

Elderslie Bridge over Hunter River

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Item

Name of Item	Elderslie Bridge over Hunter River
Item Number	4301691
Type of Item	Built
Item Sub-Type	Iron Lattice Bridges
Roadloc	
Address	**** Regional Road 453 Singleton/Elderslie 2335
Local Government Area	Singleton
Owner	Roads and Traffic Authority
Current Use	Road bridge
Former Use	Road bridge

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Statement of significance

Statement of significance	<p>The Bridge over the Hunter River has significance because:</p> <ul style="list-style-type: none"> * it has been an important item of infrastructure in the history of New South Wales for over 100 years, * it was a technically sophisticated bridge structure for its time, * it has strong aesthetic lines, * it contributed significantly to the social and commercial development of the Hunter Valley region of New South Wales. * it is an good representative example of this type of bridge. <p>This bridge has been assessed as being of State significance.</p>
Date Significance Updated	15 August 2005

Description

Designer	John A McDonald
Builder	F J Carson
Construction years	**** - 1891
Physical description	The Bridge over the Hunter River is a major bridge. It is a three-span, high level Bridge over a wide river with a severe flood regime. It is one of the largest of John A McDonald's three-span continuous designs with spans of 43-55-43m. The overall length is 162m and it has a steel girder approach span at each end. The width between kerbs is 5.5m. The substructure consists of four tall cast iron diaphragm-tied piers.
Physical Condition and/or Archaeological Potential	Original condition assessment: 'The ironwork is in good condition. The timber deck is in fair condition.' (Last updated: 26/03/2001.) 2007-08 condition update: 'Good.' (Last updated: 17/4/09.)
Modifications and dates	****

History

Historical notes	<p>The Elderslie Bridge is an iron lattice bridge and was completed in 1891. It gave access to a very productive area of the Hunter Valley that had been isolated by a washaway of a low level bridge. The severe flood regime of the Hunter River dictated a new high level (19m above normal water), long span bridge. Iron lattice bridges are the most significant bridges of the colonial period. They were the major bridges of their time and carried the burgeoning road network across many of the major rivers in New South Wales. Whereas the construction of timber truss bridges extended over a long period, from the 1860s to the 1930s, and was associated with three prominent engineers in the Department of Public Works (Percy Allen, E M de Burgh and Harvey Dare), the construction of the iron lattice bridges was confined to a short period, from 1881 and 1893, and all were designed by bridge engineer John A McDonald.</p> <p>The lattice truss is an example of British bridge technology and they appeared in large numbers in the British colonies of Australia, particularly in New South Wales and Victoria and a few examples in the other colonies. These bridges were almost the exclusive choice for large rail and road bridges such that in New South Wales, 41 of these bridges (27 for roads and 14 for railways) were built between 1871 and 1893. Most were in the Hunter Valley and New England region.</p> <p>They were a more economical form of construction than the heavy cellular girder bridges, requiring only about half the amount of iron, but the iron was still an expensive import (rolling marks such as BUTTERLEY, SHELTON and BURBACH appear on iron elements of many of the bridges). In terms of costs, indexed to the year 2000, the iron lattice bridges would have cost around \$9,000 per square metre of deck whereas for timber truss bridges this unit cost would only have been around \$1,500. Despite the high initial costs of the lattice bridges, their durability and low maintenance costs have meant that in the long term they have been very cost-effective structures. The iron lattice bridges were, to the colonial period, what reinforced concrete bridges were to the period 1930-60 and prestressed concrete bridges have become since the 1970s.</p>
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Listings

Heritage Listing	Reference Number	Gazette Number	Gazette Page
Local Environmental Plan	-	81	3889
Heritage Act - s.170 NSW State agency heritage register			
Register of the National Estate			

Assessment of Significance

Historical Significance	The Bridge has a high historical significance as it is on a main road. It is a large bridge with long spans over a major river, indicative of the then burgeoning road network. It has historic associative value based on its ability to represent the endeavours of local settlers, with their need for safe and reliable access across the Hunter River. It is associated with bridge designer John A McDonald. It significantly helped open up the Hunter Valley region of New South Wales.
Historical Association	****
Aesthetic/Technical Significance	Aesthetically, the Bridge with its long lattice trusses and tall piers presents an imposing yet attractive reminder of the past. It has strong aesthetic lines that enhances the aesthetics of its environment. The curved ends give a sense of grace and elegance to this design. As such, the bridge has aesthetic significance.
Social Significance	Because of their numbers, the complete set of lattice truss bridges gain high social significance. The Bridge also has significance to the local community. The Bridge has contributed significantly to the social and commercial development of the Hunter Valley region of New South Wales.
Research Significance	The Bridge has high technical significance because of its integrity and good condition, which contribute to its ability to demonstrate aspects of technology, design and style in bridge construction. The Bridge is one of the largest of John A McDonald's three-span continuous designs.
Rarity	****
Representativeness	A fine representative example of an iron lattice truss bridge.
Integrity/Intactness	Intact.
Assessed Significance	State

References

Type	Author	Year	Title
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Study details

Title	Year	Author	Inspected by	Guidelines used
Study of Heritage Sig. of pre 1930 RTA Controlled Metal Road Bridges in NSW	2001	Cardno MBK		Yes

Custom fields

RTA Region	Hunter
Bridge Number	1661
CARMS File Number	****
Property Number	Bridge
Conservation Management Plan	****

Images



Elderslie Bridge - General Oblique View

