

KOORINGA AND REDRUTH BRIDGES, BURRA

After the South Australian Mining Association ceased mining operations at the Burra Burra mine in 1877, the Burra settlement entered the post-mining era. It was incorporated as a town in 1876, with a Mayor and Council.

The iron bridges across the Burra Creek were constructed during 1878 and 1879 by the Midland Road Board, one of several local Boards of Main Roads responsible for the roads and highways in the settled parts of the colony. The bridges replaced less durable timber laminated arch bridges over the creek which in the case of Redruth, ". . . had got quite rotten and unsafe".

The Kooringa Bridge was opened to traffic on May 22, 1879. It had cost 2,500 pounds and was built by the contractor, C. Davies. There was no formal ceremony for its opening, stemming from the fact that there had apparently been some problems with the contractor. On the other hand, the Redruth Bridge was opened on 12 December, 1879 by the Chairman and members of the Midland Road Board and a large party of civic dignitaries from the town and district councils. The Redruth Bridge cost 1,400 pounds to build and the girders for the bridge were supplied by James Martin and Company, Gawler. The contractor was Mr. Duncan Grant who used the design of the Chairman of the Midland Road Board, a Mr. Morris, presumably an engineer.

The design of the bridges is based on a bow string truss. The earliest bridge of this design, according to the Institution of Engineers' Heritage List, was actually a railway bridge across the Torrens River, near Port Road. This bridge was built in 1876 by James Martin and Co., Gawler, also. Other road bridges were also built based on the bow string truss design, namely the Merriton Bridge over the Broughton River and Dunn's Bridge over the Wakefield River, both constructed in 1880.

The Kooringa and Redruth Bridges were originally finished with jarrah planking but the Highways Department replaced the timber with reinforced concrete decking during the 1930's.

SOURCES

Burra Record May 22, 1879
 September 6, 1933

Observer December 20, 1879

Ian Auhl Burra and District A Pictorial Memoir
 (Adel, 1975) photos 93 and 94

Institution of Engineers, Australia: Engineering Heritage List for South Australia.

South Australian Highways Department, Archives Section (Mr. Alan Hartley).

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|---------------------------------------|---|---------|--------------------------------|----|----|----|----|
| South Australian Heritage Act 1978-80 | Register of State Heritage Items ITEM EVALUATION SHEET Buildings and Structures Item REDRUTH BRIDGE, BURRA | | | | | | |
| Age 1879 | Theme | | Office 6630-10413 | | | | |
| Period 1852-1883 | Subject Transportation - Land, Road, Route | | Region Mid North | | | | |
| Building Type Bridge | Style Bow-string Truss | | Status N.Tr. (RL) N.E.R. | | | | |
| <u>Qualitative Data</u> | | | <u>Grading</u> | | | | |
| Component | | Comment | E | VG | AG | FP | NA |
| <u>History</u> | | | | | | | |
| 1. Context: | The bridge was constructed in 1879 to replace a timber laminated arch bridge in poor repair. It lay on the main road between "the Burra Railway Station and the Eastern Plains" and was opened formally on December 12, 1879. | | * | | | | |
| 2. Person/Group: | The Midland Road Board was responsible for the organisation of tenders and contracts for the bridge's construction. | | * | | | | |
| 3. Event: | Not yet established. | | | | | | * |
| <u>Architecture/Engineering</u> | | | | | | | |
| 4. Engineer/ Builder | Mr. Morris, then Chairman of the Midland Road Board. Contractor: Duncan Grant Supplier: James Martin & Co., Gawler | | * | | * | | * |
| 5. Design: | Bow String Arch Truss with separate vehicular and pedestrian access. A functional structure with no frippery. | | | | * | | |
| 6. Construction: | Iron Bow-string truss with shaped stone abutments. | | | * | | | |
| 7. Interior: | Not applicable. | | | | | | * |
| 8. Representation: | Excellent example of iron bow-string bridge of which only four remain in the State. | | * | | | | |
| <u>Environment</u> | | | | | | | |
| 9. Continuity: | Important part of Burra's road network. Construction method and engineering solution contributes to the continuity of Burra's functional atmosphere. | | * | | | | |
| 10. Local Character: | Same as for Note 9. | | | | | | |
| 11. Landmark: | The bridge is a dominant landmark, clearly visible from major access roads. | | * | | | | |

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| South Australian Heritage Act 1978-80 | Register of State Heritage Items ITEM EVALUATION SHEET Buildings and Structures | | | | | | |
| Item | | REDRUTH BRIDGE, BURRA | | | | | |
| Component | Comment | Grading E VG AG FP NA | | | | | |
| <u>Integrity</u> | | | | | | | |
| 12. Alterations: | Original timber decking has been removed and replaced with reinforced concrete in 1944. Some web members have also been replaced. | | * | | | | |
| 13. Condition: | Bridge is in reasonable condition. | | | * | | | |
| 14. Compatibility: | The bridge has been in continuous use since 1878. | * | | | | | |
| <u>Supplementary Information</u> | | | | | | | |
| Adaptation: | The structural/engineering form of the bridge should not be altered but the paving material could be renewed as it is not original. | | | | | | |
| Interpretation: | The Redruth Bridge is an important element within an overall interpretation scheme for Burra as well as other engineering or transport themes. | | | | | | |
| Current Situation: | It appears that the Highways Department is looking for alternate traffic routes and thus retain the bridge. Corrosion seems a problem which needs urgent attention. | | | | | | |
| Evaluated By | Lothar Brasse Consultant Architect | Kate McDougall Consultant Historian | Date | | | | |
| Reviewed By | Ivar Nelsen | | Date | | | | |
| South Australian Heritage Committee Categorization | | | Date | | | | |



FILM 19
No 2

REDRUTH BRIDGE FROM NORTHEAST

BURRA
14-12-78



Engineering works and stone constructions (especially by Cornish masons) are prevalent within the Burra State Heritage Area. Three bridges and two stone walls have particular significance as State Heritage Places entered in the South Australian Heritage Register.

Mine Bridge

Market Street, Burra (opposite Peacock's Chimney & the Burra Mine Site entrance)
SAHR 10021 – confirmed as a State Heritage Place 8 November 1984

This single-arch stone bridge was completed in 1868, during Burra's prosperous mining period, and provided a link between the townships of Koorunga and Redruth. It also helped to channel the water produced by the copper mining operations, which entered Burra Creek via Mine Creek.

Mine Bridge was built under contract for the Central Road Board by Messrs Tiver and Woollcott. On 8 May 1868 the Register reported that the "bridge is progressing favourably and the work certainly does great credit to the contractors" ... This followed an observation that

The Burra Mine will soon wear a livelier aspect as the engine house to the new shaft is to be at once erected. From the fact that so expensive a piece of work has been ordered we infer that the mine will shortly resume underground operation.



Eastern parapet, Market Street, 2005

Earlier, in December 1867, the local correspondent had complained that the Central Road Board had "not kept their promise to complete the road near the Mine Store and making the bridge. It was left off very abruptly and is in a very dangerous condition for anyone passing in a cart on a dark night."

With the widening of the main road, sections of Mine Bridge have been removed at various times and the creek bed has been backfilled on the western side. Only the eastern parapet and arch detailing now survive, with a concrete pipe channelling water from the mine site to the west.



Eastern arch and parapet, 1994



Creekbed and surviving stone arch, 2005

Kooringa Bridge

Commercial Street, Burra

SAHR10006 – confirmed as a State Heritage Place on 6 May 1982

The Kooringa Bridge was constructed during 1878-79 at the beginning of the post-mining period of Burra's development. It was one of five riveted, wrought iron, bow-string trusses built in the northern districts by the Midland Road Board – others were at Redruth (see below), Merriton, Balaklava and Undalya.

The bridge consists of two 18-metre arched spans, on two metal pillars sunk into the creek bed. It was originally finished with jarrah planking, but the Highways Department replaced this with concrete in the 1930s.

This bridge links the eastern and western areas of Kooringa, and replaced an earlier timber structure at Bridge Street (one street south) that had been carried during a flood in March 1877. The Kooringa Bridge originally cost £2,500 and was opened to traffic during May 1879, but there was no official ceremony.



*Burra Creek in flood at Kooringa 1915
Photo B 27686: State Library of SA*



Kooringa Bridge, 2005



*Across Kooringa Bridge to
Commercial Street, 2005*

Redruth Bridge including Stone Abutments & Walls

Ludgvan Street, Burra

SAHR 10413 – confirmed as a State Heritage Place 24 March 1983

The Redruth Bridge, constructed at the same time as the Kooringa Bridge (see above) is an example of a riveted iron bow-string truss. It was officially opened at a ceremony on 12 December 1879 by the local representative of the Midland Road Board, Captain Killicoat, and a large party of civic dignitaries from the town and district councils.



Footpath, Redruth Bridge, 2005

The Redruth Bridge cost £1,400 to build, and replaced an earlier timber laminated arch bridge that had become quite rotten

and unsafe. The bridge was designed as an iron bow-string truss with shaped stone abutments, and provided separate vehicular and pedestrian access. Like the bridge at Kooringa, the Redruth Bridge was originally finished with jarrah planking, which was replaced with reinforced concrete in the 1930s.



Redruth Bridge, 2005

**Stone Wall located on the east side of Commercial Street and Ware Street
cnr Commercial & Ware Streets, Burra**

SAHR 10435 – confirmed as a State Heritage Place 8 November 1984

&

**Stone Wall located on the west side of Commercial Street
Commercial Street, Burra**

SAHR 10436 – confirmed as a State Heritage Place 8 November 1984

Much of Burra's charm and interest is reflected in these well-constructed stone walls which, together with remaining miners' cottages and other buildings up to the late-1870s, signal the Cornish influence within the town. The construction dates for both walls are elusive, but early sketches of Burra suggest that they were built after 1870.



Corner Commercial (east) and Ware Streets, 2005



Wall on Commercial Street (west), 2005

The wall on Commercial Street's east side is an L-shaped one, on the corner of Ware Street. It stands near the remains of Burra's first Roman Catholic chapel and school (late 1840s).

The wall on the west side of Commercial Street stands near 'The Paddock', where the bullock teams were pastured, opposite the original Burra Hotel and by the main southern entrance to the town.



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Government of South Australia
Department for Environment
and Heritage



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REDRUTH BRIDGE FROM NORTHEAST

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VIEW WEST OVER REDRUTH BRIDGE

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REDRUTH BRIDGE

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