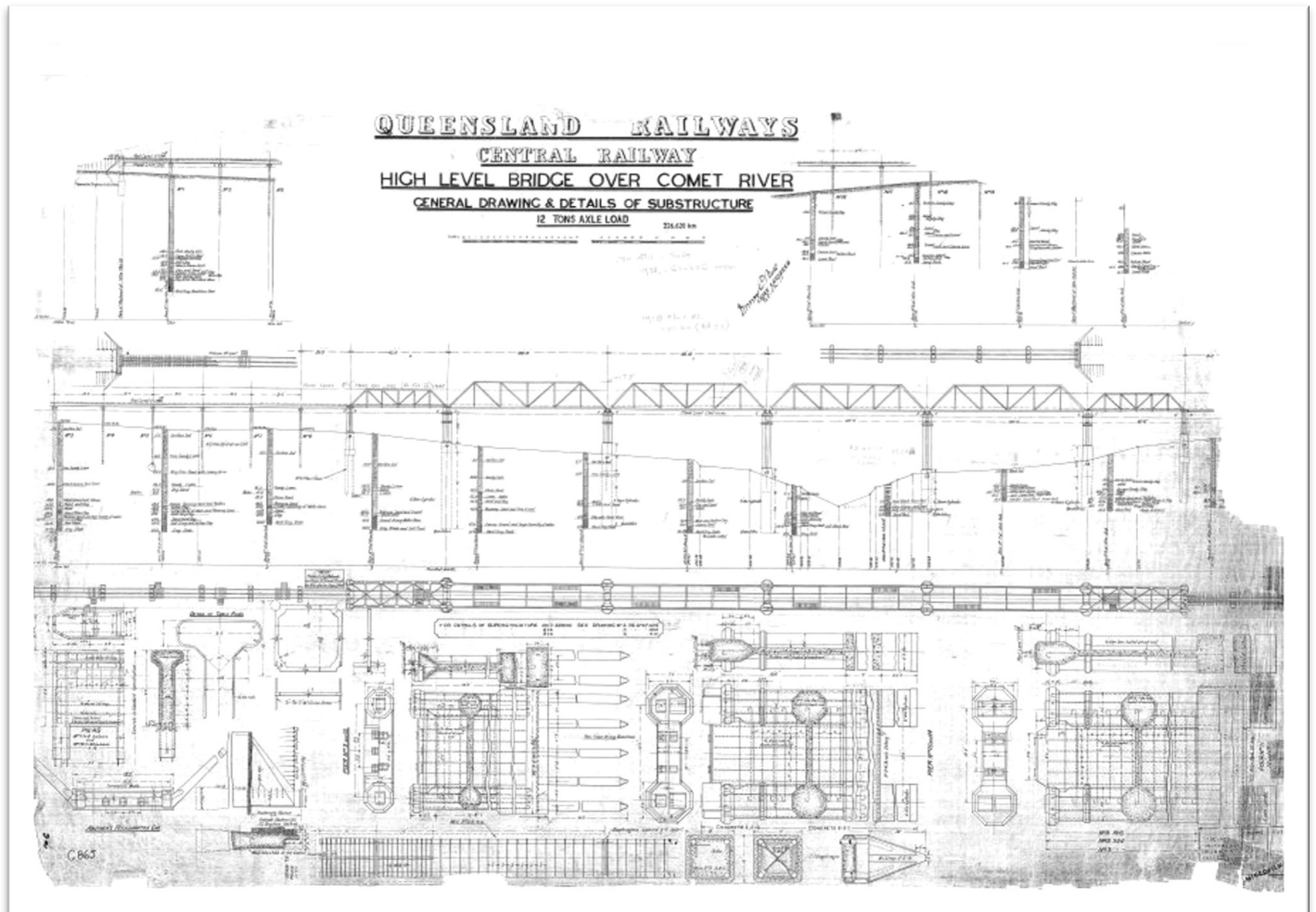
The bridge was designed in 1911, to replace Robert Ballard's 1878 timber rail bridge over the Comet River.



ROBERT BALLARD'S
1878 TIMBER RAIL BRIDGE

In the Brisbane Telegraph newspaper, dated Wednesday, 30th August, 1911, it was reported that “£10,000 pounds was allocated to the Comet River and Nogoa River high level rail bridges for analysis of requirements.” This was signed by, W. H. Barnes, the State Treasurer.

It was further reported in the newspaper that February that year was very wet.



COMET HIGH LEVEL BRIDGE PLAN



Now, the bridge took three years to build, and has a rail height of 19.22m above the stream bed. The cement for the massive piers was probably mixed with early type mechanical mixers with some of the materials being sourced locally.

The steel for this bridge was manufactured by the English firm of Dorman Long & Company Limited. This company were steel makers, constructional engineers and bridge builders and had built many famous bridges.

One of their finest achievements is the Sydney Harbour Bridge.

Most of the steel work on the Comet bridge was hot riveted together on-site by the workmen.



COMET STEEL RAIL BRIDGE C1953

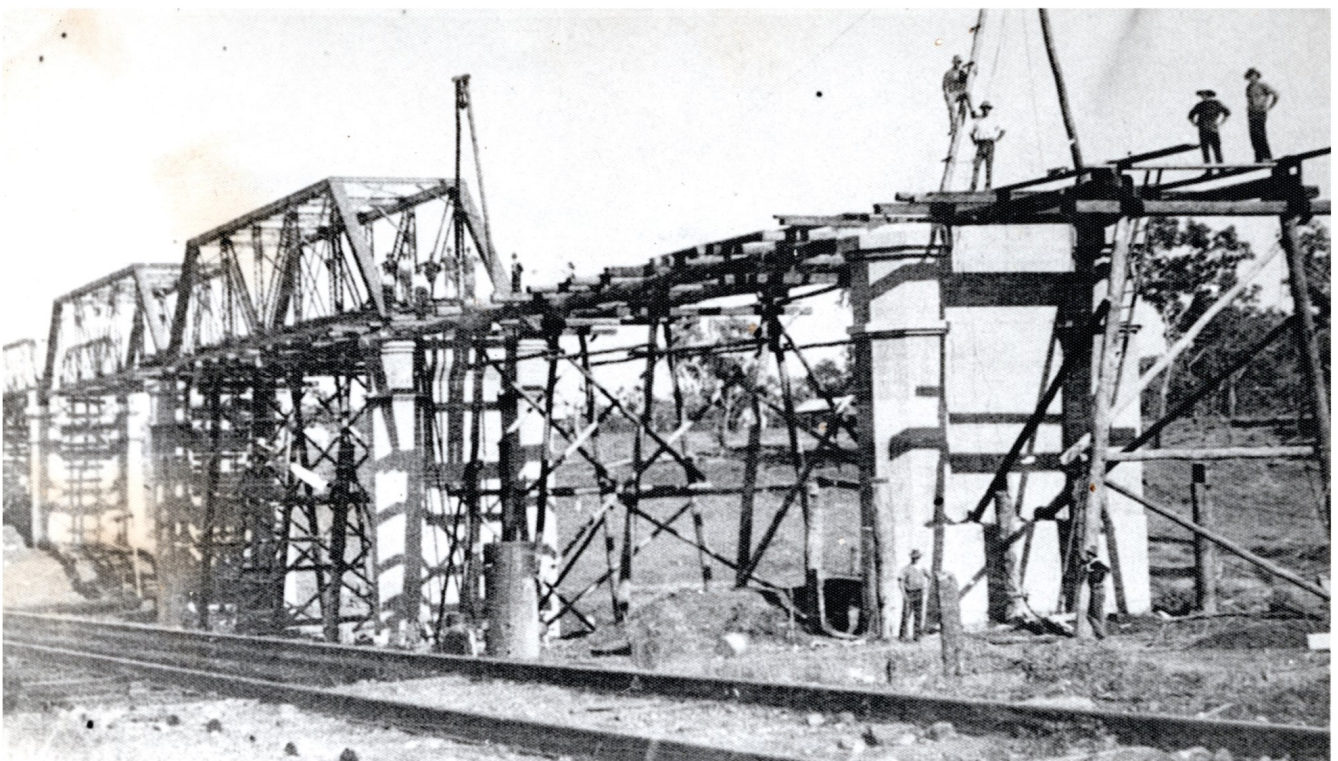
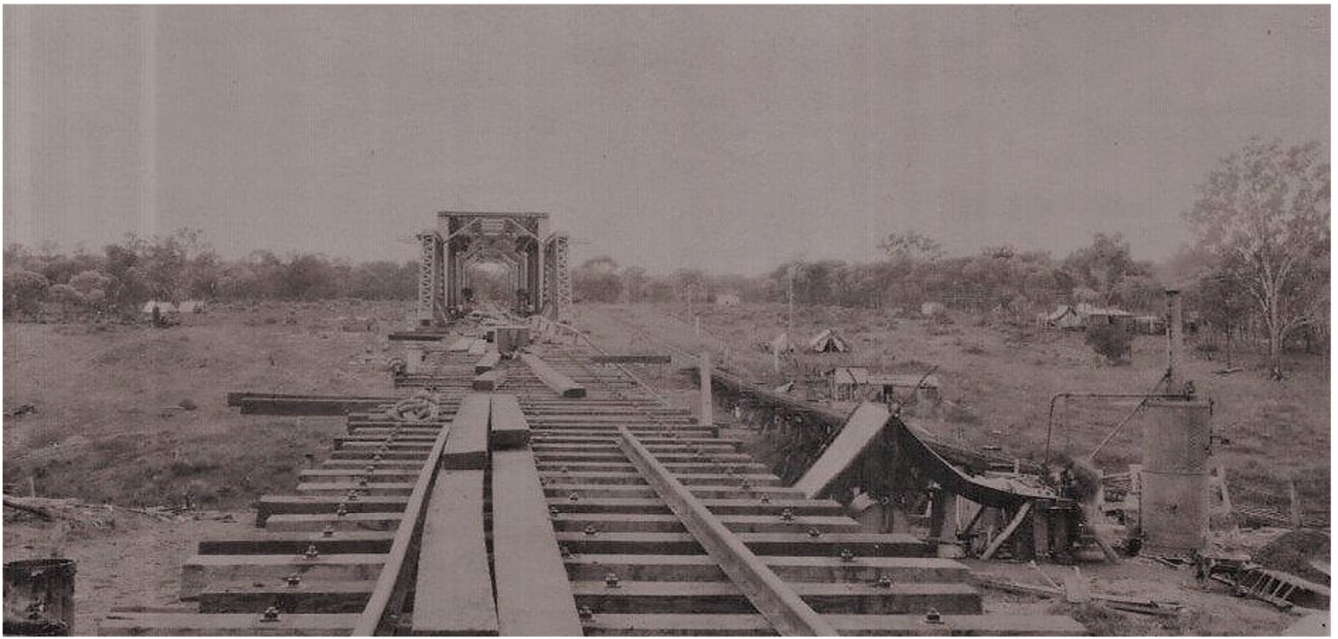
A red-hot rivet was driven through a drilled hole with a heavy hammer, then capped to clamp the rivet in place.

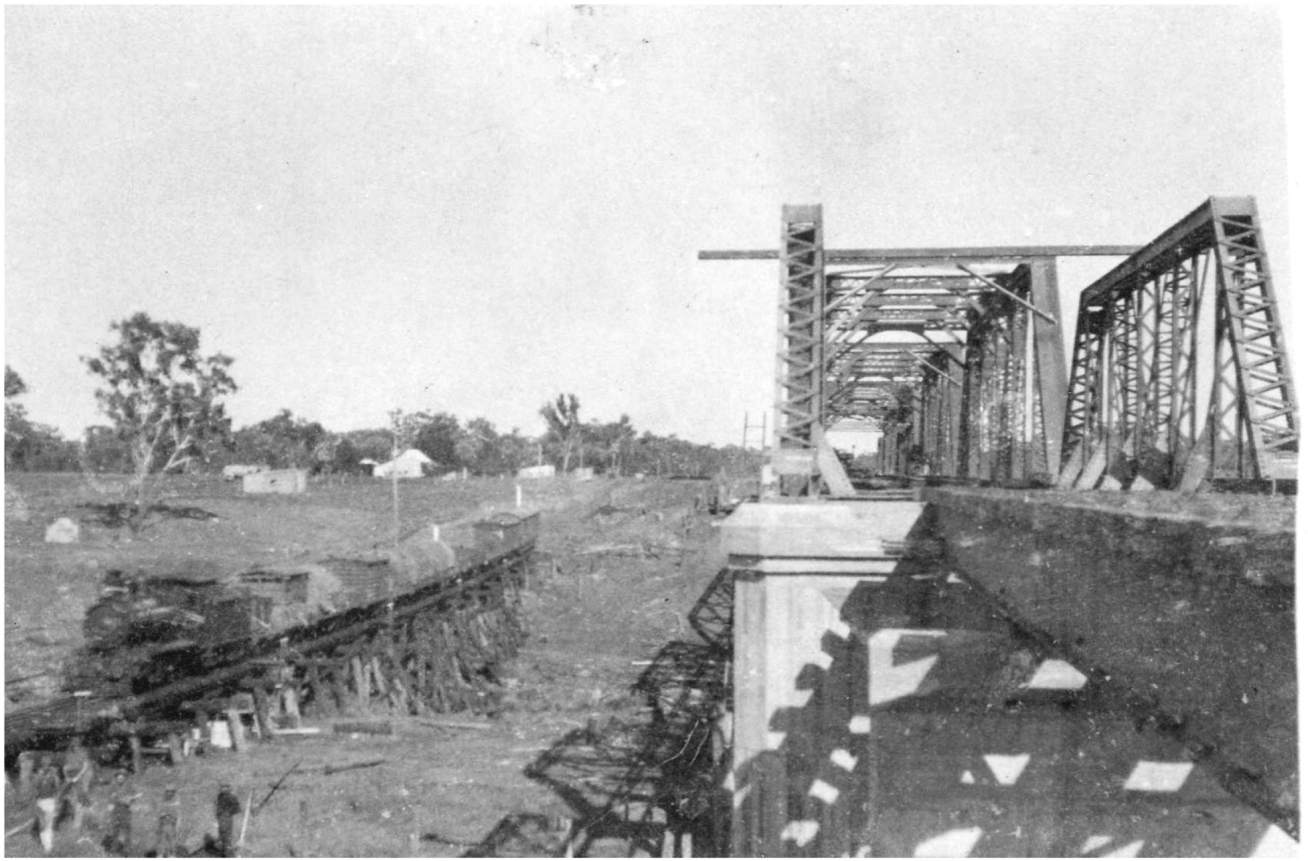
Just Looking at the photograph of the bridge; imagine how many rivets it would take to hold this massive bridge superstructure together.

When this bridge was built, it had a 12-ton axle load to carry the steam trains.

If you would like to see the plans for this bridge, go to the Whistle Stop Park Railway Station Museum in Comet.

During the construction of the bridge, the workers and their families were camped by the river on a black soil reserve near the bridge.

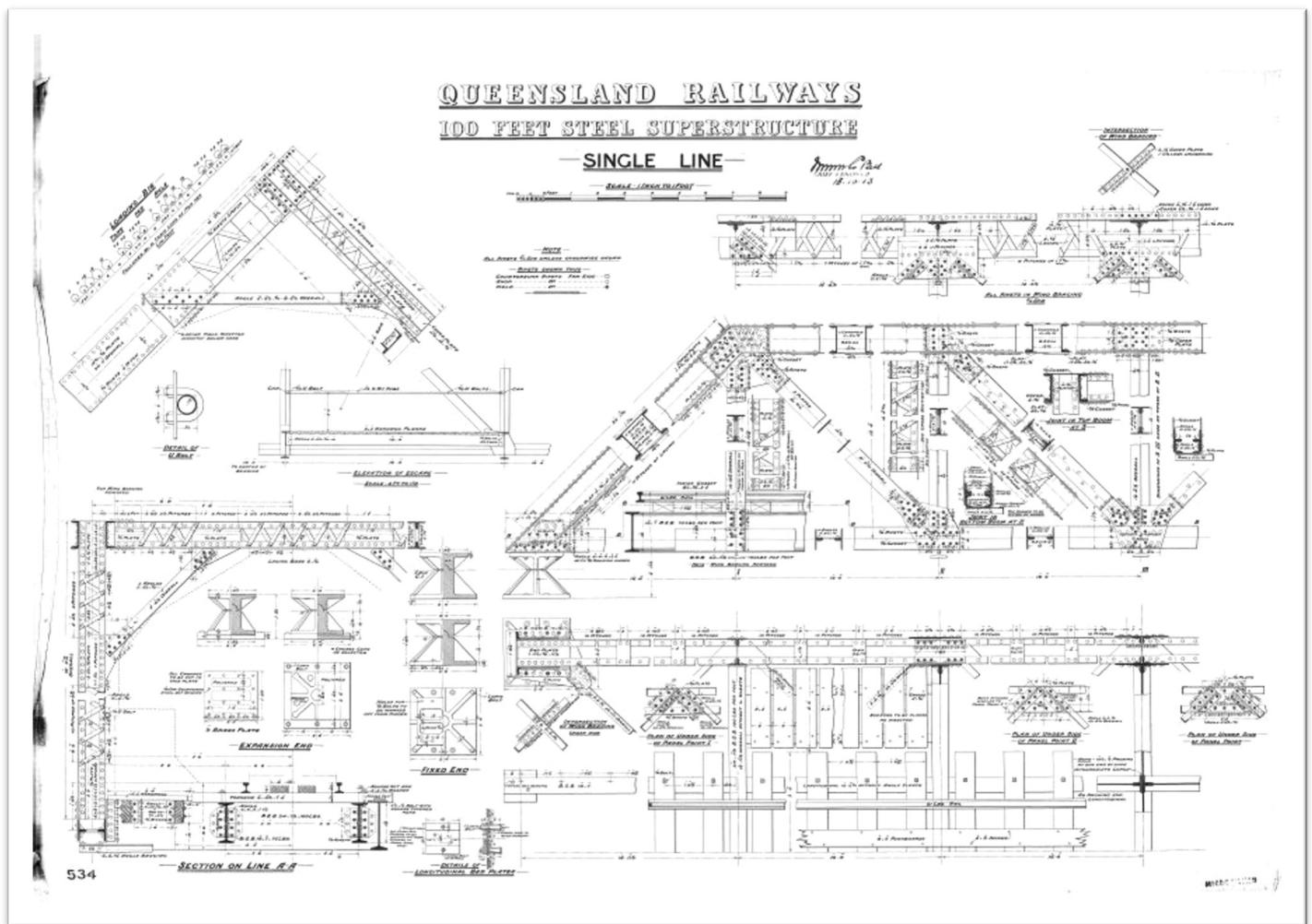




BALLARDS BRIDGE TO THE LEFT OF PHOTO, MAKES THE
STEAM TRAIN LOOK SMALL!

NEW STEEL BRIDGE TO THE RIGHT.





COMET STEEL RAIL BRIDGE PLAN

The all-important water for the job and the families was available from Ballard's well, which was situated some 50m upstream of the steel rail bridge, and from a deep-water hole downstream from the road traffic bridge.

Ballard had sunk this well to water his steam locomotives back in 1878. This well was opened again during the terrible 1969 drought, by Mr Tom Dunbar to water his cattle and horses.

It would have been difficult for the families camped on the black soil during wet weather. Imagine trudging through the heavy mud as there were no footpaths and perhaps the dirt roads had also turned to mud.

Let me draw your attention to the photo of the piers under construction? These show the hessian bagging draped over the pier to keep the cement damp while it is curing.

And take note of the workers standing on the top of the pier, no hard hats or harness to keep them safe. Workers must have been a lot hardier, and more responsible for their actions in those days.

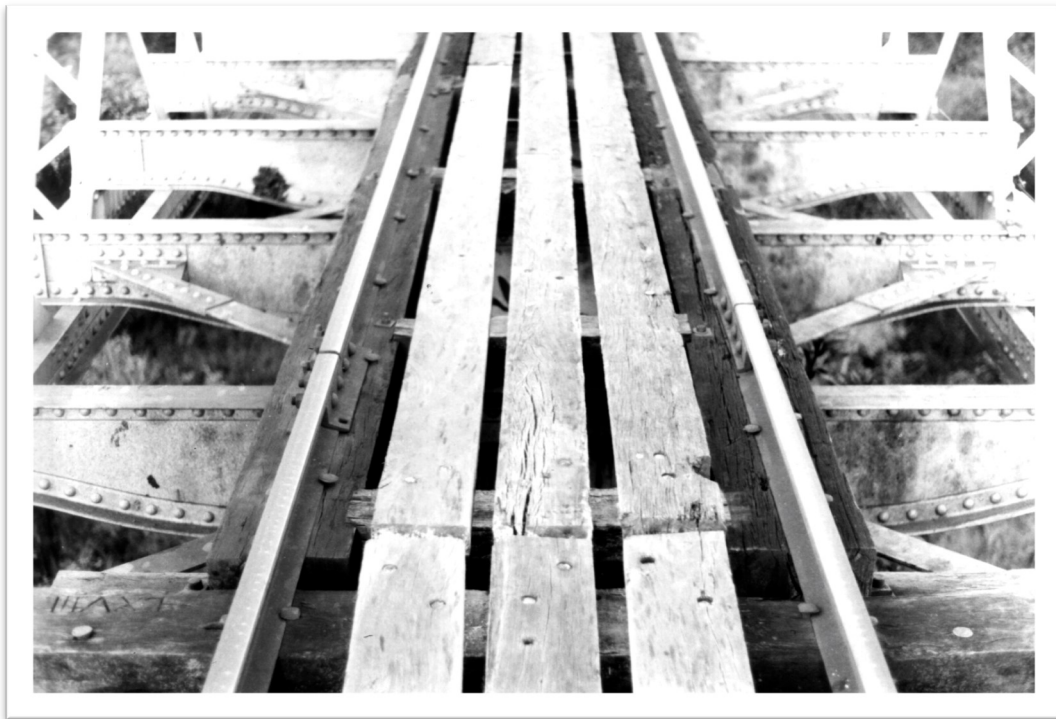
The bridge was completed in 1914 after some three years of hard work.



COMET STEEL BRIDGE UNDER CONSTRUCTION

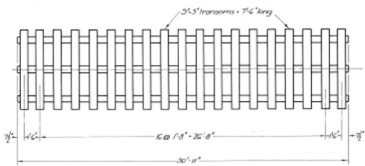


This bridge has seen several upgrades over the years. Greg Hallam, Queensland Railway Historian told me that, “It was slightly modified in the 1950’s, respacing the transoms to 20-inch centres”, that is 50cm.



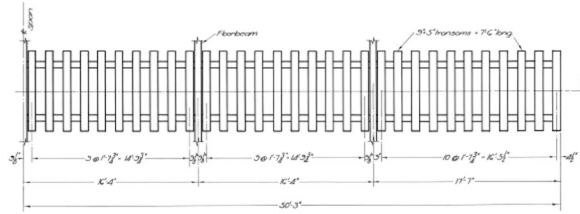
We know that later, substantial modifications were made for electrification, with the line now electrified as far as Emerald.

Greg Hallam also said that further modifications gave the bridge a 15.75 tonne axle load.



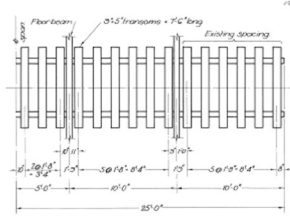
31 FT SPANS (STD DWG 415)

COMET RIVER BRIDGE
NOGGA RIVER BRIDGE



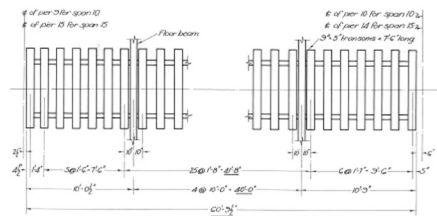
100 FT SPANS (DWG No. 474)

COMET RIVER BRIDGE
NOGGA RIVER BRIDGE



50 FT SPANS (DWG No. 512)

NOGGA RIVER BRIDGE



62 FT SPANS (DWG No. 453)

COMET RIVER BRIDGE



Notes —
1. New transom bolts should be in line longitudinally with existing bolts and not less than 5 centimetres therefrom.
2. Existing bolts should be retained where they are not more than 2" from the new transom centre line.

SCALE	LOADING	ALTERATIONS	DATE	REMARKS	C NO
1/2 inch = 1 foot					
C5140					

226.620 km
264.260 km

QUEENSLAND RAILWAYS
ROCKHAMPTON-EMERALD
COMET RIVER BRIDGE AT 142° 28' E
AND NOGGA RIVER BRIDGE AT 165° 52' E
RESPECING OF TRANSOMS TO 22 CENTRES

RECOMMENDED	STRESSES	C NO	No. OF SHEETS
S. C. O'Brien	122	122	1
BRIDGE ENGINEER	122	122	
DATE 10-1-53	CHECKED	122	122
APPROVED	122	122	122
17/8/53	122	122	122
CHEF ENGINEER	122	122	122
DATE 2-0-53	122	122	122

C5140
MICROFILMED



As the years roll on, the steam engines became heavier and able to pull greater loads.

In October 2005 six million dollars was spent to upgrade the Comet steel rail bridge.

The bridge, with its century old piers could now carry the heavy coal trains going to the shipping port of Gladstone from the Minerva Mine near Springsure.



3 BRIDGES / BALLARDS TIMBER RAIL BRIDGE, STEEL RAIL BRIDGE
UNDER CONSTRUCTION, TIMBER ROAD BRIDGE.



3 BRIDGES / STEEL RAIL BRIDGE, CEMENT ROAD BRIDGE
OLD TIMBER ROAD BRIDGE SADLY REMOVED.

To prepare the site for the required work, soil was dumped into the riverbed to create a bridge for vehicles, to track backwards and forwards at the work site.

The train lines at either end of the bridge were cut and put aside and later re-joined after the new sleepers had been laid.



An interesting discovery was made at the commencement of the work. After the river was drained of water in the immediate area, the old footings of Robert Ballard's 1878 timber rail bridge were exposed.



Another discovery was made some time ago, when a reject sill log was located at the site of Ballard's bridge. It was almost buried in silt. An officer from Queensland Rail verified the relic and had it transported into Comet for display at the Dig Tree Park.



Workmen added concrete collars to the smaller piers below and above ground to increase their load bearing capacity.

The old superstructure was removed from the bridge, and a new structure was assembled on site. This was raised by huge cranes onto the bridge above.



During this upgrade when cutting into the piers, the workmen found that glass beer bottles had been embedded in the concrete. They thought that the 1912 workmen had been drinking on the job.

However, it was revealed, that the bottles with the necks removed, had been used to create a void in the concrete.

A Lewis bolt was later grouted inside the bottle to secure the girders to the piers. Do you think that glass bottles would be used today?



BEER BOTTLES USED TO HOLD THE LEWIS BOLT IN PLACE

The work was done over two forty-eight-hour periods, when this section of the line was closed to rail traffic. On the first occasion it rained heavily and caused a great deal of inconvenience to the workmen.

The river flooded and the water washed away the soil embankment in the riverbed. This had to be replaced before the work could continue. The job was completed during the second forty-eight-hour closure.





The bridge now has an axle load of 20 tonnes to cater to the 4000-class diesel electric engines and the coal wagons which have a capacity of eighty tonnes.

The job was completed with the construction area around the bridge tidied. All the excess soil was removed and later the area was planted to grass.



This massive upgrade was a joint venture between Canstruct and Queensland Rail and the new steel superstructure was manufactured by Casa Engineering. Mr Roy Watts of Mackay was the Building Inspector overseeing the construction of the new superstructure and the clean-up of the work site.

This steel bridge and the steel bridge over the Nogoia River at Emerald, are truly remarkable for their workmanship in a time, when everything was achieved through manual labour without the help of high-tech machinery.

Both bridges are now over a century old and bear testament to the men who constructed these magnificent structures. Perhaps these remarkable bridges will still carry trains into the next century.

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Compiled by Rosemary McLeod, 2020.

Acknowledgements:

A huge thank you to Greg Hallam from Queensland Rail who has worked with Rosemary McLeod and Robyn Morawitz for many years supporting and bringing together the history of the Comet Steel Rail Bridge.

Photos:

National Library of Australia; State Library of Queensland; Rosemary McLeod collection; Trevor Kemp collection; Queensland Rail / Greg Hallam; Audry Bywater.