

Heritage Overlay No.: 054
Citation No.: 117
Place: Bridge over Kororoit Creek, Melton Highway

Other Names of Place: N/A
Location: Melton Highway crossing of Kororoit Creek (at 37 km post), Plumpton.
Critical Dates: Likely c.1859-60 (original arch span); 1870-71 (girder span); 1955 & 1968 (new deck).
Existing Heritage Listings: None
Recommended Level of Significance: LOCAL



Statement of Significance:

The bridge over the Kororoit Creek, Melton Highway, Melton, is significant as one of few nineteenth century stone road bridges in the Melton Shire, as one of the few early round arch road bridges in Victoria, for its combination of an arch and a girder span, and for its likely early date. Probably built c.1860, it had a girder span added in 1870, with some interesting and rare design features. In the 1950s and 60s the parapets and original timber superstructure of the girder span were replaced with a concrete superstructure, and the masonry parts of the bridge may also have been sympathetically widened. It is moderately intact.

The bridge over the Kororoit Creek, Melton Highway, is historically and scientifically significant at a LOCAL level (AHC A.4, F.1). It illustrates a contextually rare form of stone bridge construction, being one of few nineteenth century stone road bridges in the Melton Shire. It is associated with one of Victoria's primary early roads from Melbourne to Portland, with the original Ballarat goldrush road, and was the main coach road between Melbourne and Ballarat until replaced by the railway in 1889. It is a scarce and probably very early example of a round or Roman arch bridge in Victoria. It is unusual within Victoria for having both an arch and a girder span, which demonstrates the event of the 1870 superflood, which devastated bridges throughout Victoria, and prompted a significant review of bridge design in the colony. The different spans are also likely to express the funding of the original bridge by the colonial government in the gold-era, and the funding of the new span by local government in the farming era. While modifications to its superstructure have compromised the ability of the girder span to demonstrate these changes, the rare shaped bluestone corbels and bluestone paved floor contribute especially interesting and illustrative feature with research potential.

Overall, the bridge over the Kororoit Creek is of LOCAL significance.

Description:

The bridge over the Kororoit Creek, Melton Highway, Melton, has a large round arched (barrel vault) and side opening that was formerly spanned by a timber superstructure. The bridge is constructed of coursed random rubble bluestone and has an introduced concrete superstructure. Other early features include the projecting bluestone corbels that support the superstructure above, large bluestone cutwater wall, and cobbled bluestone creek floor.

The bridge was constructed in two stages. It is likely that the arched section of the bridge over the main watercourse was constructed first, and the girder section, and perhaps the massive cutwater, were added after the 1870 flood had washed away the bridge's embankments. The stonework on the arched span is coursed, but much less regularly than that in the girder span section, and its stone is also of an overall lighter hue, with many distinctly reddish stones.

The projecting stone corbels on the girder span are a highly unusual and probably rare (and perhaps even unique) feature of the bridge. Many nineteenth century bridges with bluestone abutments and timber girders contain small niches inserted into the abutments for the girders themselves, and sometimes nicely worked 'shoes' or housings for timber struts (or springing points for timber arches) to rest in the wall a metre or so below the top of the pier or abutment, but not projecting stone corbels. The shaping of the corbels - in a manner that is a direct copy of many timber corbels in the late nineteenth and early twentieth centuries - is even more interesting.

The concrete deck of the bridge was added in 1955.

Presumably the 1968 widening refers to the carriageway, but it is not clear whether stonework was added, or whether the widening was the cantilevered concrete deck (supported by large new concrete crossheads/abutments) on the upstream side. The carriageway width of the stone portions of the bridge appears wide for a nineteenth century bridge, so it is quite likely that they were widened. Such widening was common CRB practice for stone bridges at the time, enabling many historic bridges to be preserved in operational condition. If so it was undertaken in a typically sympathetic and successful manner. The evidence of non-original mortar pointing may be associated with these alterations.

History:

The bridge is situated on the Melton Highway crossing of Kororoit Creek, Section 16 Parish of Kororoit, through land purchased from the Crown by William Highett 18th October 1852.¹

From very early in Victoria's settlement this was the main land route between Melbourne and Portland. In those times most individuals would opt to travel by coastal vessel rather than overland for such a long trip, and the road was usually described in terms of the 'Keilor Bridge to Kororoit', and 'Kororoit to Pentland Hills' road. However in 1848 residents of nearby parishes noted that the 'Portland Road', together with the old Sydney Road, and the Mount Macedon Road, were 'the three greatest thoroughfares of the Colony'.²

Chief surveyor Robert Hoddle agreed that the 'Keilor to Portland' road was 'of great importance'.³ As early as 1839-40 he had instructed surveyors CJ Tyers and TS Townsend to establish the best line road between Melbourne and Portland.⁴ In 1847 he instructed surveyor WS Urquhart to mark the best line of road between Keilor Bridge and Bacchus Marsh, being part of the Portland Road.⁵ The reason for the link to Keilor is that this was the most downstream point on the Maribyrnong to have been bridged at the time. The only other crossings were Solomons Ford at Avondale Heights, and several punts in the Footscray area.

Urquhart produced several maps showing both the existing track and the 'line' that he then surveyed, which is the route of the present Melton Highway on which the bridge is situated.⁶ However the track that was actually used crossed Kororoit Creek a few hundred metres upstream, at a ford that was approached by a turn to the right as the escarpment into the bridge was reached. It continued up the side of a gully to the top of the plain, and continued westwards towards Pykes Station (later Melton) parallel to and about 400 metres northwards of the Melton Highway.⁷ Parts of this track can still be discerned in trackmarks, cart ruts, and small earthworks on the gully above the ford. The ford itself is black scoria, with some concrete aggregate added.

By 1852 this old ford crossing route was still appearing on maps, and appears to still have been the route actually taken.⁸ In fact an 1855 plan indicates that this Kororoit Creek ford crossing was about to become official; it showed 'the land proposed to be taken for a Road through Mr Highett's property Section 16 Parish of Kororoit'.⁹ This route was gazetted, and part of it can be seen today in the route of Highett Street.

¹ Parish Plan, Parish of Kororoit

² Minutes of Meeting, 6/8/1848, PRO, VPRS 2877

³ R Hoddle Report, 8/8/1848, PRO, VPRS 2872, Unit 2. (Few people travelled to Sydney by road in those days, sea passage being more convenient.)

⁴ Scurfield, G & JM, *The Hoddle Years: Surveying in Victoria, 1836-1853* (Institution of Surveyors, Canberra, 1995), pp.74-75

⁵ *ibid*, p.99

⁶ Central Plan Office Maps OR K7 and OR K8 (WS Urquhart, 1847): "Plan of the Proposed Line of Road from Keilor Bridge to the Kororoit Creek shewing the Present Track and the Measured Lands on both sides of the Line... being part of the line of road from Melbourne to Portland via Buninyong Burn Creek and the Grange." (This is approximately the present road to Portland; Buninyong became Ballarat, and Grange Burn became Hamilton.)

⁷ Eg, Historical Plan, OR K7 (Urquhart, 1847)

⁸ Eg:- Put Away Plan K74(2) (1852); Historic Plan RS 12(b) (1852)

⁹ CPO, Map PR 47 (1855)

However in 1859 Urquhart's proposed crossing, which is the crossing of today, was readopted, as evidenced in a:- 'Plan showing land proposed to be taken for a Deviation for the Melbourne and Ballarat Road through Mr Ingles' Land, Parish of Kororoit.'¹⁰

This date is significant, as in 1859 the Government Gazette advises that a contract had been let of the 'Erection of a bridge over the Kororoit Creek about 17.5 miles from Melbourne', on the 'Melbourne to Ballaarat main road'. The contract was let to James Nicol & Co, who had never previously performed a contract for government, at a cost of £2,654.13.0, charged against the Ballaraat District Division.¹¹

We can not be completely certain yet that this was the present bridge, which is situated at the 37 kilometre post (c.23 miles) from Melbourne. Such a discrepancy would not be impossible in the period. But it is also possible that this bridge was situated on the Kororoit Creek at Deer Park, as today's Western Highway was by then the official main road to Melbourne. As yet additional research been unable to provide further evidence that might resolve this question.

While it is likely, but not completely certain, that the bridge was built in c.1859-60, it is certain that it was in existence by September 1870. In that year bridges all over Victoria were devastated by a superflood. The Bacchus Marsh Express carried successive reports on its impact in the Melton district:

10th September 1870

'One of the severest floods ever witnessed by the oldest residents of this township took place on Thursday. The rain had fallen incessantly from Tuesday evening and the creek was gradually swelling until about 1 o'clock when it overflowed the banks a little above the Presbyterian manse, and in a few minutes the whole of the plain from the creek to the Roads Board Office was one massive sheet of water with a powerful current. Mrs and Miss Cameron had to escape from the manse to a house on higher ground and Constable Johnston with his wife and family had to escape for their lives to one of the hotels.

Mr H Miller, who had a garden which yielded him a comfortable living had fences, vegetables and all washed away and most of his provisions, etc. destroyed in the house. Goats, dogs and other animals, which were left on the premises, were drowned.

The mail coach which arrived at its usual time from Bacchus Marsh could not proceed on its journey until nearly four o'clock and about an hour after its departure, was obliged to return again as the bridge over the Kororoit Creek was unapproachable, the embankments being washed away for nearly 50 yards on each side, thus rendering any communication between Keilor Road and here almost impossible till the creek subsides. The bridge itself is still standing.'¹²

17th September 1870

¹⁰ CPO PR 104 (1859)

¹¹ Government Gazette, 1859, p.2806 (Contract No.82 of 1859).

¹² *The Bacchus Marsh Express*, 10/9/1870

‘The injury to the Kororoit Creek bridge is scarcely so great as it was thought to be last week the western approach being the only one washed away though considerable injury was done to the eastern one.

The force of the current which carried away the western approach must have surprised any spectator who may have chance to pass that way. Immense boulders of stone have been extracted from a rocky cutting leading to the bridge, a large number of which must exceed half a ton in weight each were carried a distance of three or four hundred yards and piled upon either side as though placed there with great difficulty by human hands.

The other bridges higher up on the same creek, on roads leading to The Gap and Sunbury were totally swept away and some embankments on the road to the latter place were destroyed. A large quantity of fencing was carried away and doubtless other disasters of which I have not heard.

The probable cost of repairing the damage caused by the flood, so as to prevent the probability of similar disasters from future floods, is estimated at not less than £1000, so the Bacchus Marsh Roads Board is not the only unfortunate body on this occasion. It is anticipated that a special rate of 9d in the pound will have to be made so as to enable the Board to partially execute the necessary repairs during the on coming year. The question of the special rate would doubtless cause a commotion at the next Board meeting, the majority being landed proprietors, but they must bear in mind the smallest ratepayer in this district will feel the burden of an increase in their rates as much as they. Their income from the increase in property enables them to bear the additional outlay.’¹³

By October Richard Lethbridge, the Melton Shire Secretary and Engineer, was advertising tenders for major repairs to bridges, in particular the Keilor Road one:

‘The Melton District Road Board will receive tenders until 12 noon on Wednesday, the 16 November (1870), for constructing new barrier opening and bluestone masonry repairs to the bridge over the Kororoit Creek on the Ballaarat main road; constructing new barrier opening and masonry repairs to the bridge over the Western Kororoit Creek near John Burke’s property; constructing a culvert and masonry repairs to the embankment on the Monmouthshire to Sunbury road. Plans and all particulars at this office. Neither lowest nor any tender necessarily accepted. 5% preliminary deposit to be enclosed with tender.’¹⁴

‘Melton and District Road Board will receive tenders until 11a.m. on Thursday 1 December 1870, for constructing an invert arch in bluestone under the Greenhills bridge and from persons willing to undertake the position of Overseer of Works at the bridge over the Kororoit Creek. Particulars at this office. Neither lowest nor any tender necessarily accepted.’¹⁵

It appears that the western approach embankment to the bridge was to be replaced with a new bluestone span. In the wake of the 1870 flood shire engineers were examining surviving timber bridges as models for replacements and rethinking their bridge design. One of the most popular results, a blend of durability and economy, was the combination of masonry abutments, piers and wingwalls with either strutted-stringer timber spans or iron girders

¹³ *The Bacchus Marsh Express*, 17/9/1870

¹⁴ *The Bacchus Marsh Express*, 20/10/1870

¹⁵ *The Bacchus Marsh Express*, 26/11/1870

supporting traditional timber decks and barrier rails.¹⁶ As is evident in the newspaper reports, for the Melton ratepayers who would be financing the new span economy was a major issue (probably in contrast to the original bridge, which was a State government project for a main road). The design of the new span was typical of new bridges that were being constructed all over Victoria.

The masonry abutments of the new span incorporated shaped stone corbels (in the manner of some late nineteenth century timber corbels) for the support of girders (almost certainly of timber) which spanned approximately 6 metres. An undated photograph of the 'old bridge over Kororoit Creek on the Keilor Melton Road' shows the bridge prior to the CRB modifications.¹⁷ While the original bridge had a stone pediment, the new span included timber barrier railings. In 1928 it was reported that flood damage had left two beams 'broken' - obviously timber beams.¹⁸ This portion of the bridge would have had a timber deck.

In 1954 the CRB slightly altered the alignment of the road reservation on the west side of the creek to make the curve less sharp, and earthworks were probably undertaken at this time.¹⁹

In 1959 Crs Wallace and Trethowan moved that 'the parapet on Keilor Road Bridge over Kororoit Creek be reduced to 3 feet in height.'²⁰ This was a period in which farming were regularly lobbying to have rails and pediments removed or lowered to allow the passage of modern farm machinery.²¹

CRB plaques on the bridge advise that a concrete deck was added to the bridge in 1955, and that in 1968 the bridge was widened c.2 metres on the upstream side.

The original round arch bridge had a solid stone pediment in three sections, raised over the arch section of the bridge, and with a string course below. The remains of the lower side sections of the string course are visible today, but the pediment and the central string course have been removed.

Thematic Context / Comparative Analysis:

Shire of Melton Historical Theme: Transport

Comparable Examples:

The only other round (or Roman) arched stone bridge in the Melton Shire is the Djerriwarrh Bridge that is included on the Victorian Heritage Register. It has an elevated single arched design and is a rare example of sandstone bridge construction in Victoria. It is also one of the State's earliest surviving road bridges. Having been superseded, it is much more intact than the Melton Highway Kororoit Creek bridge.

¹⁶ Don Chambers, 'Historical Overview of Timber Bridges in Victoria' (National Trust Timber Bridges Study, 2002)

¹⁷ Starr, J, *Melton: Plains of Promise* (Shire of Melton, nd, c.1985), p.134.

¹⁸ *Melton Express*, 21/2/1929

¹⁹ Parish Plan, Parish of Kororoit

²⁰ *Melton Express*, 1/8/1959

²¹ Eg, at 'Minns Bridge' over the Toolern Creek, and the dry stone causeway over a gully off Finches Road.

The other known examples of round, or ‘Roman’, arch road bridges in Victoria are: Corkscrew Bridge near Aitkens Gap (1862), Blampied (1883, the only known example of a road bridge with more than one round arch), and at Little River (for which O’Connor does not provide details).²²

The incorporation of two types of spans is expressive of the great September 1870 flood, which devastated Victorian bridges, and engendered a state-wide review of municipal bridge design. The full impact of this event is compromised by the modifications of the 1950s and 60s, which have removed the timber deck, girders and barriers, but enhanced by the unusual, probably rare, features of this extension: the shaped stone corbel, and the bluestone pitched stream floor.

Condition:

Good

Integrity:

Moderately intact

Recommendations:

Recommended for inclusion in the Melton Planning Scheme Heritage Overlay.

Recommended Heritage Overlay Schedule Controls:

External Paint Controls:	<i>Yes</i>
Internal Alteration Controls:	<i>No</i>
Tree Controls:	<i>No</i>
Outbuildings and/or Fences:	<i>No</i>

Other Recommendations:

- A future state-wide heritage survey of Victoria’s surviving masonry arch bridges might result in the significance of this bridge being reviewed upwards.

²² There has as yet been no typological heritage study of masonry arch bridges in Victoria, and this list is derived from the reports produced by Professor Colin O’Connor during his Australia wide survey of bridges for the Australian Heritage Commission.



The girder span, showing the shaped bluestone corbels, bluestone paved bed. Concrete girders have replaced the original timber ones. The round arch span is adjacent.