Heritage Overlay No.: 008

Citation No.: 265

Place: Melton Viaduct

Other Names of Place: Melton Railway Viaduct
Location: Melton Reservoir, Melton
Critical Dates: 1886
Existing Heritage Listings: -
Recommended Level of Significance: STATE

Note: This citation contains only a statement of significance. It was commissioned after the heritage study had been exhibited. The Melton Viaduct was included in the schedule to the heritage overlay prior to the heritage study.

Statement of Significance:

The Melton Viaduct, opened in 1886, is of State heritage significance as a very large and visually distinctive wrought iron, lattice girder trestle bridge over the Werribee River (now Melton Reservoir). It comprises 18.3 and 9.1 metre spans, in a generally alternate arrangement, of total length 375 metres, and standing 38 metres over the Werribee River. Wrought iron small section iron was used to build tension trussed trestle legs, which supported four lines of rivetted wrought-iron deck-type double

lattice trusses. It has bluestone abutments and pier bases of coursed rock-faced bluestone with drafted margins. The larger half-piers, now usually submerged in the Melton Reservoir have sharp tapered cutwaters and curved coping at the tops. While designed to carry two rail tracks it has only ever been used as a single track line. Despite several alterations to its deck structure, it remains an outstanding example of a lighter structural design employing open metal trestle supports and metal truss girders.

The Melton Viaduct is scientifically significant at the State level (AHC F1). It demonstrates a technical accomplishment in the history of bridge construction during the nineteenth century. It is one of Australia's largest early metal bridges. When opened it was the second longest Australian metal truss bridge, after the 1862 Moorabool railway viaduct (396 metres) whose trusses were replaced with steel girders in 1918. It was also the third longest Australian metal bridge, after the Moorabool viaduct and the 1878 Echuca rail / road metal plate girder bridge (442 metres). Its advances in design and construction, while not revolutionary, represented important shifts in engineering and railway construction, including incremental construction with travelling cranes, prefabrication of components, and use of tensioning rods for stability and simplification of construction. It was a landmark in the transition of railway engineering, most noticeable in Victoria's 1880s railway boom, from very substantial and over-engineered British main-line railway practice (the Melbourne-Bendigo and Geelong-Ballarat lines) to efficient and cost-effective 'light line' all-metal railway engineering practice of late nineteenth century North America. It is one of the best, and possibly the first, Australian example of a lightweight metal truss and metal trestle bridge.

The Melton Viaduct is aesthetically and architecturally significant at the State level (AHC E1). Its slender metal frame trestles, bedded on low masonry piers, combine with metal trusses to create an exceedingly light, elegant, but still imposing structure. It is a dramatically scaled and distinctive landmark in an unusually attractive setting, spanning two arms of the Melton Reservoir and the intervening peninsula.

The Melton Viaduct is historically significant at the Regional level (AHC A4). The direct Melbourne to Ballarat railway link of which the Melton viaduct was the major engineering work contributed significantly to the history and development of Victoria. This new link reflected Ballarat's diversifying economy as well as the commercial and political influence of the metropolis. Construction of the bridge, and the associated large workers camp, were extensively photographed, documenting an important episode in local history. The railway enabled the development of new industries in the Melton area, notably the timber industry and a chaff industry of national importance, greatly facilitated the later transition of the Shire from a pastoral to a farming economy, and struck a major blow to Melton township's era as a wayside town servicing Ballarat road (especially coach) traffic.

The Melton Viaduct is socially significance at the Local level (AHC G1), as a landmark in the locality and to recreational users of the Melton Reservoir Park.

Overall, the Melton Viaduct is of State heritage significance.

Consultant: David Moloney (2009)