PROPOSAL TO NOMINATE AN EHRP ITEM OF INTEREST

Derwent River Bridge

Southern Bridge Elevation
(Photograph taken by Graeme Nichols)

Item Name:	Derwent River Bridge
Other/Former Names:	Derwent River Bridge
Locality:	Macquarie Plains
Address:	Gordon River Road
Co-ordinates	-42.708384767093946, 146.90965535989034

Nominated by:	Graeme Nichols		
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EHA Branch:	Tasmania		
Current Owner:	Department of State Growth		
Original Owner:	Public Works Department, Tasmania		
Current use:	Bridge serving state road		
Former use:	Bridge serving state road		
Proposed use:	Bridge serving state road		
Item Condition:	Good, has been strengthened to meet the latest loading standards		
Designer:	Robert Sharp		
Builder:	Public Works Department		
Started:	June 1934	**Completed:**	February 1936

History: **(100 to 600 words)**	The current bridge replaced an iron and timber bridge built in 1892. This bridge was prone to flooding and a letter to the Mercury dated 28 June 1889 recommended raising the bridge and increasing the span lengths. In 1919 the bridge was repaired by installing new piles and sheathing (The Mercury, 12 June 1919). In December 1933 the Parliamentary Public Works Committee began to consider evidence for the proposal to build a new bridge. The bridge incorporated composite steel girder and concrete deck spans as invented by the Public Works Department in collaboration with the University of Tasmania. The estimated cost of the new bridge was £7,000. Construction of the new bridge included the demolition of the existing bridge and construction of a temporary bridge on the upstream side. In May 1935 the temporary bridge was washed away in severe floods and was not replaced much to the consternation of local residents. Flooding was an ongoing problem during 1935 and work was suspended during winter. Flooding caused scouring problems around the piers. As a result, the bridge construction cost increased by 20 per cent. The bridge was opened to traffic on 14 February 1936. A strengthening project was completed on this bridge in October 2024. (Reference: Tasmanian Heritage Council Datasheet ID 11026 and Newspaper Articles sourced from Trove)
Description: **(100 to 600 words):**	The Derwent River Bridge is a seven span, single lane bridge 106.9 metres long and 5.5 metres wide. Each span is supported by two steel girders made composite with the reinforced concrete deck. The two end spans measure 12 metres in length, and the five internal spans are 16 metres long. The bridge is supported by reinforced concrete piers and abutments. The piers are a portal shape with two sloping octagonal shaped columns and two horizontal bracing members located at the pier head and above low flood level. Both abutments consist of a concrete sill founded on the sandstone abutment constructed in 1892 for a previous bridge.
Engineering Significance: (Refer Section 2.4 in 'An Engineer's Guide to the Conservation of Australia's Engineering Heritage')	This bridge was one of a series of early composite concrete deck and steel beam structures in Tasmania which utilised new technology devised by Allan Knight and Professor Alan Burn from the University of Tasmania. The Derwent River Bridge incorporated more connectors between the deck and the girders than previous bridges of this type, reflecting the advances in the technology over a two-year period. Composite construction resulted in a reduction in the required steel beam size and savings in materials. The use of composite concrete deck and steel beam structures, now a world-wide method of construction, was pioneered in Tasmania during the early 1930s.
Webpage Summary: **(200 to 300 words)**	The Derwent River Bridge is a seven span bridge 106.9 metres long with a composite concrete deck and steel beam superstructure. It was constructed between 1934 and 1936 and incorporated the latest design methods relating to composite beam and deck design. These methods of design were researched, tested and documented by the University of Tasmania in association with the Public Works Department. The bridge is supported by concrete piers and abutments. The eastern abutment is founded on a sandstone abutment constructed in 1892 for a previous bridge.

Engineering Theme	Heritage Bridges
Heritage Listing: (State and/or Local Authority)	Registered on the Tasmanian Heritage Register, THR Reference 11026

Photo 1: View looking east along the bridge deck
(Photograph taken by Graeme Nichols)

Photo 2: Pier elevation
(Photograph taken by Graeme Nichols)

Photo 3: Detail of girder bearings and pier crosshead
(Photograph taken by Graeme Nichols)