PLAQUING NOMINATION
FOR THE

1883 LIFT BRIDGE, NORTH BOURKE, NSW

AS A

NATIONAL ENGINEERING LANDMARK



This historic bridge on the Darling River is the oldest moveable span bridge in Australia

Prepared by Don Fraser for the
Engineering Heritage Committee
Engineers Australia, Sydney
and the
Bourke Shire Council
October 2004

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Plaque Nomination Form

The Administrator
Engineering Heritage Australia
Engineers Australia
Engineering House
11 National Circuit
BARTON ACT 2600

Name of Work: **North Bourke Bridge**

The above-mentioned work is nominated to be awarded a

National Engineering Landmark

Location, including address and map reference:

Mitchell Highway, Darling River

Owner (name and address):

Bourke Shire Council

The owner has been advised of this nomination, and agreement identified:

Letter attached

Access to site: **Open to the public**

Nominating Body: **Engineering Heritage Committee, Sydney**

Chairman ***Glenn Rigden***

Engineering Heritage Committee Sydney

Date: **September 2004**

The Council of The Shire of Bourke

Council Chambers, Bourke, N.S.W. 2840
29 Mitchell Street
P.O. Box 21, Bourke, N.S.W. 2840
Telephone (02) 6872 2055. Fax (02) 6872 3030
Email: bourkeshire@bourke.nsw.gov.au

Please address all communications to the General Manager

Your Ref.

Our Ref. SJR-04-KH-185-B6-1

OF ENGINEERS AUST.
SYDNEY DIVISION
10 AUG 2004
FILE.....

3rd August 2004

The President
Sydney Division
Engineers Australia
Eagle House
118 Alfred Street
MILSONS POINT NSW 2061

Dear President

Re: Nomination of Bourke Lift Bridge for an award under Engineers Australia Historic Engineering Plaquing Program

Situation in North Bourke is an historic lift bridge which was erected over the Darling River in 1883. A new road bridge recently replaced the old structure which was transferred to the ownership of Bourke Shire Council by the Roads and Traffic Authority (RTA).

The old bridge is presently undergoing refurbishment to ensure its continuing existence as an icon of the heritage of Bourke and its involvement in the Murray-Darling riverboat trade. The work on the bridge is expected to be completed towards the end of 2004 and it is anticipated the occasion will be marked with due ceremony.

From recent discussions by Cr Walter Mitchell with the Secretary of the Heritage Committee of EA Canberra Division, I understand that Engineers Australia has a program of plaquing significant historic engineering works and that several bridges similar to the Bourke Bridge have received awards under the scheme. It seems appropriate that the Bourke Bridge be nominated for such an award and that if successful, the plaque be unveiled during the end of refurbishment ceremonies.

I therefore request that your organization take action to nominate the Bourke Lift Bridge for an award under the Historic Engineering Plaquing Program.

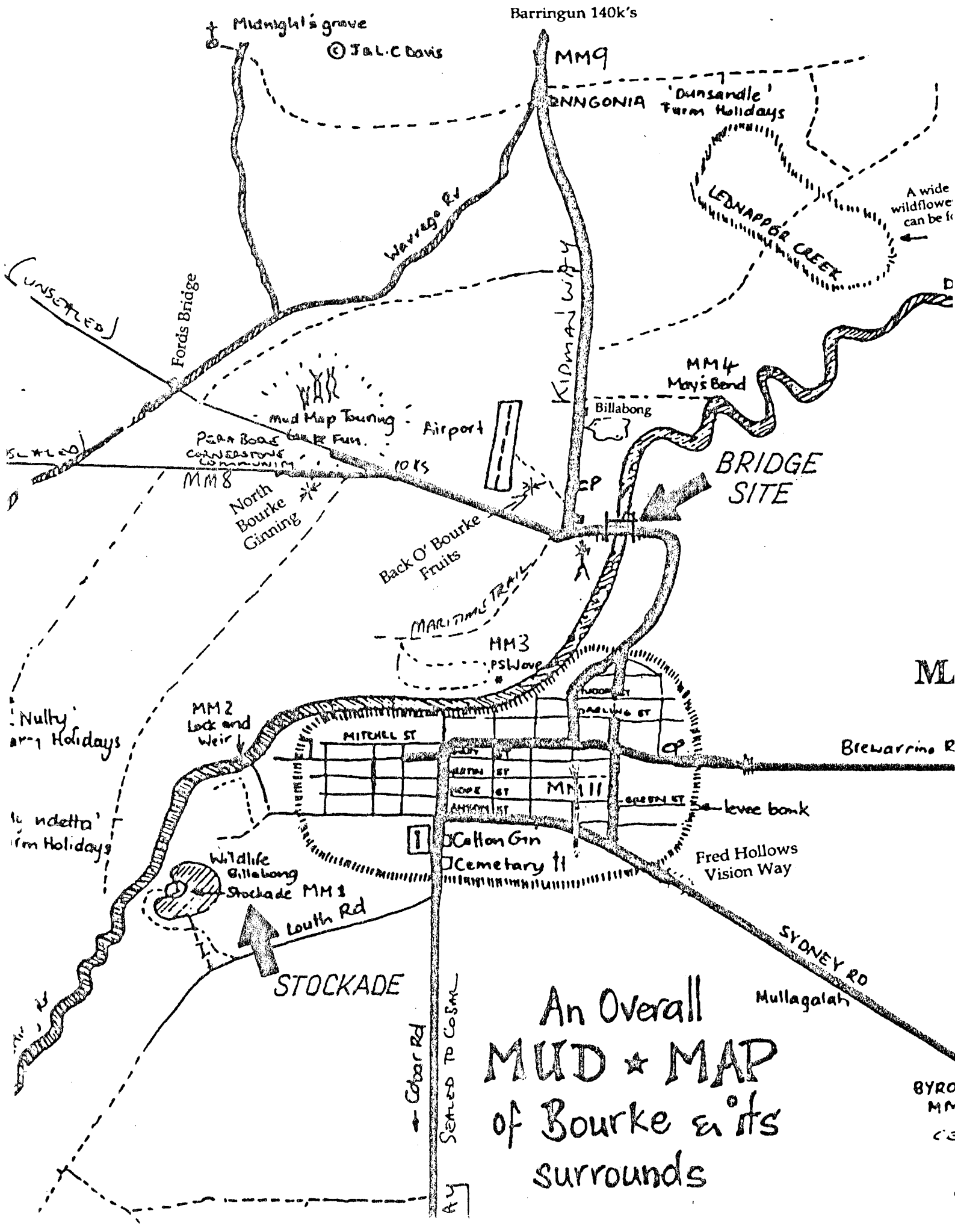
In making this request I understand Engineers Australia will meet the cost of the nomination process and the supply and delivery of the plaque. Local authorities will be responsible for mounting the plaque and its ongoing care, organising the unveiling ceremony and meeting associated costs.

Yours faithfully

Ken Croskell
GENERAL MANAGER
CC:
Mr Owen Parry
Secretary, Engineering Heritage Committee
Engineers Australia Sydney Division
5/24 Keith Street, DULWICH HILL NSW 2203


Peera Peera Poolanna L.
Clifton Hills
Lake Eyre Basin
Oodnadatta
Mt Dutton
SOUTH
Warburton
L. Eyre
Coopers Cr
Yamma Yamma
McGregor Ra
Quilpie
Charleville
Morven
Mitchell
Roma
Miles
Wyandra
Warrego
Sunnybank
Thargomindah
Darling Downs
Dalby
Sandgate
Brisbane
Moreton B
Cooroy
Gympie
Kingaroy
Maryborough
Fraser or G.t Sandy I.
Tin Can B
Tin Can Bay
Tarooom
Wandoan
Murgon
Toowoomba
Ipswich
Southport
Stuart Ra
Strangways Spr.s
L. Eyre (South)
Etadunna
L. Gregory
L. Blanche
Marree
Bopeechee
Bullo R
Paroo
Nebine Cr
Eulo
Cunnamulla
Roma
St George
Goondiwindi
Warwick
Macpherson Ra
Tenterfield
Casino
Lismore
C. Byron
Grafton
Coff's Harbour
Kempsey
Port Macquarie
Barringun
Wanaaring
Milparinka
L. Callabonna
Barwon R
Brewarrina
Bourke
Walgett
Moree
Glenlinnes
Inverell
Narrabri
Ben Lomond 4986ft
Round Mt 5300
Armidale
New England Ra
Walgett
Namoi
Castlereagh
Darling
Louth
Wilcannia
Cobar
Coonamble
Gunnedah
Liverpool Range
Oxley's Pk 4500ft
Black Sugarloaf 4900ft
Mt Barrington 5200ft
Tamworth
Muswellbrook
Maitland
Cessnock
C. Hawke
Newcastle & Port Hunter
Port Jackson
Ramatta
Sydney
Wollongong
Port Kembla
Jervis B
Nowra
Goulburn
Yass
Lake George
CANBERRA (AUS. CAPITAL TERR.)
COMMONWEALTH TERR.)
Tumut
Snowy Mts
Mt Kosciusko 7316 ft
Bega
Bombala
Orbost
Bairnsdale
C. Howe
Australian Alps
Mt Bogong 6516
Benalla
Wangaratta
Coomo
Wagga Wagga
Culcairn
Albury
Deniliquin
Riverina
Swan Hill
Murray R
Murrumbidgee R
Balranald
Hay
Griffith
Cootamundra
Young
Liverpool Plains
Katoomba
Lithgow
Bathurst
Orange
Forbes
Lachlan
Hillston
Dubbo
Nymagee
Ivanhoe
Condobolin
Parkes
Nyngan
Cobar
Broken Hill
Menindee
Pooncarie
Wentworth
Mildura
Renmark
Morgan
Waikerie
Loxton
Barmera
Berri
Murray Bridge
Adelaide
Port Adelaide
Port Elizabeth
Yorke Pen
Spencer Gulf
Port Pirie
Port Augusta
Whyalla
Iron Knob
Streaky Bay
Kyancutta
Cowell
Ceduna
Eyre Pen
Gawler Ra
Quorn
Cockburn
St Mary Pk 3900ft
Mt Brown 3380ft
Leigh Cr
L. Frome
Flinders Ra
Kingoonya
L. Torrens
Woomera
Tarcoola
L. Everard
L. Gairdner
Wimmera R
Darling R
Murrumbidgee R
Lachlan R
Murray R
Murrumbidgee R
Edward R
Wakool R
Loddon R
Avoca R
Wimmera R
Glenelg R
Hopkins R
Darling R
Murray R
Victoria
Mallee
Sunraysia
Mildura
Irrigation Area
Swan Hill
Kerang
Echuca
Shepparton
Wangaratta
Bendigo
Castlemaine
Maryborough
Ballarat
Melbourne
Geelong
Dandenong
Warragul
Sale
Traralgon
Woodside
Port Albert
Wonthaggi
Port Phillip
C. Otway
Ninety Mile Beach
Wilson's Prom.y
Bass Strait
King I
Flinders I.
C. Barren I.
Furneaux Group
Hunter I.s
C. Grim
Banks Str.
Burnie
Smithton
Devonport
Cradle Mt
Scottsdale
Launceston
Queenstown
Hobart
Port Sorell
Ulverstone
Wynyard
Stanley
Table Cape
Circular Head
Waratah
Zeehan
Strahan
Macquarie Harbour
Gordon R
Derwent R
Huon R
Tasman Pen
Tasman I
Port Arthur
Dunalley
Bruny I
Maatsuyker I
Southwest Cape
Recherche Arch
Esperance B
Esperance
Cape Pillar
Cape Raoul
Cape Hauy
Tasman Arch
Eddystone Pt
Swansea
Bicheno
Freycinet Pen
Schouten I
Great Oyster B
Little Swanport
Triabunna
Maria I
Spring Bay
Orford
Cape Tourville
Cape Forestier
Tasman I
Cape Pillar
Cape Raoul
Cape Hauy
Tasman Arch
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Bicheno
Freycinet Pen
Schouten I
Great Oyster B
Little Swanport
Triabunna
Maria I
Spring Bay
Orford
Cape Tourville
Cape Forestier

AREA MAP


Barringun 140k's
Midnight's grove
© J&L.C Davis
MM9
'Dunsandle' Farm Holidays
LEICHHARDT CREEK
A wide wildflowe
can be f
Fords Bridge
Kidman Way
MM4
May's Bend
Billabong
Airport
BRIDGE SITE
MM8
North Bourke Ginning
Back O' Bourke Fruits
MARITIME TRAIL
MM3
PS Wave
MM2
Lock and Weir
Nully
Holidays
MITCHELL ST
MM11
Brewarrina R
levee bank
Cotton Gin
Cemetary
Fred Hollows Vision Way
Wildlife Billabong
Stockade MM1
Louth Rd
STOCKADE
SYDNEY RD
Mullagalah
Cobar Rd
An Overall
MUD * MAP
of Bourke & its
surrounds

Introduction



This bridge is one of the most historic bridges in New South Wales. Opened on 4 May 1883, it is the sole survivor of the first two lift bridges built in New South Wales (the 1881 Balranald bridge was replaced in 1973 then demolished). The bridge is the oldest moveable span bridge in Australia.

The Bourke Bridge was designed and constructed at the height of the River Trade era when the principal mode of transport for Western NSW and the Riverina District was some 200 paddle steamer-barge combinations operating the Murray-Darling River system.

Designed by J H Daniels, its operation was modified by E M de Burgh in 1895 and 1903, both Public Works bridge engineers. The initiating contractor was prominent colonial bridge builder David Baillie, completed after his death by business associates McCulloch & Co.

The main bridge over the Darling River was a very expensive all-iron structure, involving imported wrought iron from England, most of it carted 400 miles from Bathurst with some by river boat from Echuca. It was more than a technical achievement. It was a political statement from successive Governments in Sydney against the poaching of its riches from the wool trade by South Australia and Victoria. The bridge provided easy direct access for wool teams to the railway in Bourke which arrived in September 1885, thereby avoiding difficult river bank loadings of barges.

The bridge scores highly in the principal categories of significance, historical, technical, social and aesthetics, in the Bourke Heritage Inventory.

Despite its one-lane and speed- limiting effects on road transport, it was a 'gateway' structure for the inland districts of Northwest NSW and Southwest Queensland for 114 years.

In 1997 a new concrete ' Gateway Bridge' was completed putting the old bridge out of service but it was not marked for demolition. Under a hand-over agreement with Bourke Shire Council, the Roads and Traffic Authority, NSW has undertaken major refurbishment works.

Bourke Shire Council has formally requested Engineers Australia to provide a commemorative plaque to be unveiled at the official hand-over on a date to be determined in December 2004.

Plaquing Nomination Assessment Form

Based on Bourke Heritage Inventory, Entry No 1220010

1. BASIC DATA

Item name: North Bourke Bridge

Other/Former Names: West Bourke Bridge

Location: Darling River, North Bourke, NSW

Address: Darling River, North Bourke, NSW

Suburb/Nearest Town: Bourke, NSW

State: New South Wales

Local Government Area: Bourke Shire

Owner: Bourke Shire Council

Current Use: Footbridge

Former Use: Road bridge with lift span to clear river craft

Designer: J H Daniels then E M de Burgh modifications

Maker/Builder: David Baillie then McCulloch & Co

Year Started: 1879 **Year Completed:** 1883

Physical Description: The main structure of the bridge over the Darling River consists of a centrally located wrought iron lift bridge structure flanked on each side by two wrought lattice trusses. All these rest upon pairs of concrete-filled cast iron cylindrical tubes braced together to form six piers. The links to the river banks are timber beam approaches, short and straight on the Bourke side, long and curved on the North Bourke side.

Physical Condition: Good – still safe for pedestrians. Currently being refurbished by the Roads and Traffic Authority.

Modifications and Dates: 1895 – tops of towers braced together to eliminate bending of the towers causing lift span to jam, and a change from iron chains to flexible wire ropes and large pulleys to reduce friction.

The wire ropes were arranged such that only one winch was required to operate the lift span.

1903 –replacing the western straight approach viaduct with a curved structure to eliminate the difficult T-intersection in West Bourke.

Historical Notes: The name Bourke derives from Major Thomas Mitchell's 1835 expedition to western New South Wales when he built a protective stockade, which he named Fort Bourke after Governor Bourke, on the bank of the Darling River about 13km downstream of present-day Bourke. By 1859 "Fort Bourke" had become the first of many large cattle and sheep stations. The latter produced fine quality wool prized by the English wool markets. The high price for wool enabled it to bear the high cost of long-haul transport to overseas trading ports such as Victor Harbour in South Australia and Melbourne, via Echuca.

Significantly in 1859, Captain Randell's paddle steamer "Gemini" arrived at Fort Bourke thereby starting the main form of access to and transport from the area, the River Trade, that was to be dominant for he next quarter of a century.

In May 1862 Surveyor Wilson laid out a town at the 18-mile point north of Fort Bourke. The new town of Bourke grew steadily as the district supported a large body of men engaged in shearing, droving, transport and property improvements.

Access across the Darling River was initially by an 1860 punt at Bourke or by a ford some 10km upstream. In order to improve that access with a bridge above maximum flood level but at the same time catering for paddle steamers and their barges laden with wool, the Sydney-based government authorised the building of an expensive lift bridge made from wrought iron imported from England. The bridge was opened on 4 may 1883 at the height of the River Trade.

Bourke soon became a major wool loading centre; at boom times as many as 50,000 bales were shipped out in a year. But the financial gains were going to the rival colonies of South Australia and Victoria via the Darling and Murray Rivers.

Consequently, successive NSW Governments funded extention of the Great Western Railway 400 miles from Bathurst to Bourke, opening the line on 3 September 1885. This gave the town its first fast and reliable transport, and diverted the riches of the River Trade to Sydney.

With decreasing numbers of paddle steamers, the operation of the lift span became intermittent and was stopped in the 1930s. Thereafter the bridge became a routine part of the road network until bypassed and closed to road traffic in 1997.

Heritage Listings:

Name:	Title:	Number:	Date:
Local Environmental Plan	North Bourke Bridge	10	Dec 1998
Bourke Heritage Inventory	North Bourke Bridge	1220010	Oct 1999
Register of National Estate		00538	

2. ASSESSMENT OF SIGNIFICANCE

Historic Phase: The 1883 North Bourke Bridge is the oldest moveable span bridge in Australia. It is the sole survivor of a pair of lift bridges built in the early 1880s to cater for paddle steamers and barges at the height of the River Trade on the Murray-Darling River system. The 1881 lift bridge at Balranald was replaced in 1973 and then demolished. Early operational problems with the North Bourke Bridge were

overcome by modifications in 1895 and the curved timber viaduct was constructed in 1903. Despite the decline of the River Trade and "locking down" of the lift span, the bridge continued to provide an essential crossing of the Darling River for 114 years. It became a ''Gateway Bridge' for the hinterland beyond Bourke.

Historic Association: The bridge has historical association with two important bridge engineers in the Roads and Bridges Branch, Public Works Department. The initial designer was J H Daniels and the designer of all the modifications was E M de Burgh. The initiating contractor , David Baillie, was a prominent colonial bridge builder in NSW from the 1860s through to the early 1880s. After his premature death, his business associates McCulloch & Co completed the project.

Creative or Technical Achievement: The bridge was a significant technical achievement for its time. Its significance to the Government can be gauged from the fact that no expense seemed to be spared in sourcing the wrought iron materials from England. This necessitated their shipping to Melbourne and their railing to Echuca, followed by the long paddle steamer journey down the Murray and up the Darling to Bourke. Other materials had to be transported 400 miles overland to the bridge site after arriving at the railhead at Bathurst.

Research Potential: The bridge provides evidence of the colonial interaction of engineering infrastructure and commerce by road and water transport. Its history displays technical improvements that were incorporated into succeeding lift span bridges in NSW. Its characteristics and method of operation are clearly accessible for appreciation.

Aesthetics: The bridge sits prominently over the main stream of the Darling River and blends well with its environment. It is a handsome bridge and bears the qualities of a ' gateway' structure.

Social: The bridge has a 114 year history of being a great social asset locally and as a ' gateway' structure to the hinterland north west of Bourke.

Rarity: The bridge is very rare – oldest moveable span bridge in Australia and the oldest lift bridge in NSW , the only one of its overall configuration.

Representativeness: The bridge represents the beginning of the evolution of lift bridges in New South Wales.

Integrity/Intactness: Since the modifications in 1895 and 1903 the bridge is intact and retains many feature of integrity of the original construction.

References:

Author	**Title**
Bourke Library	Historical records
Don Fraser	Personal files and records

Newspapers	Articles re opening
Percy Allan	"Highway Bridge Construction" 6-part series 1924

Statement of Significance: (summary of important items from the assessment)

The North Bourke lift bridge has significance under the four principal heritage criteria
- Historical and Association, Technical, Social and Aesthetics.

1(a) **Historically** because it was one of the first pair of lift bridges in New South Wales (the 1881 Balranald Bridge was demolished in 1973) catering for paddle steamers and wool barges at the height of the River Trade on the Murray-Darling River system.

1(b) By **Association** with Public Works bridge engineers J H Daniels and E M de Burgh, and prominent colonial bridge builder David Baillie.

2. **Technically** because it was a new type of bridge introduced into New South Wales to cater for river craft on navigable waterways. It is the oldest moveable span bridge in Australia and sole survivor of its type in New South Wales.

3. **Socially** because of its dual service in catering for road and river traffic. It was a 'gateway' structure for hinterland regions northwest of Bourke for 114 years.

4. **Aesthetically** because of its dominant position over the Darling River. Although out of service, except for pedestrians, it still retains its 'gateway' quality.

Assessed Significance: State – and as a National Engineering Landmark.

Image with caption:



The 1883 North Bourke lift bridge with its 1895 modified lift towers

Proposed Information Plaque Citation:

IEAust Logo

NORTH BOURKE BRIDGE

Opened on 4 May 1883, this lift bridge was designed by J H Daniels and modified in 1895 and 1903 by E M de Burgh, both Public Works bridge engineers. Built at the zenith of the River Trade, its construction was begun by David Baillie and completed by McCulloch & Co. The 1895 modifications led to improved designs for subsequent lift-span bridges. The bridge is the oldest moveable-span bridge in Australia and is the sole survivor of its type in New South Wales. It served as a 'Gateway' structure for 114 years before being bypassed in 1997. (99 words)

The Institution of Engineers Australia
Bourke Shire Council 2004

APPENDICES

THE BRIDGE HISTORY



The 1883 lift bridge over the Darling River at North Bourke with its 1895 tower configuration

Before the bridge

Prior to the bridge, crossing the Darling River was made either by an 1860 punt at Bourke township some 10 kms downstream or by fording the river just upstream from the 1883 bridge site (*Gateway to the Never Never*, Mrs H L Glover).

The type of bridge

Wherever navigable waterways are crossed by bridges with decks virtually level with the tops of the river banks, a moveable span has to be incorporated somewhere along the bridge structure so as to provide a passageway for the water traffic. There are six basic types of moveable span bridges of which the lift, swing and bascule have been the most common throughout the world

Lift bridges, as at North Bourke and many other inland and coastal river sites in NSW, have the moveable span suspended horizontally between a pair of vertical towers. Cables holding the span pass over pulleys at the tops of the towers and are attached to counterweights. Due to near perfect balance only a small amount of effort, originally manual via a geared winch, enables the suspended span to be raised vertically to some predetermined limiting height (images next page).

The swing bridge also has a horizontal moveable span, at the same level as the adjoining bridge structure but the moveable span rotates, in the horizontal plane, on a pivot pier thereby creating a passageway on either side of the pivot pier. The illustrated 1902 Pyrmont Bridge in Sydney is the largest swing bridge in Australia.



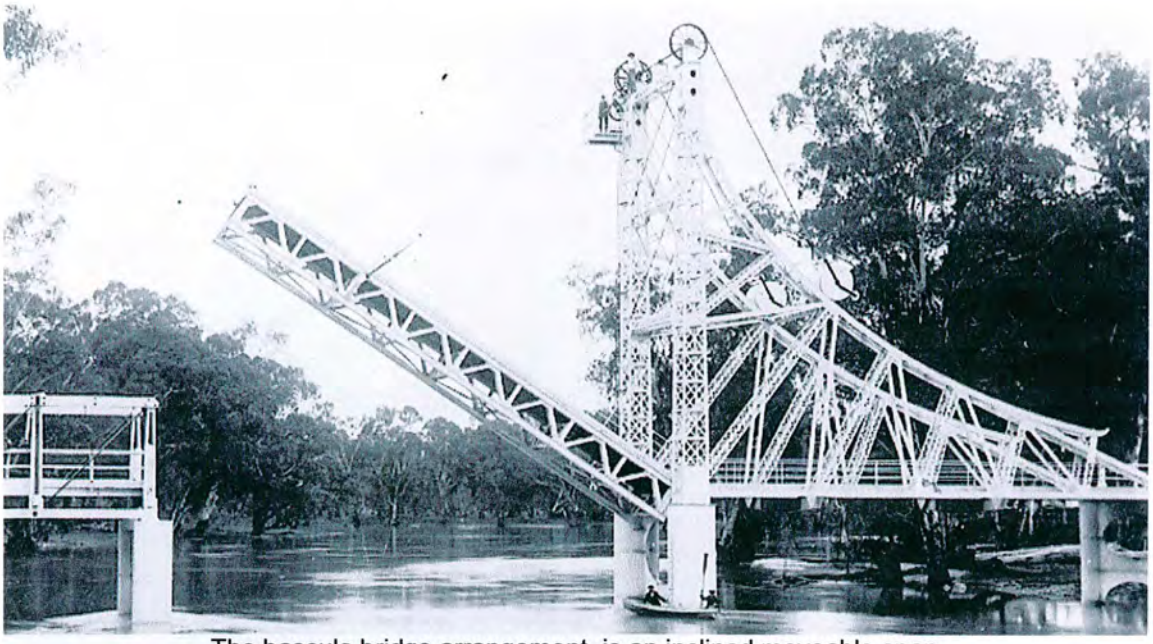
Gears on Bourke Bridge



Typically raised lift span at Swan Hill



Pyrmont swing bridge is still operational



The bascule bridge arrangement is an inclined moveable span

The bascule moveable span, as illustrated, is hinged only at its connection to a tower with its other end unattached. A counterweighted cable is attached near the far end such that during operation only the far end moves, upwards. The moveable span swings upwards through a vertical arc to create a passageway for vessels.

Choice of moveable span bridge

Three prime criteria determine the choice from these three moveable span bridges – width of passageway, headroom and location of waterway channel. The latter is important in times of low water, droughts or tidal, so as to maintain depth for vessels.

The lift bridge has an advantage that it can accommodate longer spans due to its simply-supported lightweight truss and its towers can be located at the edges of or outside the natural channel of the waterway. However, headroom clearance under the raised span has to accommodate tall masts and funnels. Fortunately, most river craft tend to be squat vessels. So it's only during high water, floods and tides, that limited headroom clearance may restrict the passage of vessels.

Swing bridges can be designed to have generous passageways and they have no headroom restrictions , but, the central pivot pier would normally be in the middle of the natural channel, a much needed space for shipping at times of low water.

The bascule bridge satisfies all three criteria. It can have a generous passageway, there is unlimited headroom and its main piers can be located outside the natural channel.

All three types can have low operating effort, particularly desirable for the original manual operations, based on near perfect balance and well maintained gearing.

The famous Public Works bridge engineer, Percy Allan, chose the lift bridge for the inland rivers, round 1900, because the paddle steamers and their loaded barges were squat vessels unlikely to cause headroom problems even in high floods, and the design, construction and operation of these bridges was simple.

However, his brilliant assistant, Harvey Dare, favoured the all-round merits of the bascule bridge and introduced the curved-track type, as illustrated, from America in 1903. Twelve were built by 1912 with a 1924 survivor on the Murrumbidgee River at Carrathool. Two others survive on the North Coast.

As for the 1880s, particularly at Bourke, the swing bridge was unsuitable and bascule bridge technology was not yet ready – so the lift bridge was the sole choice.

The Bourke Bridge

The first lift bridges in New South Wales were constructed at Balranald on the Murrumbidgee River and at Bourke on the Darling River in the early 1880s to cater for the River Trade, then at its zenith on the Murray-Darling River system. Both bridges

were designed by J H Daniels and tenders were called for both on 7 December 1877 (*Government Gazett,e Vol 1 1878, p9&11*).

The Balranald Bridge was opened on 24 June 1881, replaced in 1973 then demolished.

The Bourke Bridge was opened on 4 May 1883, replaced in 1997 but is being retained by the Bourke Shire Council.

The Bourke Bridge, drawing A, consists of a central wrought iron lift-span structure (56ft centres of tower piers) flanked on each side by two wrought iron lattice deck girders (62ft and 60ft spans), then timber beam approaches to the river banks. Deck girders, (drawing B, deck on top) were acceptable for the side spans because their depths were above the estimated maximum flood level.

However, the lift span between the towers is a wrought iron through lattice truss, (drawing C), in order to keep as much of this span above the flood level and to maximise the headroom for paddle steamers. It provided a clearway for paddle steamers and barges of 51ft 6 inches. Note on the cross section, in the middle of drawing C, there is shown a concrete deck. This would have made the lift span very heavy, an important detail when discussing operational problems, later.

The main bridge was supported on pairs of cast iron piers assembled from cast iron tubes 7ft tall, (drawing D), braced together by cast iron segments that formed a series of attractive circular openings. The cylinders were dredged clear down to rock and filled with concrete. The timber approaches were supported on conventional timber pile trestles.

The initial contractor for the bridge was prominent colonial bridge builder David Baillie, His signature appears at the top right corner of drawing E dated 2 April 1879. Unfortunately, he died some time into the project and his business associates McCulloch & Co completed the work, and got all the credit.

A significant feature of the project was the necessity to transport all the materials (as well as construction equipment) to Bourke, some 500 miles (800km) from Sydney. Some materials went by rail to Bathurst and thence by bullock drays to Bourke. The wrought iron components from England came by sea to Melbourne, thence by rail to Echuca and then by paddle wheel steamer down the Murray and up the Darling to Bourke. As a consequence there were delays to construction.

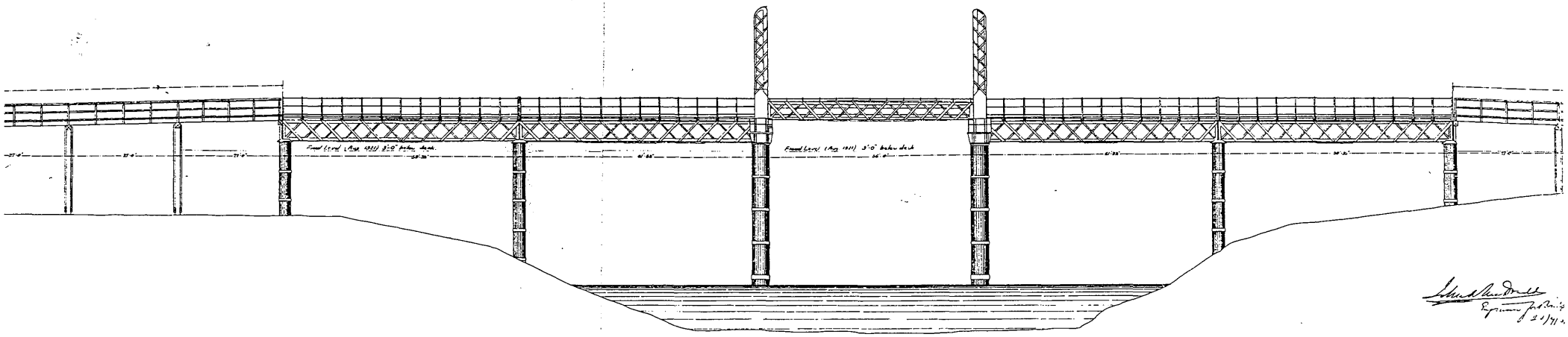
Attached after drawings A-D are four newspaper items about the opening of the bridge which took place on Friday 4 May 1883 (nearly two years after the Balranald Bridge). In the Sydney Mail article David Baillie's name is wrongly spelt as Bailley.

There are many claims as to final cost, between £30,000 and £50,00. The official Public Works Department cost was £37,932 (approximately equivalent to $5 million in 2004).

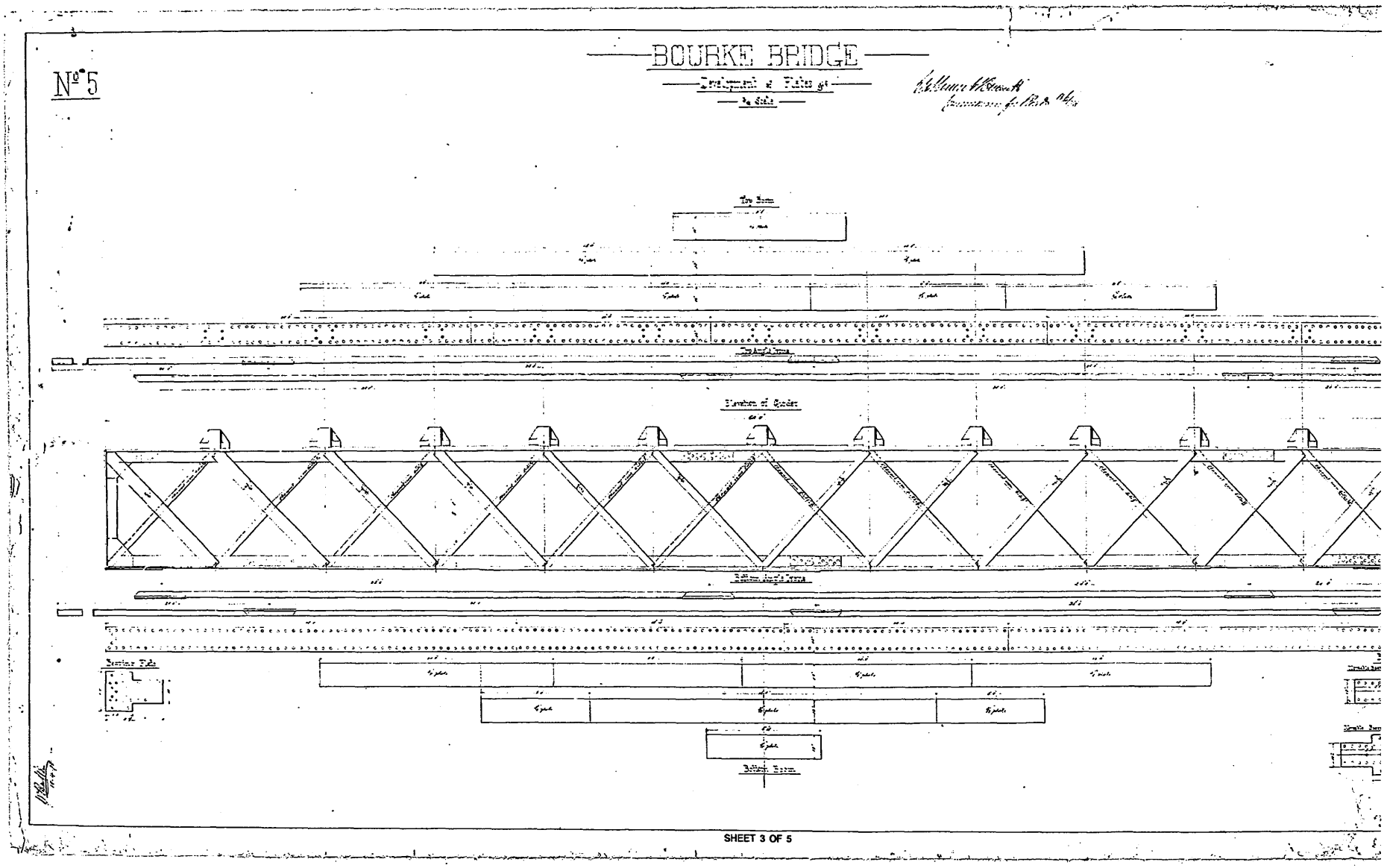
BRIDGE OVER DARLING RIVER AT NORTH BOURKE

1/8" SCALE

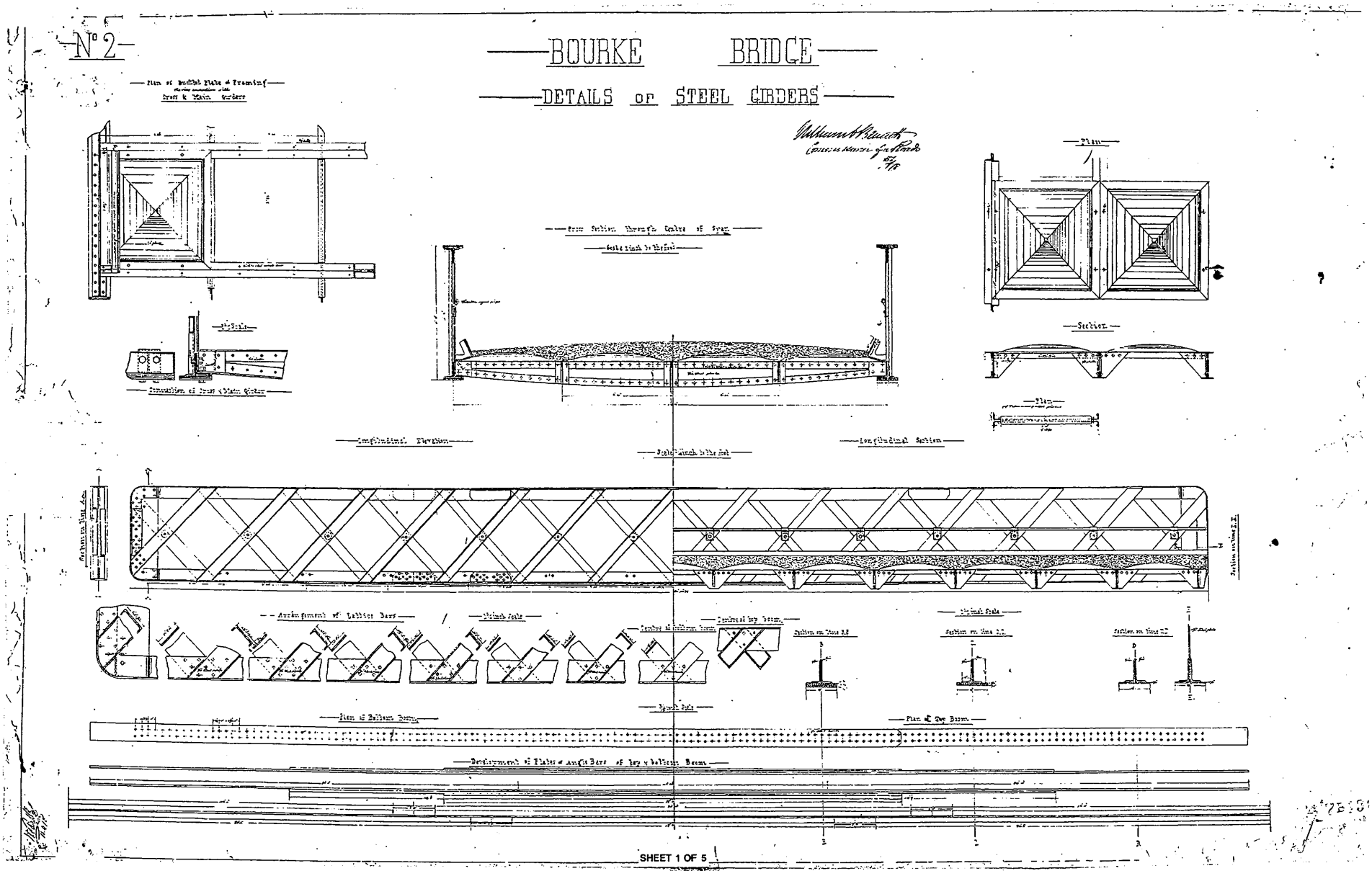
GENERAL ELEVATION



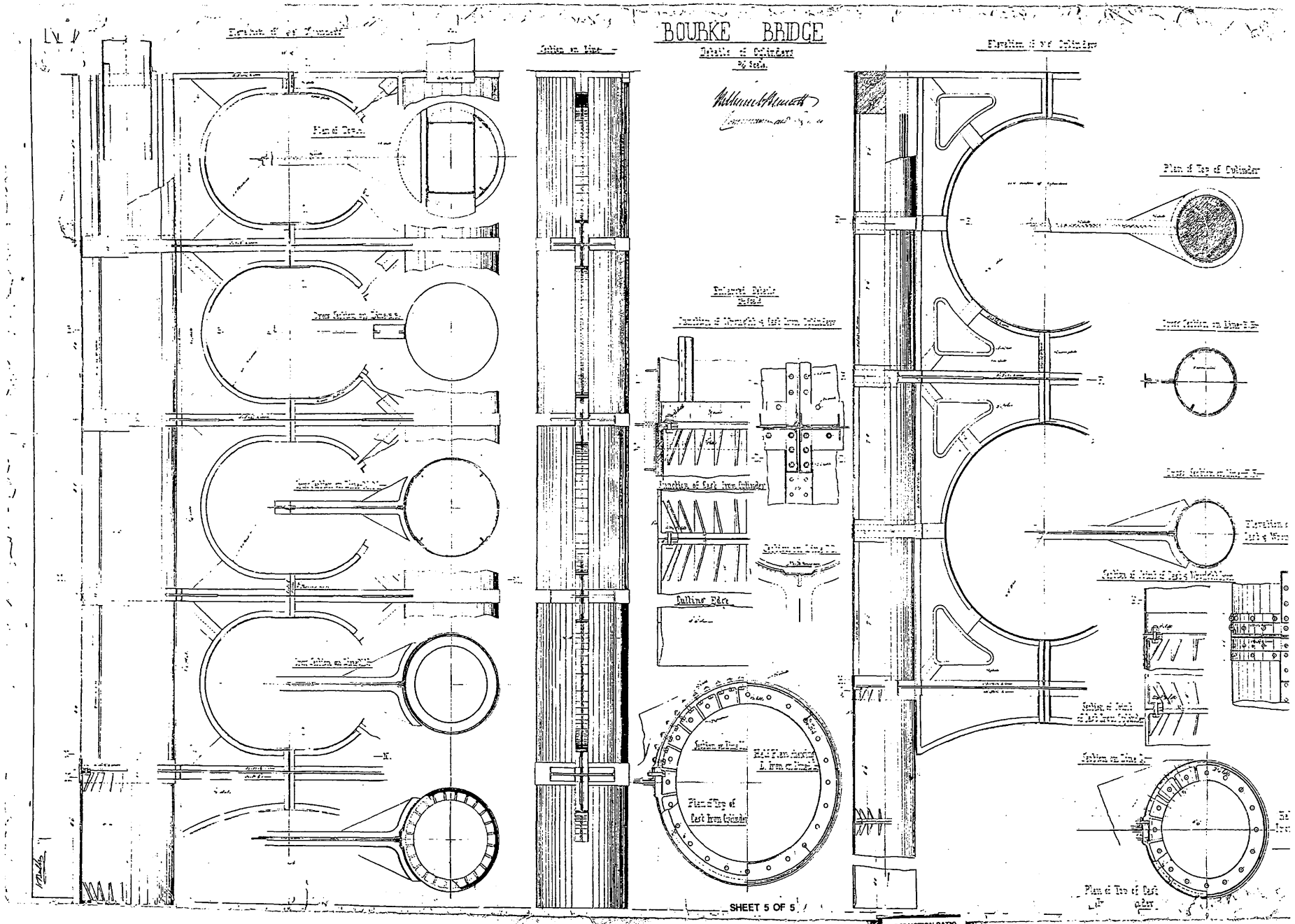
DEPARTMENT OF MAIN ROADS PLAN ROOM
7 B129
REDUCTION RATIO
30 x
0007 052 BC 0138
SHEET 12 OF 17
FRAME 2 OF 3



FRAME 1 OF 2 0007 109BC0138
ROADS & TRAFFIC AUTHORITY N.S.W.
REDUCTION RATIO
30 x
B



SHEET 1 OF 5
0007 109BC0138
ROADS & TRAFFIC AUTHORITY N.S.W.
REDUCTION RATIO
30 x



FRAME 1 OF 2
0007 109BC0138
ROADS & TRAFFIC AUTHORITY N.S.W.
REDUCTION RATIO
30 x

SMH 8 May 1883 p8 c2

Mr. West both to

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LAIDE, MONDAY.
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for the current year, to-day. The rates amount to nearly £800.

Heavy rain has fallen all day.

TEMORA, MONDAY.

An application for an injunction was brought in the Warden's Court to-day by Cotten and Bryen, to restrain the South Australian Gold-mining Company from working the ground in dispute, pending the result of the proceedings now instituted. The injunction was granted, conditionally that the applicants should deposit £50 in court, to cover expenses in the event of the case being decided against them.

The weather is cold, and threatening rain. A smart shower fell yesterday morning.

COBAR, MONDAY.

One inch 10 points of rain fell on Sunday morning. The weather now is fine.

WALGETT, MONDAY.

Nice rains have fallen here since Saturday; total, 1 inch 24 points. Much more is required, the district being in a bad state, stock of all kinds dying. It is now fine.

WELLINGTON, MONDAY.

Rain fell yesterday; 45 points were registered. Ploughing is being actively proceeded with. The prospects for

BOURKE, MONDAY.

On Friday afternoon the new Darling Bridge at West Bourke was formally opened by the wife of the ex-Mayor, Mrs. Richard Green, in the presence of one of the largest crowds yet seen on the Darling. One of M'Culloch's steamers travelled up the river from Bourke, being literally crammed with passengers; and every available vehicle in the town was engaged for carrying passengers. The town was completely emptied of its inhabitants. Appropriate speeches were made in honour of the event by the Mayor, by Judge Docker, and others. No accidents of a serious nature occurred. In the evening a ball took place at the Mechanics' Institute. The hall was well filled and the ball was most successful.

was very heavy, but only lasted a few minutes. Unless good rain comes at once, the pasturage will be but slightly benefited, as the weather is now getting too cold. Business is fairly brisk. At Walgett the rainfall has been 1·20; at Mogil, ·81; at Mungendi the weather to-day was cloudy, with a little rain; at Brewarrina the rainfall was ·51; at Goodonga 51; at Bourke, ·56; at Louth, ·78; at Cobar, ·40; at Nymagee, 1·00; at Barringun, ·50; at Wilcannia, ·67.

MINING INTELLIGENCE.

[BY TELEGRAPH.]

(FROM OUR OWN CORRESPONDENTS.)

ADELONG, MONDAY.

The new Californian Gold-mining Company have, after six months' suspension of work, got their machinery on the ground and into position. The company have erected a steam pump, and expect soon to have a crushing plant erected. The works are very extensive, covering 35 acres. The reef has been fairly tested, and the stone goes 1oz. to the ton. There are many good reefs in this locality, about 20 miles from Adelong, which should prove remunerative. A number of other claims will soon be taken up. It costs 25s. a ton to cart stone to Adelong. One of the reefs aver-

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NURSER

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Duchess of Albany ...	8
Land League	8
Hurricane	8
Sardine	7
Country Boy	7
Mitchain	7

TH

There has not been any character upon the Royal Hay Cup, to be run at the the 24th instant, but a goo in doubles at from 1000 to for both events will fall when the general entry is the A. J. C. committee ha Coffey to appear before t ference to the Hubbub-H

The trustees of the Par allow further racing on th the members of the Parra Hack's Hotel on Monday Hugh Taylor, M.L.A., in able discussion, it was deci the club in the bank at a t ing suitable arrangements At a committee meeting Taylor, for private reasons secretary and as one of t resignation was received mous vote of thanks was a vices rendered to the club act temporarily as honorar will take place on the 25th

Calma, Chucksters, and for the Queen's Birthday for all their Sydney Thrf

Our Bourke correspond Australian Handicap there Hurdles 12. The meeting her Majesty's birthday, a

TOWN

AND COUNTRY JOURNAL. 12 May 1883. P.903 C3

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IPONDENTS.)

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"Town and Country

May 3.

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place for holding sessions there. It is not only unfair to them, but to the business people of this town, who have to attend court, as jurors, in cases which should be tried

WEST BOURKE BRIDGE.—The next event of importance, although perhaps of more importance to the material prosperity of the town and district, was the opening of the West Bourke bridge for traffic. At the meeting which was called to arrange matters it was thought that the supplies promised would be much in excess of requirements, but such a crowd attended that it was found twice the quantity would not have been too much. In buggies, in traps, on horseback, on foot, in boats, people came from all directions, and over 400 persons were conveyed to the scene by Messrs. M'Culloch's (the contractors) splendid boat, Victoria. The ceremony was performed by Mrs. Green, wife of the late mayor, and the customary blue ribbon being untied, and the champagne bottle broken, she declared the Darling Bridge open to the public for traffic. The company afterwards adjourned to the refreshment booth, where the toasts of "The Queen," "The Government and Parliament of New South Wales" (responded to by Mr. Levien, M.L.A.), "The Visitors" (responded to by Judge Docker), "The Contractors and Workmen," "Success to the Darling Bridge and Bourke Municipal Council," "Mrs. Green and the Ladies," "The Engineer," and others, were proposed and drank with enthusiasm. The bridge itself has cost, I believe, some £40,000, and is, I fear, anything but profitable to the contractors. It is wrongly situated, the result of undue political influence, and it is estimated that it will be nearly two years before the approaches are complete, without which the bridge, in anything like a high river will be of little service.

[illegible] It is rumoured, I [illegible] what truth I cannot say, that our two parliamentary representatives are about to resign their seats. If such be the case we may look for a lively campaign, and it is not unlikely that the rejected of last election will yet take his seat in the legislative halls of the country.

SHEEP INSPECTOR.—The office of sheep inspector for the district, resigned by Mr. F. E. Bloxham, has been filled by the appointment of Mr. Mallin, for several years manager of a neighbouring station, and a gentleman represented as being every way suited for the office.

RACES.—We have several horses in training for the forthcoming races, but there does not appear to be the same interest taken in them as in past years. The business men of the town do not care about them much; they drain a deal more money out of the neighbourhood than they bring into it. The added money is something between £800

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SYDNEY MAIL 12 MAY 1883 P586 C2

Birie, and the Culgoa Rivers, on the road to the Queensland border. The want of these bridges is very much felt, owing to the daily increasing traffic between this town and the south-western portion of Queensland, and its being the most direct road between the railway and that portion of Queensland.

Great indignation is expressed and disappointment felt by the public owing to the delay in completing the bridges over the Tarrion and Bogan, which were commenced 12 months ago, and which have been at a standstill for over six months past, the contractor having left the district some months. Should sufficient rain come to flood these rivers all traffic between here and Sydney will be blocked.

Property in this town is rapidly increasing in value. Messrs. Rich and Co. sold a quarter-acre allotment in Bathurst-street, with a small wooden house, for £500.

Two selections of 640 acres each were taken up yester-

BOURKE, MONDAY.

On Friday afternoon the new Darling Bridge at West Bourke was formally opened by the wife of the ex-Mayor, Mrs. Richard Green, in the presence of one of the largest crowds yet seen on the Darling. One of M'Culloch's steamers travelled up the river from Bourke, being literally crammed with passengers; and every available vehicle in the town was engaged for carrying passengers. The town was completely emptied of its inhabitants. Appropriate speeches were made in honour of the event by the Mayor, by Judge Docker, and others. No accidents of a serious nature occurred. In the evening a ball took place at the Mechanics' Institute. The hall was well filled and the ball was most successful.

TUESDAY.

Since the coming into force in the Bourke district of the Pastures and Stock Protection Act, 403 native dogs have been paid for by the board at 10s. per head.

The Government water-boring party at the second bore at No. 1 site—between here and the Warrego River—were down last night 170 feet, after working three weeks and one day. This is considered very good work. In one week 60 feet were bored, but no water has been struck since reaching a depth of 147 feet, and then only a salt mud spring. At present there are no indications of the proximity of water appearing, while in the previous bore, the one which had to be abandoned on account of the tubing flooding, water was struck at 168 feet. Feed for cattle and water are both getting scarce in the vicinity of No. 1 bore. The non-arrival of tools and tubing for continuing the work has delayed operations, but the required implements are reported to be now on the road, and may be expected very shortly.

CASINO, MAY 4.

A public meeting is to be held on Monday next to appoint delegates from the Richmond district, *re* the North Grafton and Tenterfield railway, and also to consider the suggestions

better looked after by trustees. At the instance of Mr. Humphery, M.P., a return was ordered by Parliament, "giving the items in detail expended upon this portion of the main South Coast-road within the electorate of Shoalhaven since the road became entitled to an annual expenditure of £50 per mile." The return was printed not long ago, and a more mixed up or unsatisfactory statement could not possibly have been produced. The motion passed by Parliament specified that only those items spent within the electorate of Shoalhaven were to be enumerated. Yet the second item in the return is an expenditure near the centre of the Kiama district. The heading of the statement itself says, "Statement of moneys expended upon that portion of the South Coast-road within the electorate of Shoalhaven." Yet the third item in the statement for 1882 is "Putting in drain pipes at Kiama, £42 10s." A statement given, at the instance of Dr. Tarrant, M.P., to the Kiama Council in a similar manner mixes up matters, giving Kiama accounts the credit of money expended in this electorate. The statements together show that neither place has had half or little more than half the money it has been entitled to expended upon the roads, and that either those items have been grossly exaggerated or expended in a culpably injudicious manner. The roads are in a state of quagmire for 12 miles between here and Kiama; and where the municipal council metalled the road, it is so cut about and destroyed by flood-water allowed to go where it listeth that even the once good roads are dangerous to travel on. Yet Mr. Bennett admits that he allowed thousands of pounds granted for these roads to lapse every year, thus virtually telling Parliament it passed money for work that was not required. I have never heard in any district such complaining about roads. The people seem determined to blame some one, and I fear if something is not done soon to determine that an equal sum shall be expended on the South Coast-road in each district some very good members of Parliament will hear more of this business than they are to blame for at the next general election.

Our mail communication suffers at times from the same source of default of duty. The Shoalhaven and the Kangaroo rivers sometimes delayed mails from Sydney for days. These rivers were bridged and a road made from here to Moss Vale at a cost of something over £30,000, yet, like the ship which sank for the want of a bolt, our mails are at times delayed for periods of 12 to 24 hours for the want of a small bridge somewhere, called Bundanoon, near Moss Vale.

And after the passengers thus delayed in a cold, hungry, and outlandish place reach Moss Vale at perhaps the small hours of the morning, when all the hotels are closed, they find that the Commissioner for Railways has turned the waiting-room at the railway station into a goods shed for the reception of miscellaneous parcels, including unsound bacon, cheese, &c. Our member had also the first say as to how our railway waiting-rooms should be lighted and warmed for travellers' reception. Promises were made by our bureaucratic officialdom, only to be forgotten as soon as the complaint is pigeon-holed.

Yalwal goldfield is beginning to lift its head again. 259oz. were, the other day, smelted into a cake from amalgam taken from the Homeward Bound Co.'s battery, after a crushing of 160 tons. The stone was raised in about five weeks and by four men, and was, in fact, quarried from the face of land 16 feet wide, and at a depth of about 6 feet from the surface. The Eclipse Company has now only two men at work, and is driving. The Pinnacle is preparing for crushing. The Pioneer is still at work raising stone, and the Star or Long Tunnel Company has got three or four men at work, so, I suppose, we shall soon have more returns to report. The road to Yalwal is, however, but progressing slowly. The Gap is still in a state of nature, and militates much against the progress of the place.

Bourke.

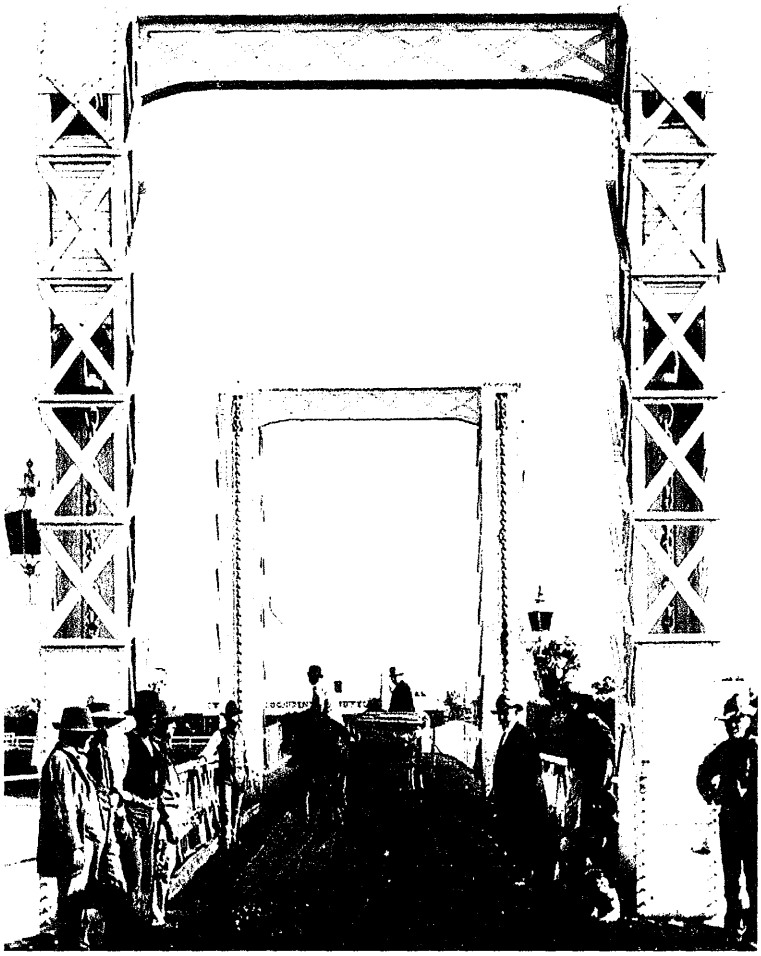
MAY 19.

The Darling Bridge, which is situated opposite that erroneously named township of West Bourke, was formally opened with great *eclat* on the 4th instant. The largest crowd that has hitherto been seen at any public ceremony on the Darling was there collected together. Speeches of all kinds were made, and champagne of all kinds drunk. Every available means of transit was used by the townspeople and visitors, the latter of whom, owing partly to its being session time, were in considerable numbers, his Honor Judge Docker, Mr. Levien, M.L.A., Messrs. M'Culloch, Merewether, and Browning, Ls.L. (luminaries of the law), being amongst them. Mrs. R. Green, the wife of the ex-Mayor, was, in a few appropriate remarks, called on by the Mayor, Mr. M. Scrymgour, to christen and open the structure. This was done at shortly after 3 o'clock in the orthodox manner, after which the refreshment booth was resorted to. The usual loyal toasts having been imbibed in the usual loyal manner, Mr. Henry Levien, M.L.A., was called upon by his Worship the Mayor to respond to the toast of "The Ministry and Parliament of New South Wales." Mr. Levien, in doing so, said that it was unfortunate that one or both of the members for the electorate had not been present for the occasion, which was one of great importance in the district. Referring to the present Ministry, he had no hesitation in pronouncing himself to be one of their thorough and stanch supporters. He believed that their principal aim was to promote the interests of the colony in every way it was possible for them to do, and to show justice to all classes. This their actions have undoubtedly shown up to the present time. The present Government had much to contend with when taking office. They had come in at a most critical and trying time; but he hoped the day was not far distant when that question, which of all others tended so much to set class against class, would be finally settled. He referred to the land laws of the colony. (Cheers.) He believed that on the reassembling of Parliament, the first important work dealt with would be the bringing in of a Land Bill, complete in every respect, and one which would prove equally satisfactory to the public. (Cheers.) In speaking of the election, he said there was no doubt that sectarian differences rose at times; but he for one always did and always would discountenance anything of the kind. He considered that men who would advance the general interests of the colony, whether Catholic or Protestant or other creed, were the ones who should be sent in, without regard to creed in any way. (Cheers.) In concluding a very neat speech, he thanked those present for the enthusiastic manner in which the toast of the Ministry and Parliament had been honoured, and took great pleasure in proposing "Success to the Darling Bridge and the Municipality of Bourke." He hoped before long that local self-government would be established, and that those who knew what they required would be in a position to control the expenditure of money in their own districts, without the necessity of Government executing works such as the present one. His Worship the Mayor, after having suitably responded on behalf of the municipality, called upon the townspeople to drink the health of "Our Visitors, coupled with the name of his Honor Judge Docker." His Honor, in responding, said he was most happy to be present on this occasion, and to have the opportunity of speaking. He supposed the duty fell upon him, as he was perhaps one of the oldest visitors present. It was some 12 years now since he first saw Bourke, the occasion being the opening of the first District Court here. Since then most important changes had taken place. At the time he referred to Bourke had no public buildings worthy the name. The Courthouse was then an old wooden building that now is not considered fit for a police barracks. There were no post and telegraph offices, no bridge, no municipal council; and after rain of the lightest sort, it was impossible to move about the streets without carrying great clods of earth about upon the boots. Such was the state of the streets and buildings, and the private residences and rest of the town were little better. 12 years had changed all this completely. There is now a well-ventilated Courthouse, where the business of the court could always be conducted with comfort to both Judge and jury alike. There is also a fine post and telegraph office, which is a credit to the town. Improvement and advancement appeared on every side. The Municipal Council had worked wonders. He had ample opportunities when travelling about, of seeing other towns and municipalities, and it always gave him great pleasure, whenever the subject was under discussion, to cite Bourke as a model municipality. In every visit he paid to the town he could plainly see improvement rapidly going on. Here, a little out of town, they had all met together to dedicate to the public use a magnificent structure, of which the colony might well feel proud. He hoped soon to hear the whistle of the locomotive at the back of the town. No doubt many anticipated and wished it, as was shown by the very high prices paid for land at the present time. His Honor then referred to the late Mr. Joseph Becker, who was one of the founders of the town, and regretted, as he knew all who knew Mr. Becker did, that he was cut off in his prime, and had not lived to see the town become the important centre he had always anticipated it would become. In concluding, he thanked them on behalf of the visitors, and also for the invariable kindness shown to himself when visiting the place. He then proposed the health of the lady who had performed the opening ceremony, Mrs. Green. This toast, together with "The engineer in charge of the work," "The contractors," and "The workmen," having all been severally and duly honoured and responded to, the proceedings closed. A fine photograph of the bridge during the ceremony was taken by one of the local photographers, Mr. E. Spike.

The cost of the structure is something over £50,000, and it is now some four years since first it was commenced. Many difficulties of various kinds have had to be overcome during that period, the greatest being caused through the river being unnavigable for such long periods, thereby preventing the arrival of necessary material and machinery. The original contractor, Mr. Bailley, died some time after having started operations, and Messrs. M'Culloch and Co., of Melbourne, who were connected with Mr. Bailley in a business way, had to continue the contract. This they have carried out, as already stated, under very considerable difficulties. Although the main structure over the river is completed, the approaches, which are very lengthy and substantial, are not likely to be finished in less than two years' time or more. These extend on the south or Bourke side of the river across a deal of flooded ground and over a large billabong up to the high ground, and in flood time will be the only means of reaching the bridge proper. And while on the subject, and at the same time bearing the old axiom in mind of

Operational difficulties

Unfortunately, the bridge did not perform well due to two main faults – excessive friction in the lifting system required too much effort to wind the winches – and the lift span would jam between the towers when about half raised. Both can be explained through a combined reference to drawings A and E, and the following illustrations.



Axis view of Bourke Bridge soon after completion.
Note the bracket and lamp outside the left tower.
A kerosene lamp was used for night navigation
until around 1908. The bracket is still there.

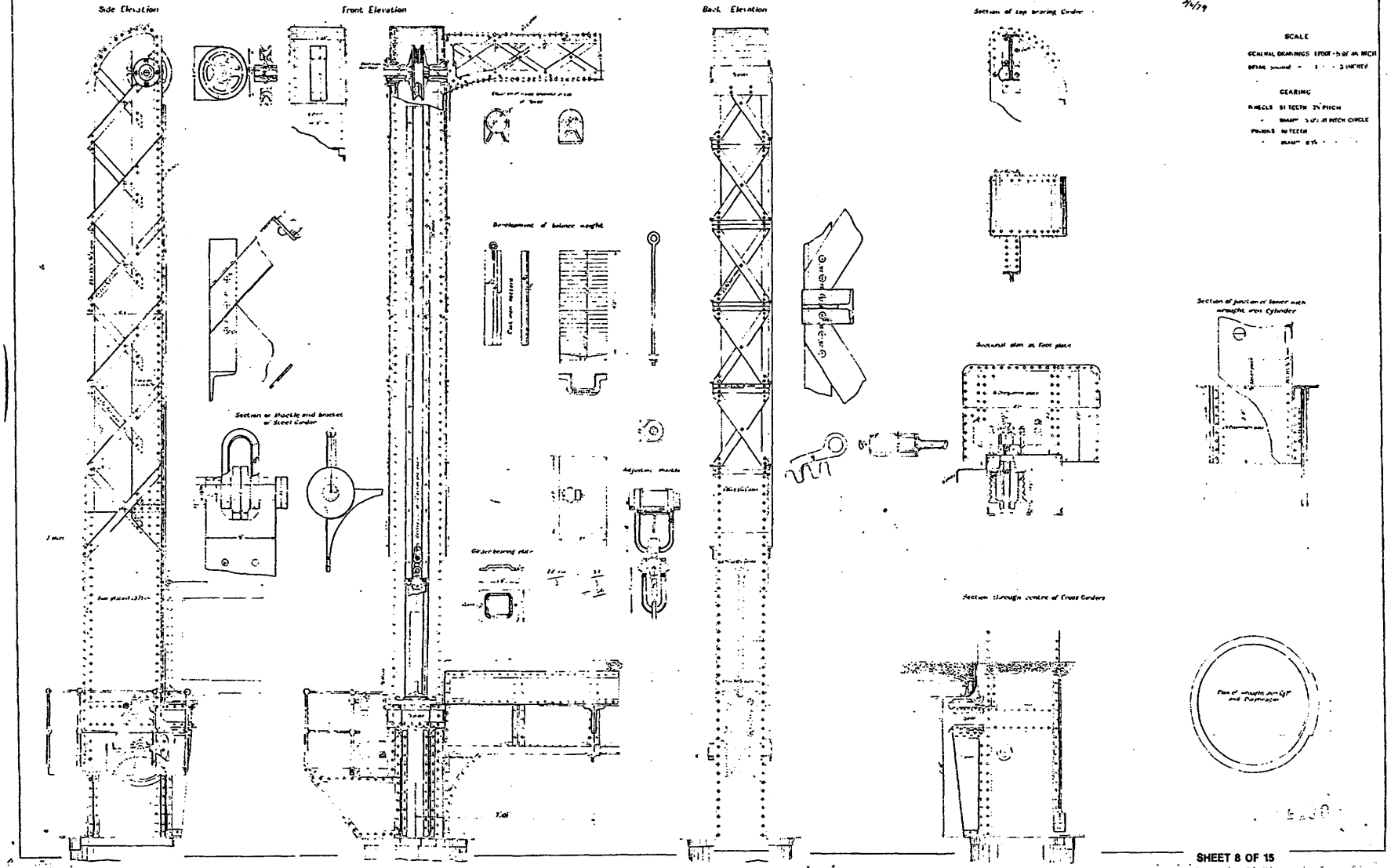
Friction was caused by the lifting chains, seen on the distant towers, rubbing in the pulley grooves, and the counterweights, seen inside the two near towers, would rub along the insides of the towers.

The jamming of the lift span was caused, in part, by small inwards deflections of the towers, enough to close the small clearances between the ends of the lift span and the guide rails on the inner faces of the towers.

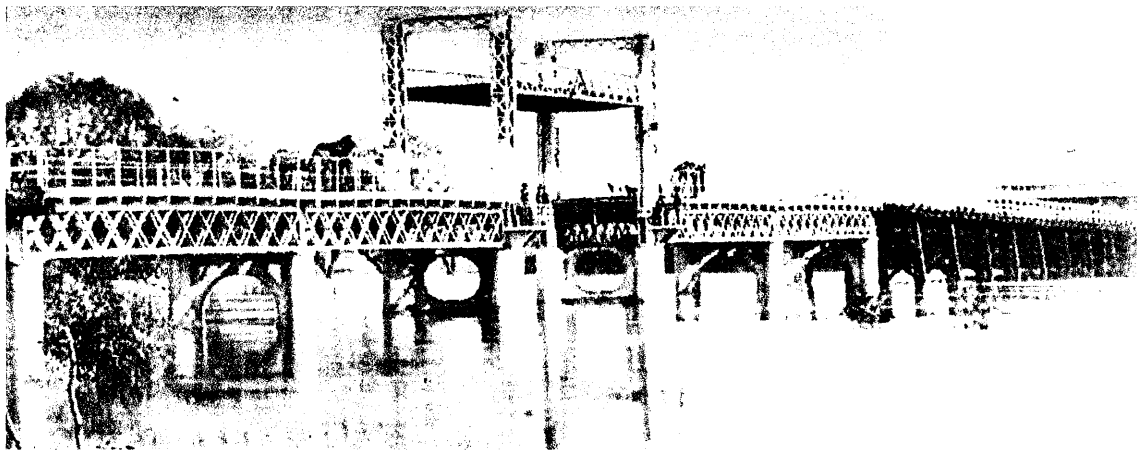
N°3

BOURKE BRIDGE

DETAILS OF TOWERS AND MACHINERY



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ROADS & TRAFFIC AUTHORITY N.S.W.
REDUCTION RATIO
30 x



Bourke Bridge c1886 (Bourke Shjre Council Collection)

Note that the pairs of towers are braced together transversely but, as can also be seen on drawing A, they are not connected longitudinally. Had the pulleys at the tops of the towers been located centrally on the towers, no bending would have occurred and the towers would have remained straight vertically.

But the centres of the counterweights occupied the centres of the towers, so the pulleys became eccentric, see drawing E, left hand detail next to "N^{0}3". The combined weight of lift span and counterweight, acting through the pulley axle, is off-centre, enough to bend each tower slightly inwards – hence the jamming action.

Had the concrete deck on the lift span actually been as shown on drawing C instead of a conventional lighter timber floor, the lift span would have been very heavy. Combined with its counterweights, much larger vertical eccentric forces would have acted on each tower, aggravating the bending deflection.

However, there seems to be no mention of a concrete deck in the 1895 remedial work. The current timber deck right across the whole bridge, including the lift span, suggests it was always so.

Another cause for jamming the lift span was the use of two independent winches, one at the base of each tower, see the above 1886 photograph. Perfect unison was required otherwise the ends of the lift span would not be at the same height, causing a slight longitudinal tilt resulting in jamming.

The problem of a jamming lift span, plus the excess friction, had to be rectified.

Remedial work



The 1895 remedial work to the tops of the towers

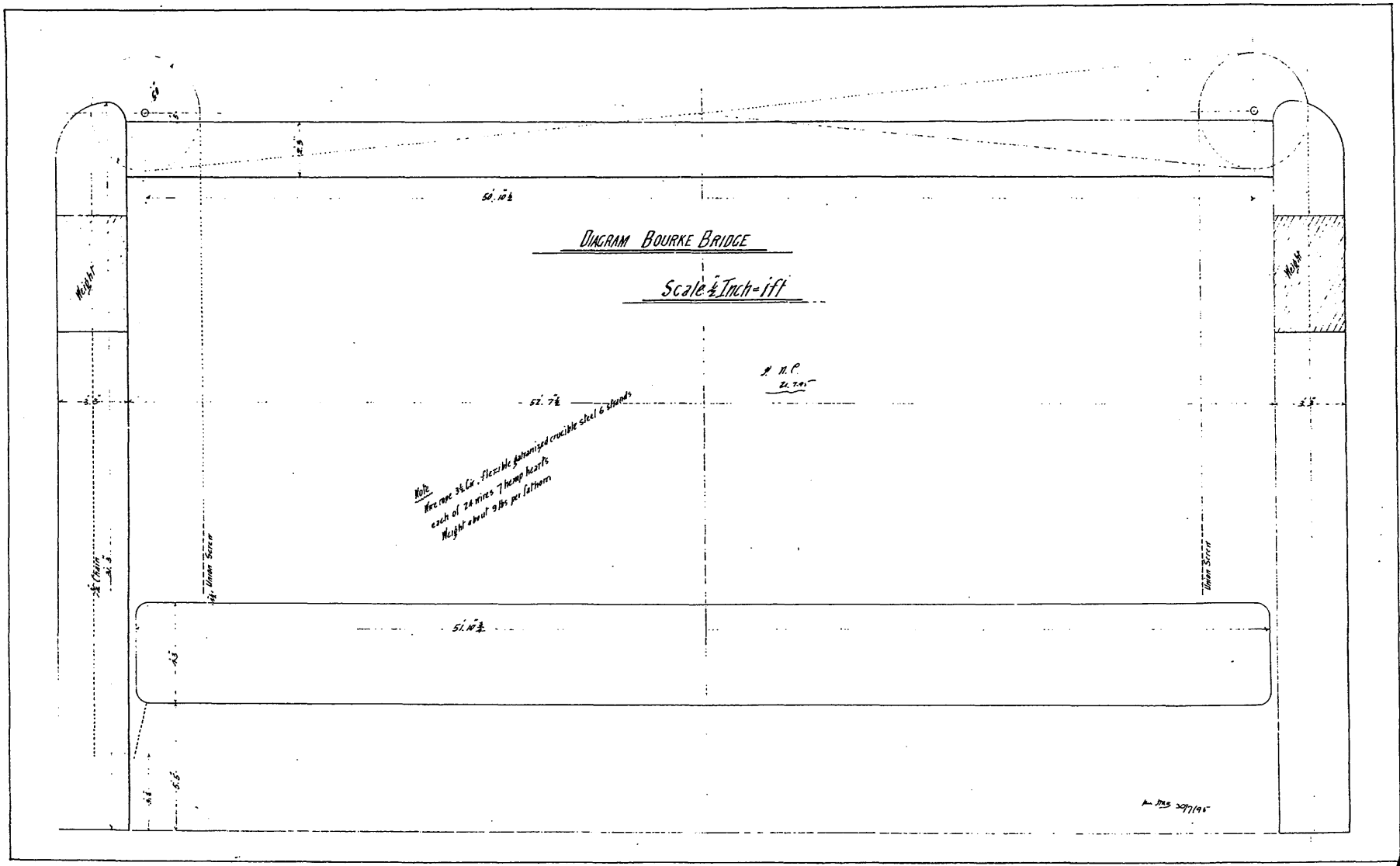
In 1895 drawings were prepared under the direction of PWD bridge engineer E M de Burgh for correcting the two main faults. The work can be explained using a combination of the above illustrations and drawing F.

On first sight, the remedial work may seem to have made things worse due to the replacement of the small pulleys, partly inside the towers, by much larger pulleys supported by a brackets outside the towers. On its own, this change would have created larger eccentricities and induced more bending of the towers.

However, the tops of the towers were now strutted apart by a network of horizontal steel elements, particularly the longitudinal pair. The tops of the towers were now held firmly in place and the lift span could be raised to full height without jamming.

Friction was greatly reduced by replacing the crude chains with smooth flexible wire ropes passing through generous grooves in the large pulley wheels. Also, the cross-over arrangement of the wire ropes was such that a single point of operation was achieved and the lift span remained level thus eliminating jamming from longitudinal tilt.

The effect was that only one man was required to operate the lift span. This arrangement, with various modifications, was applied to all subsequent lift span bridges.



SHEET 5 OF 15

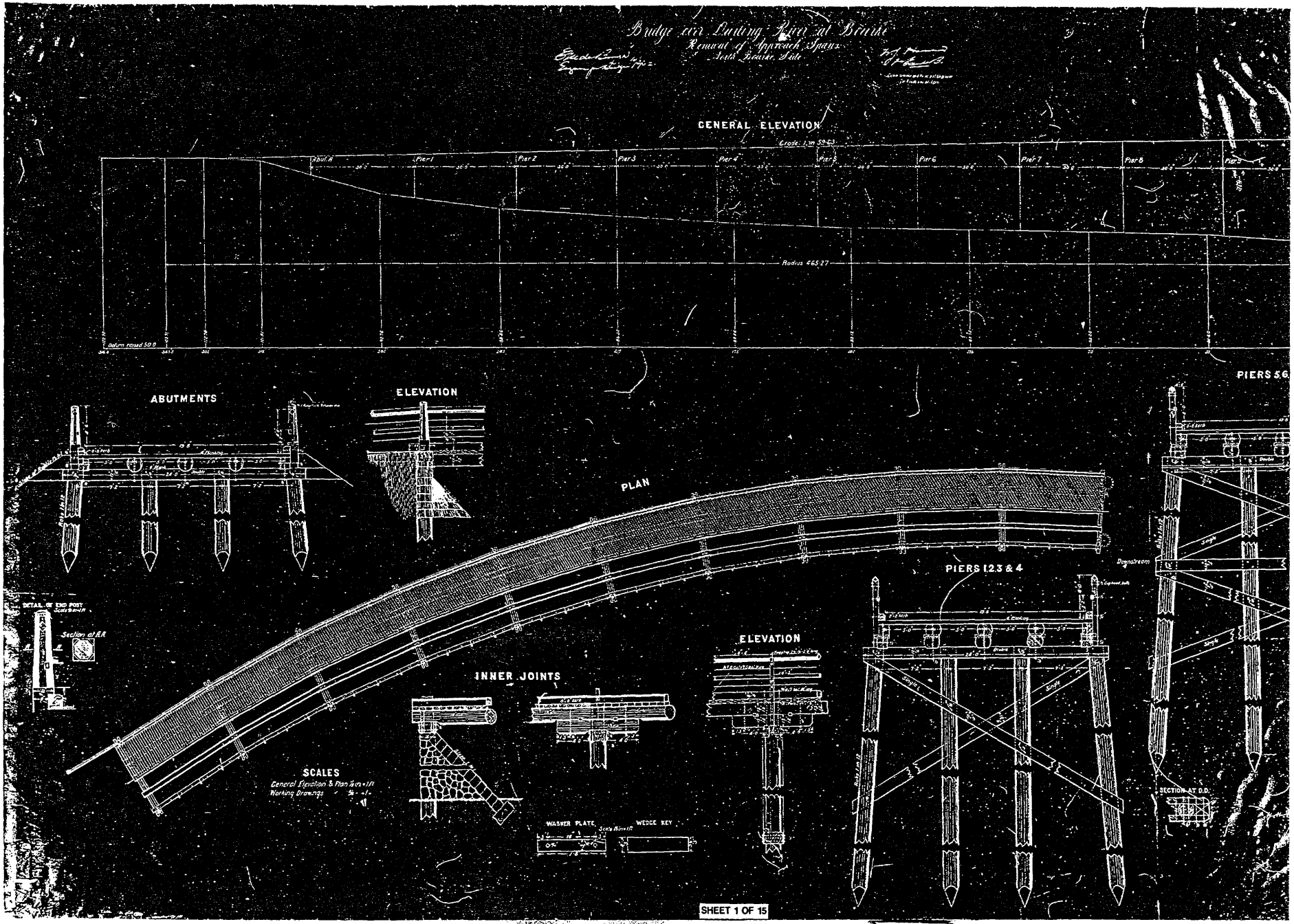
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REDUCTION RATIO
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The approaches



Another fault in the original layout of the bridge was that the long timber viaduct on the western side went straight to the village, then West Bourke, close by a hotel, see the right distance in the 1886 photograph on page 16. The T-intersection was difficult for long bullock teams to negotiate, and so on many occasions the verandah was demolished.

Negotiations to resume the hotel site for improving the intersection failed, so in 1902 plans, (drawing G), were drawn up under E M de Burgh's direction for a curved viaduct to join the shore line on clear land. It is an extant feature of the historic North Bourke crossing of the Darling River.



FRAME 1 OF 2 0007 109BC0138
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REDUCTION RATIO
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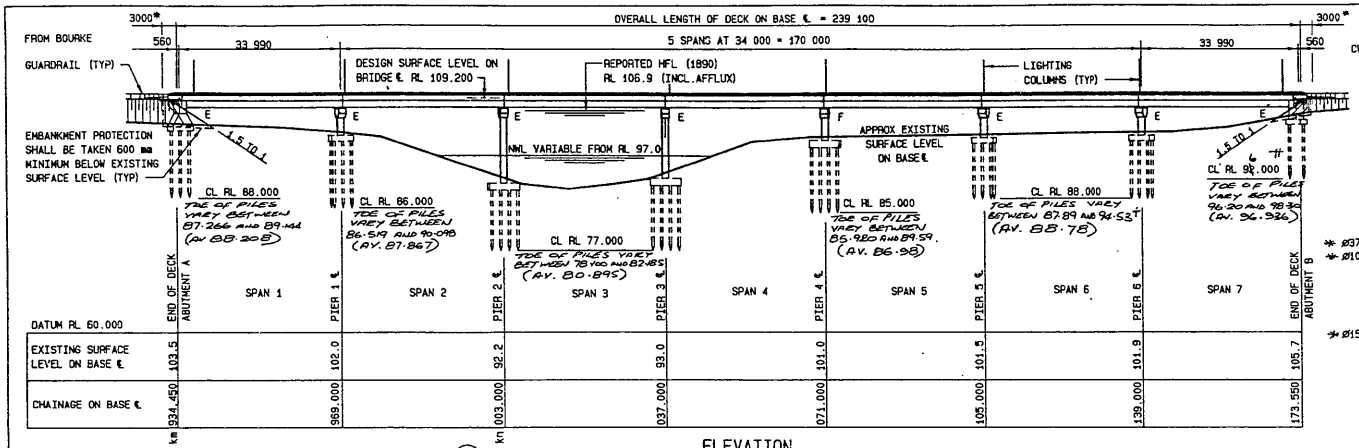
The new bridge



Bourke has been traditionally referred to as a "gateway" town leading to the hinterland of North West New South Wales, South West Queensland and beyond.

In 1997, after 114 years of service, the old lift bridge was bypassed by a modern prestressed concrete girder bridge, aptly named GATEWAY BRIDGE.

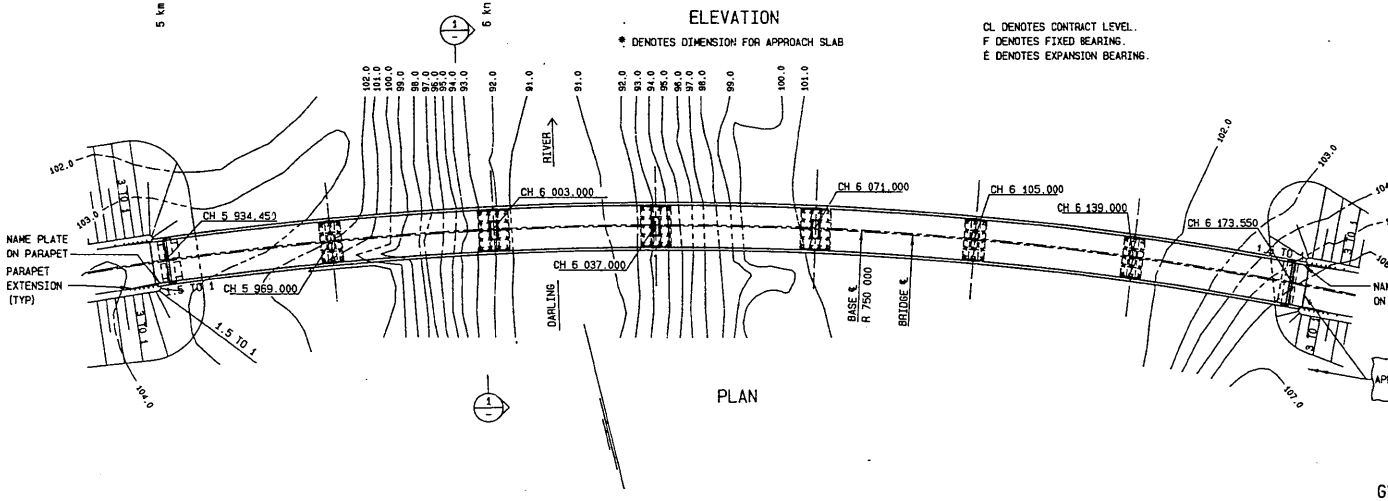




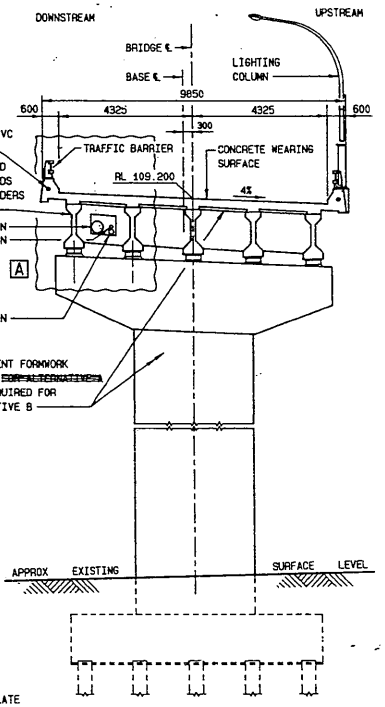
ELEVATION

* DENOTES DIMENSION FOR APPROACH SLAB

CL DENOTES CONTRACT LEVEL.
F DENOTES FIXED BEARING.
E DENOTES EXPANSION BEARING.



PLAN



SECTION 1

SCALE 1 : 75

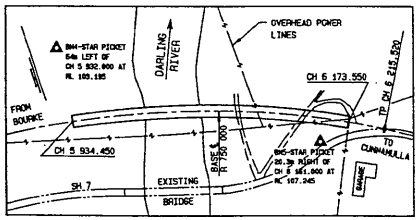
Test pile No.94 was prebored to RL 95.3 and then driven to RL 94.53 where set was achieved. As the level for minimum embedment is RL 93.5 it was decided to drive a second test pile at pile location 98 but prebore to RL 92.4. and bore through the mudstone layer that was hit by the previous test pile. Following driving of this pile set was achieved at RL 88.7 which was very close to design level.

Test pile No.113 was prebored to RL 95.9 and then driven to RL 94.39 where set was achieved. As the level for minimum embedment is RL 93.8 it was decided to drive a second test pile at pile location 109 but prebore to RL 92.4. and bore through the mudstone layer that was hit by the previous test pile. Following driving of this pile set was achieved at RL 88.9 which was very close to design level.

APPROVAL WAS GIVEN BY RTA's BRIDGE BRANCH TO LEAVE ORIGINAL TEST PILES IN PLACE.

† * Original Test Pile did not achieve minimum embedment but achieved set. Pile was later removed after test pile was driven at new location.

†† ** Following the driving of Test Pile 125 a new Contract Level was established, raising it from RL 92.900 to RL 96.000.



SITE PLAN

SCALE 1 : 2000

GENERAL NOTES

SCALE 1:500 OR AS SHOWN.
DIMENSIONS ARE IN MILLIMETRES.
CHAINAGES AND REDUCED LEVELS ARE IN METRES.
REDUCED LEVELS ARE RELATED TO STANDARD DATUM.
AHD = STANDARD DATUM +0.046m.
ANTI-GRAFFITI COATING SHALL BE PROVIDED ON ALL PIER COLUMNS, SOFFITS OF DECK AND GIRDERS IN SPANS 1 AND 7 AND ALL EXPOSED AREAS OF THE ABUTMENTS.
* NOT IN CONTRACT

ISSUE	DATE	REVISION	PREP	CHK	AUTH
A	OCT '95	PROVISION OF HOLE IN CROSS GIRDERS NOT IN BRIDGE WORKS NOTE DELETED	RGY	RGL	JMP

QA RECORDS COMPLETED
P.C. KHAN
MANAGER, BRIDGE DESIGN PROJECTS
DATE 17-3-95

APPROVED
R.J.L. WEDGWOOD
CHIEF BRIDGE ENGINEER
DATE 17-3-95

ROADS AND TRAFFIC AUTHORITY OF NSW

STATE HIGHWAY No 7 — SHIRE OF BOURKE

BRIDGE OVER DARLING RIVER
AT 6.1km NORTH OF BOURKE

GENERAL ARRANGEMENT

PREPARED	CHECKED	REGN. No. OF PLANS
DESIGN D.A.DIONG	PARAPET, TRAFFIC BARRIER 17-3-95 D.A.DIONG	0007 109 BC 3760
DRAWING J.P. R.I.LINDSAY		
P.C.KHAN MANAGER, BRIDGE DESIGN PROJECTS		SHEET No 2A / No OF SHEETS 34

CAD D96A.A V1.2,3,4 — THIS DRAWING SUPERSEDES SHEET No.2

WORK AS EXECUTED



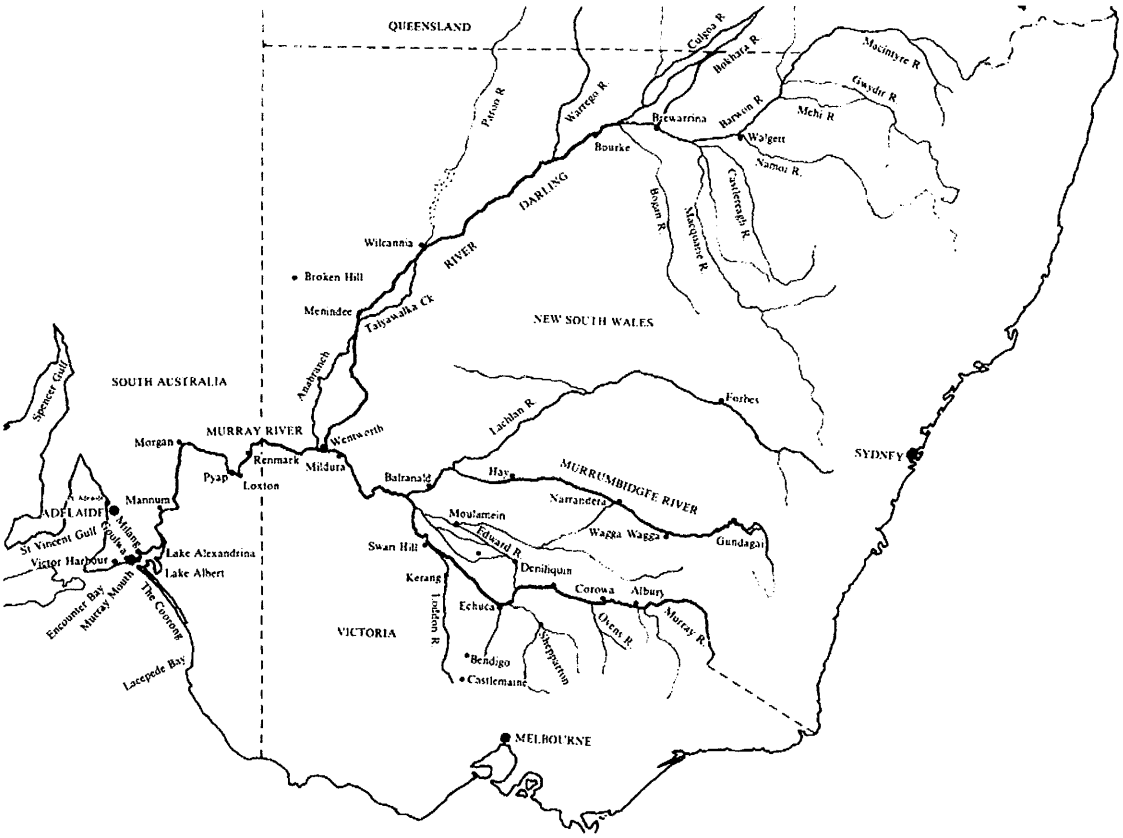
In 2004, the Roads and Traffic Authority began a major refurbishment of the old bridge prior to handing it over to Bourke Shire Council as a long term heritage symbol of an historic town and an historic era.

Bourke and the River Trade

Historical Notes from Bourke Library

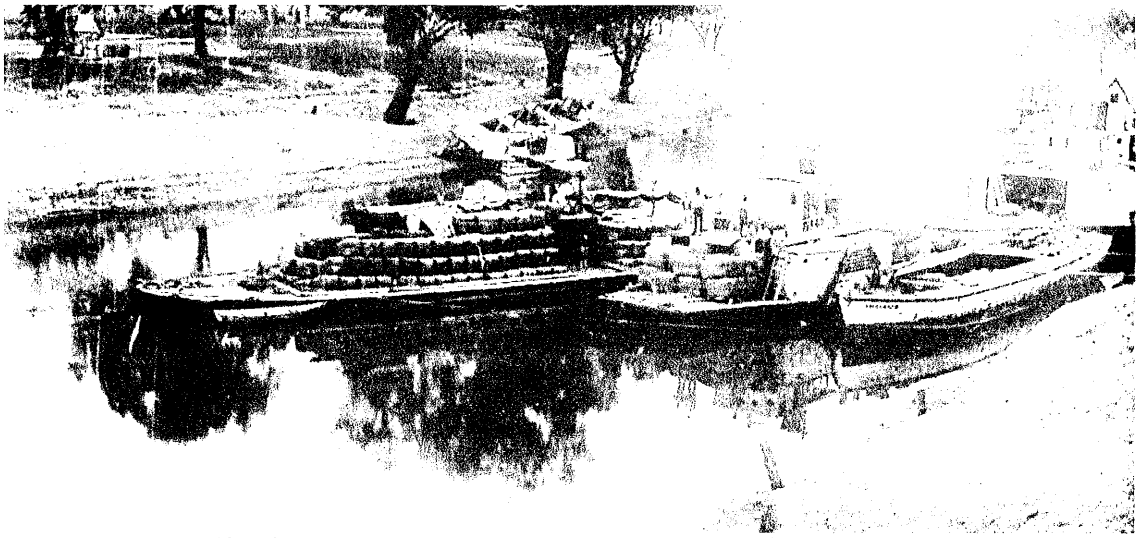


The name Bourke derives from Major Thomas Mitchell's 1835 expedition to western New South Wales when he built a protective stockade, which he named Fort Bourke after Governor Bourke, on the bank of the Darling River about 13km downstream of present-day Bourke. By 1859 "Fort Bourke" had become the first of many large cattle and sheep stations. The latter produced fine quality wool prized by the English wool markets. The high price for wool enabled it to bear the high cost of long-haul transport to overseas trading ports such as Victor Harbour in South Australia and Melbourne, via Echuca.



The Murray-Darling River system, the commercial pathways of the River Trade

Significantly in 1859, Captain Randell's paddle steamer "Gemini" arrived at Fort Bourke thereby starting the main form of access to and transport from the area, the River Trade, that was to be dominant for the next quarter of a century.



Wool barges on the Darling River at Bourke (Godson Collection)



Camels, bullock teams and horse teams brought wool to Bourke (Godson Collection)

In May 1862 Surveyor Wilson laid out the new town of Bourke which gained a Municipal Council in 1878. The district supported a large body of men engaged in shearing, droving, transport and property improvements.



Access across the Darling River was initially by an 1860 punt (right) at Bourke or by a ford some 10km upstream (Godson Collection)

In order to improve that access with a bridge above maximum flood level but at the same time cater for paddle steamers and their barges laden with wool, the Sydney-based government authorised the building of an expensive lift bridge made from wrought iron imported from England. The bridge was opened on 4 May 1883 at the height of the River Trade.

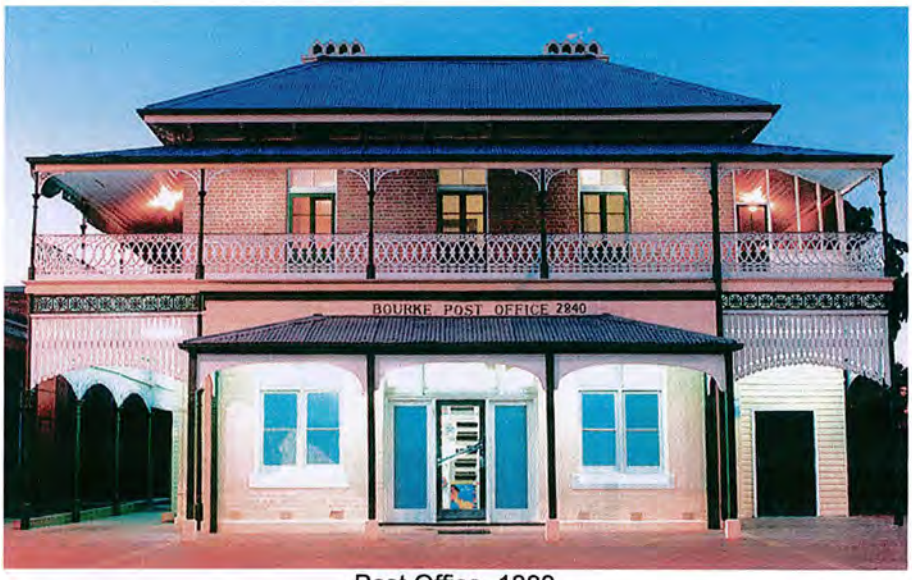
Bourke soon became a major wool loading centre, at boom times as many as 50,000 bales were shipped out in a year. But the financial gains were going to the rival colonies of South Australia and Victoria via the Darling River.

Consequently, successive NSW Governments funded the extention of the Great Western Railway 400 miles from Bathurst to Bourke, opening the line on 3 September 1885. This gave the town its first fast and reliable transport, and diverted the riches of the River Trade to Sydney.

With decreasing numbers of paddle steamers, the operation of the lift span became intermittent and was stopped when the last paddle steamer passed through in 1931. Thereafter the bridge became a routine part of the road network until bypassed and closed to road traffic in 1997.

Bourke's colonial gems

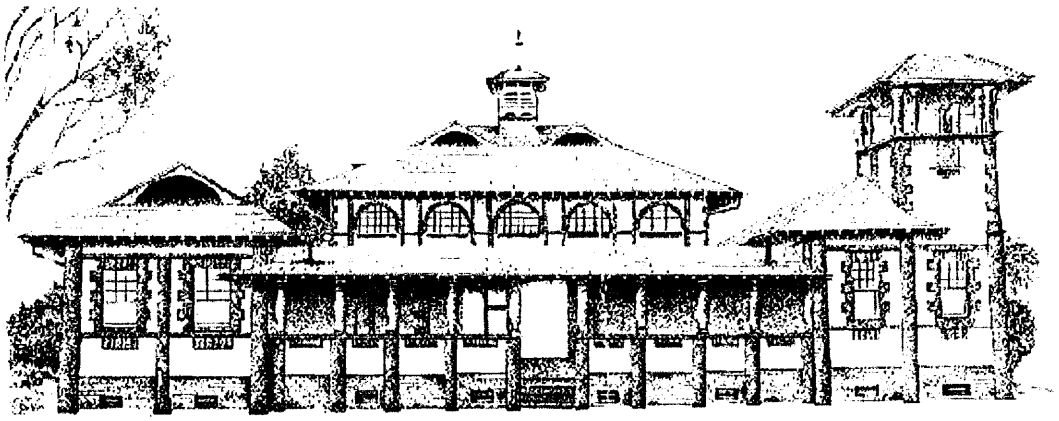
(Bourke Shire Council Collection)



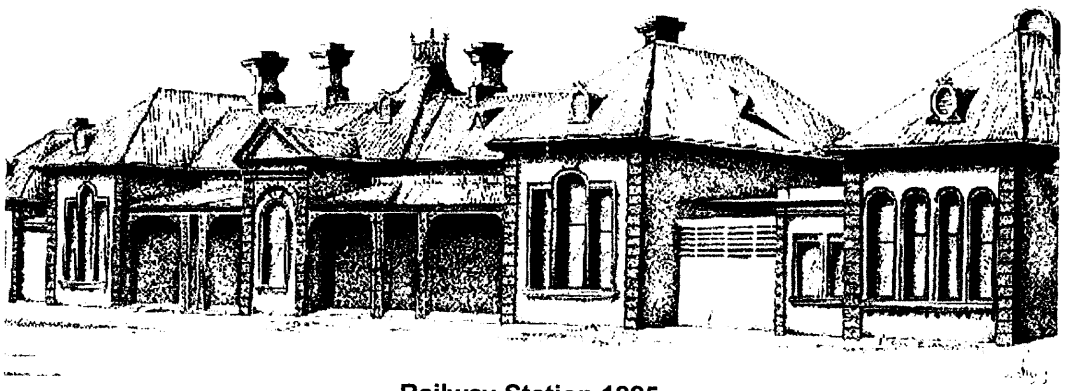
Post Office, 1880



C B C Bank, only survivor from the Victorian era



Court House 1900



Railway Station 1885