PROPOSAL TO NOMINATE AN EHRP ITEM OF INTEREST

Emu River Bridge

Photograph taken from the internet (Wikimedia Commons)

Item Name:	Emu River Bridge
Other/Former Names:	Emu River Bridge
Locality:	Burnie
Address:	Bass Highway Westbound Carriageway, Burnie
Co-ordinates	-41.066808, 145.924626

For Co-ordinates, use Google Maps, right click on spot, left click on numbers and paste into cell above.

Nominated by:	Graeme Nichols		
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EHA Branch:	Tasmania		
Current Owner:	Department of State Growth		
Original Owner:	Public Works Department (PWD)		
Current use:	Bridge serving the National Highway		
Former use:	Bridge serving the Bass (state) Highway		
Proposed use:	Bridge serving the National Highway		
Item Condition:	Good. Has been strengthened to meet the latest loading standards.		
Designer:	PWD Bridge Design Section		
Builder:	Public Works Department		
Started:	February 1939	**Completed:**	August 1940
History: **(100 to 600 words)**	The original bridge at this site was constructed in 1888. In 1908 the superstructure was replaced by steel truss girders and the roadway was widened to 15 feet (4.5m). The girders were test loaded with a traction engine pulling a chaff cutter estimated to weigh 20 tons and were found to be satisfactory for this loading.		

	By the late 1930s the steel span was unfit to carry contemporary traffic loads. Also, the roadway width was inadequate to serve the requirements of current traffic. The PWD considered it desirable to have a roadway width of 33 feet (10.0m) and two footways, plus a waterway area of 1,000 square feet (93 square metres) above highwater mark. The bowstring type arch, which was very popular in New Zealand at the time, was selected for the site to achieve a clear waterway opening. Around 1980 the Bass High was duplicated and a new bridge was constructed for eastbound traffic, with the existing bridge retaining the carriage of westbound traffic. Emu River Bridge was strengthened to National Highway bridge loading standards in 2005 (approximately).
Description: **(100 to 600 words):**	The superstructure of the current Emu River Bridge is a reinforced concrete bowstring arch with a 108 feet central span and two cantilever spans 17 feet long at each end. The footways have a clear width of 4 feet. The eastern abutment is founded on spread footings but the western abutment is supported by two 7 feet diameter cylinders 17 feet long driven to bedrock. Once in position the cylinders were cleaned out and filled with concrete. At the time of construction, the tops of the bowstring arches were joined by two concrete tie beams which spanned across the traffic lanes. These beams restricted the height available and they were frequently hit by over-height vehicles. Following investigation by the Bridge Design Section in the 1980s the tie beams were found to have no structural value and were removed.
Engineering Significance: (Refer Section 2.4 in 'An Engineer's Guide to the Conservation of Australia's Engineering Heritage')	Emu River Bridge is the only reinforced concrete bowstring arch bridge in Tasmania.
Webpage Summary: **(200 to 300 words)**	Emu River Bridge is a reinforced concrete bowstring arch built in 1939-40 by the Public Works Department. It has a central span 108 feet long and two flanking spans 17 feet long. It has a concrete deck spanning transversely between the bowstring arches. It replaced two earlier bridges constructed in 1888 and 1908.
Engineering Theme	Heritage Bridges
Heritage Listing: (State and/or Local Authority)	Tasmanian Heritage Register Reference 7411

Images: Two to four best quality originals (with caption and attribution information) to be provided for Webmaster to crop and size to the 0.3 to 1.5 MB size.

NEW BRIDGE OVER THE EMU RIVER

The modern bridge on the Bass Highway which spans the Emu River, about 1¼ miles from Burnie, and which was completed recently. It is a concrete bow-string arch bridge, the main span of which is 108ft. Its overall length is 143ft. The roadway is 33ft. 4in. wide, and the two footpaths each 4ft. 10in. wide. Its clearance from the river at high tide is 9ft. 10in.

Photo 1: Bridge Elevation
(Source of article unkown)

Photo 2: Northern elevation of bowstring arches
(Photograph from Indrek Tults)

Photo 3: Elevation of arches and adjacent footpath
(Photograph from Indrek Tults)