Victorian Heritage Database Report

Government Bridge over Creswick or Tullaroop Creek

Location:
Clunes-Creswick Road,, CLUNES VIC 3370 - Property No B7297

Heritage Status / Level of Significance:
State

Heritage Inventory (HI) Number:
Listing Authority: HI

Statement of Significance:
What is significant? Government Bridge is a large iron truss and stone bridge at the entrance to Clunes Township built by the Borough of Clunes. The bridge has a single span of 23 metres over a deep section of Creswick or Tullaroop Creek. The abutments date to around 1857, while the trusses were erected in 1896, and the deck and handrails are modern.
How is it significant? Government Bridge is significant for aesthetic/architectural, historic, and scientific (technical) reasons at a State level.
Why is it significant? Government Bridge is of historical significance to Victoria in demonstrating the role of goldfields wealth in contributing to the development of roads and engineering standards in Victoria in the

nineteenth century. The bridge was the main road entrance to this important early gold town from the 1860s (in its original laminated arch form), and played an important role in the communication and civic pride of the town throughout the second half of the nineteenth and early twentieth centuries. The reconstructed bridge reflected the brief revival of mining in the town at the end of the nineteenth century and an unusual optimism in the midst of the Great Depression. The bluestone abutments, and the evidence of the former laminated timber arch bridge, demonstrate the design standards and role of Public Works Department engineers in adapting English bridge models to Australia.

Government Bridge is one of only five lightweight metal truss design road bridges (along with Victoria Street Richmond, Brunton's Bridge, McMillan's Bridge and Pitfield Bridge), which were developed as a consequence of the theoretical and experimental engineering of the Melbourne University Engineering Department and its first Professor of Engineering W C Kernot from the early 1880s.

Government Bridge is also one of only a handful of bridges that demonstrate the use of laminated timber arches in bridge construction in the mid-nineteenth century. Others are Cressy, Pollocksford, Blue Bridge, Yendon, which were also converted to metal bridges. The continuous operation of the bridge through three major phases of building and modification contributes to its significance.

As a demonstration of both laminated arch and truss technology Government Bridge can provide evidence through further investigation, of the history of engineering and bridge design theories and technology in the nineteenth century. It therefore has a role in education, especially in conjunction with a number of other historical bridges in the district.

Government Bridge is of aesthetic significance both for its intrinsic design and for the setting. The rustic, but finely finished stonework of the abutments and wingwalls provide a suitable historic fabric for the entrance to Clunes, which is itself an exceptionally preserved nineteenth century townscape. The lightweight truss balances with the solid masonry to present a distinctive visual appearance from vantage points on the creek. The treed setting, which comprises mainly exotic (European) deciduous species, creates a pleasant and attractive framing for the bridge with foliage arching over the road and creek. This has been the character of the location since the early twentieth century when revegetation of the denuded mining landscape was undertaken as a civic project.

The bridge exhibits technical significance relating to two important engineering designs. The bluestone abutments demonstrate rare, if fragmentary evidence of laminated timber arch construction in the bearing surfaces for the arch springing. From these and other aspects of the abutments, it is possibly to deduce the form and dimensions of the arch span.

The metal truss is one of a small group of light weight riveted metal trusses which reflect the theoretical and experimental engineering designs of the Melbourne University Engineering Department and its first Professor of Engineering W C Kernot from the early 1880s. Beginning with the Victoria Street Bridge in 1880-84, designs were developed that incorporated scientifically calculated stresses and forces to determine with the most efficient use of materials and manufacturing techniques. Government Bridge stands in direct evolution from this bridge through Brunton's, McMillan's and Pitfield bridges. While it is not unusually long for a truss bridge, the combination of length with such a lightweight structure is an outstanding feature.

The bridge is rare in terms of the development of metal bridges in Victoria as it is one of few truss bridges built in the 1890s, and so is rarer than the more significant 1860s-80s examples.

The bridge is of social significance for the continuing awareness of local residents that the Government Bridge is part of the historical townscape of Clunes as well as a link beyond the town and tourist attraction, among the other goldfields relics.

Classified: 29/11/2004

Description

Government Bridge comprises a single span, riveted wrought iron or steel, double warren truss on bluestone abutments. The truss is composed of a light-weight angle iron and flat components in six panels. The bottom chords are formed of wide flat with double thickness over the centre section and single on the ends. The top chords are larger section angle. There are two lines of trusses connected by angle iron cross frames at the ends and horizontal pipes at the second and fourth bottom panel junctions.

The diagonals have double angle iron compression members at the outer two panels on either end, and single

compression members in the inner two panels, while tension members are flat bar on the outer and angle on the inner members.
The present deck is reinforced concrete cast in situ on steel deck sheeting and lain over RSJ cross girders. The cross girders extend beyond the deck and provide supports for the guard rail uprights. The guard rails are square section steel uprights and rails, with three bolted rails. Abutments are rock-faced or axe-cut bluestone in regular courses, with probably original lime mortar, pointed with cement mortar. The wingwalls have a slight and graceful curve and splay, with projecting pilasters at the abutments and end posts. A projecting string course is at deck level on the outside of the wingwalls and the coping stones project on the outer sides. All the corners, pilasters, string courses and coping have smooth chiselled drafted margins.
There are two marble commemorative stones on the northern abutment parapet walls. That on the west side reads:
"Laid by Mayoress Mrs W T Pitcher on 12 December 1896".
On the opposite side, a larger slab of marble is inscribed:"This Bridge was erected by the Clunes Borough Council Cr W. T. Pitcher, J.P., Mayor, Cr Jas Edwards, J.P., Cr John Pickford, Cr. S.J. Cooper, Cr. F. J. Miles, Cr. Thomas King, Cr. Wm. Barkell, Cr. Wm. Richards & Cr. Wm. Blackband, Harry E Sando, C.E. Town Clerk and Engineer, Jenkin Bros. Contractors, Clunes."
These are both set in smooth faced slabs on the end posts. As the end-posts on the opposite abutments have rock-faced finishes, it is likely that the stone was cut back to take the marble plaques.
Additional stepped bluestone pilasters have been constructed against the original 1860s abutments to carry the trusses. These have been keyed back into the abutments and there is evidence of some reconstruction of the abutments. The smooth 15 degree angled surfaces from the former arch springing are mostly evident, although one is missing, probably as a result of this reconstruction.Sockets for the former timber hand rails are evident on the inner end faces of the parapet walls. It is possible that the coping stones have been shifted out to remove the inner overhang, as the outer overhang is greater than that on the ends of the parapets.
CONTEXT
The bridge is located at the southern end of the main commercial area of Clunes on the road from Creswick and Ballarat. As such it is the main entrance to the town from the historically most important approach road. The road curves gently on either side creating an attractive "S" bend. Tullaroop Creek was planted with exotic trees in the late nineteenth century as part of landscape improvements following the devastation caused by the gold mines. The spread of these trees, predominantly elms) has created a wooded environment around the bridge. On the south side of the bridge a road side reserve has good examples of stone drainage culverts.

The bridge appears to be intact to its 1896 state, apart from the replacement of the former timber deck with reinforced concrete. The construction of the approach barriers will impact on the visual appearance but not effect the fabric of the bridge.

Heritage Study / Consultant	
Construction Date Range	
Architect / Designer	
Municipality	HEPBURN SHIRE
Other names	
Hermes number	71608
Property number	B7297

This place/object may also be State heritage listed. Check the Victorian Heritage Database. For further details, contact the local Council or go to Planning Schemes Online