Wallen Road Bridge

Location

Wallen Road HAWTHORN, BOROONDARA CITY

Municipality

BOROONDARA CITY

Level of significance

Included in Heritage Overlay

Victorian Heritage Register (VHR) Number

H0380

Heritage Overlay Numbers

HO487

Heritage Listing

Boroondara City

Statement of Significance

Last updated on -

Wallen Road Bridge was designed by Temperley, Edwards and Jenkins and erected by the Johnson & Co Tyne Foundry, Melbourne in 1881. Known originally as Richmond Park Bridge, then Swan Street Bridge, the bridge was jointly funded by the Victorian government, the Borough of Hawthorn and the City of Richmond as a transport link between the industrial inner suburbs and the developing eastern suburbs. A design competition was held with the condition that the cost would be limited to £5000. The utilitarian engineering evident in bridges on this part of the Yarra contrasts with the aesthetic design of bridges along the Yarra closer to the city.

The bridge was strengthened and widened in 1916 for use by electric trams operated by the Hawthorn Tramways Trust, a municipal undertaking comprising the councils of Melbourne, Richmond, Hawthorn and Camberwell. This was an extension of its tramway connecting Hawthorn and Camberwell to the city. The work involved an additional row of piers on each side carrying riveted mild steel girders of 4 feet depth web plates. The size and shape of the pier cylinders matched the original form along with similar angle steel cross bracing. The brick abutments and wing walls were also reconstructed. In this period the Hawthorn Tramways Trust erected a decorative steel gantry over the roadway to carry overhead wires for the trams. The gantry, along with those on

the Hawthorn Bridge (VHR H0050) which it closely resembles, was manufactured by H Wallace and Son Engineers.

In 1936-38 the bridge was again strengthened. At the same time an additional span was created on the Richmond side to accommodate the Yarra Boulevard which was constructed as part of an unemployment relief scheme during the Depression. Other works included the replacement of the deck with reinforced concrete on a series of RSJ beams over the 1916 piers. New mild steel RSJ girders replaced the 1916 riveted steel girders and a new six feet wide, cantilevered reinforced concrete footway built integral with the deck. The abutments and wing walls were again reconstructed in Hawthorn brick with the western abutment being relocated a further 30 feet from the river and a new pier of mild steel cylinders. Welding was used extensively for the new components and to reinforce the existing structure.

The bridge has cast iron and riveted wrought iron columns for the piers, riveted wrought iron box and plate girders for the main spans and a later 1938 reinforced concrete deck. The bridge has changed in appearance but retains its original basic form with the deep plate girder presenting a similar profile to the original box girders, the latter remaining as inner girders.

The ornamental tramway overhead gantry comprises A-framed steel uprights on either side of the road and a lightly curved main cross member of steel T section. The internal corners are decorated with curved steel strap to form spandrels which are in filled with decorative circles. The centre point of the cross member is decorated with an acroterion of steel strap in similar style. Small cantilevers on the outside carrying power lines are braced with a triangular steel web pierced with circular holes. Electric lights have been attached to the gantry.

How is it significant?

Wallen Road Bridge is of historical, scientific (technical) and aesthetic significance to the State of Victoria.

Why is it significant?

The Wallen Road Bridge is of historical significance as an important 19th century crossing of the Yarra River. Built to connect industrial inner Melbourne with the eastern suburbs, it reflects the industrial and suburban development of the 1880s boom period.

Wallen Road Bridge is of historical significance for its associations with the formative decades of Melbourne's electric tramway system. The 1916 modifications to the bridge and the ornamental tramway overhead gantry reflect the aspirations of the Hawthorn Tramways Trust, a significant municipal undertaking whose services contributed to the residential expansion of the eastern suburbs.

Wallen Road Bridge is of scientific (technical) significance as a rare example of a structure combining both cast iron columns and riveted box girders. It is the only surviving metal road bridge combining cast iron columns and box girders.

Wallen Road Bridge has the potential to educate in relation to engineering design and use of construction techniques and materials. The bridge demonstrates the progressive development of metal engineering technology over a period of 60 years, spanning the introduction of steel, welding, reinforced concrete and standard rolled beams, particularly with the extensive use of welding in the 1936-38 works.

The ornamental tramway overhead gantry is of aesthetic significance for its sophisticated early 20th century ornamental design, now relatively rare. As street furniture it demonstrates the high standard of infrastructure adopted by the Hawthorn Tramways Trust.

Hermes Number 149584

Property Number