

Appendix B

Reference Documents

Cowra:

1. Last Inspected:
 - October 2001
2. Issues Found:
 - Transoms deteriorated
 - Paint in poor condition
3. Rating:
 - Transoms category S3
4. Traffic:
 - Max 4 per week
5. Risk Analysis:
 - Extremely low risk
6. Risk Management:
 - Permanent 10km/hr speed restriction based on capacity of caissons.
7. Operating Regime:
 - Operation approved up to 21 tonne axle loads
 - Normal track speed 10km/hr
8. Maintenance Regime:
 - Programmed inspections
 - Detailed Examination every two years
 - Visual Inspection Through out annually
 - Minor respiking of transoms
 - Transom bolt tightening
9. Repairs Required:
 - Nil
10. Capacity Restrictions:
 - 21 tonne axle loads
 - 10km/hr

Major Wrought Iron Bridges on Operating Lines (April 2001) (5)

Type/ Generation	Year	Location	Spans	Load/ Speed Limit	Current Regular and Seasonal Traffic	
Cellular flanged box girder	1862	Menangle Main South 64.410	6x24m Continuous Double Track	None Applicable	XPT, Xplorer, 13MGT. NR 'C' (22.3t), Class 81 (21.5t), up to 4 locomotives. Coal (100t), Steel and general freight wagons (92t).	
Lattice Girder	First Generation <i>Strengthening scheme developed in 1914 (53 cross girders per span of 48m)</i>	1876	Bathurst Main West 239.104	3x48m Continuous Single Track	6.46t/m - 10km/hr (1.4) (K=0.66) 10/30km/hr	XPT, Indian Pacific, 6MGT. NR 'C' (22.3t), Class 81 (21.5t), up to 4 locomotives. Manildra flour wagons (100t).
		1881	Wagga W Main South 519.456	4x48m Continuous Single Track	6.28t/m - 20km/hr (1.4) (K=0.66) 20/20km/hr	XPT, 7MGT. NR 'C' (22.3t), Class 81 (21.5t), up to 4 locomotives. Wheat/sugar (81t), Steel (92t), Restrictions on some collec. steel wagons (Rova Mech 103808).
		1878	Wellington Main West 412.847	3x48m Continuous Single Track	5.87t/m - 10km/hr (1.4) (K=0.66) Axle ≤ 21.5t 10/30km/hr	XPT, 2MGT. Class 81. Grain Hoppers (E Class. 81t), Cotton Train (80t). 3-4 trains per day in each direction.
		1878	Tamworth Main North 454.125	1x48m Single Track	5.82t/m - 10km/hr (1.4) (K=0.66)	Xplorer, 0.2MGT. Class 81, Ballast and Super phosphate wagons (70t).
		1883	Woolbrook Main North 510.202	1x48m Single Track	Axle ≤ 21.5t 30/50km/hr (4)	Xplorer, 0.2MGT. Class 48, Flour and super phosphate wagons (70t).
Second Generation <i>(26 cross girders per span)</i>	1882	Dubbo Main West 462.762	3x48m Continuous Single Track	5.8t/m - 10km/hr (K=0.66) (3)	NR 'C' (22.3t), Class 81, 2MGT. Grain (81t), Cotton (80t) and Ore concentrate (78t). Prior to 1996, steel wagons.	
	1883	Albury Main south 648.465	2x48m Continuous Double Track	9.3t/m - 80km/hr (K=0.66) Single track- loading (2)	7MGT. Traffic on Down track mainly due to gauge sizes. Restricted double track loading	
	1886	Cowra Cowra Demondrille 568.384	3x48m Continuous Single Track	5.8t/m - 10km/hr (K=0.66) (3)	Class 47, 48, 49 (14.3t max). 0.2MGT. Wheat wagons (81t). 1-2 trains per day in each direction.	
Deck Trusses	1885/1889	Joppa Jn Main South 230.425	2x12m Continuous 2 Single Tracks	M250	Wrought iron bridge carrying the highest annual gross tonnage, 14MGT	

(1): Critical element is at chord splice. (2): Based on single track loading of M250.
 (3): Approximate, extrapolated from 1st generation lattice girder rating. (4): With new arches.
 (5): Also refer to Wrought Iron Report, TR.056, 1999.
 (9): All above bridges require a yearly inspection cycle.

Appendix C

RIC Inspection Report

s Corporation

64641g

Rail Access Corporation

RAIL ACCESS CORPORATION

TS.4158 Form 4

Folio:

EXAMINATION REPORT: STEEL UNDERBRIDGE (Truss)

BUNDLE: _____ LINE: COWRA-KOORAWATHA TRACKCODE: 661

KILOMETRAGE: 368.384 PREV. STATION: COWRA. ROAD/RIVER: LACHLAN

R./I.L.(S.L): _____ RAIL/FLOOD LEVEL: _____ No. TRACKS: 1

TRACK ALIGNMENT: _____ SUPER'N: _____ GUARD RAILS: YES
YES / NO

SPANS: 3/49m LATTICE TRUSS

DRAWING: _____ LOAD RATING: _____ LOAD/CLEAR. SIGNS: _____

EXAMINER: DAVID KISS DATES: 16/17/22/10/01

STEEL REPAIR PRIORITY	REPAIRED	PAINT PRIORITY	PAINTED
MAIN GIRDERS	OK	POOR CONDITION	
CROSS & STRINGER GIRDERS	OK		
BRACING	OK		
FOOTINGS	OK		
TRANSOMS 267.	106 SPLIT ENDS WEATHER WORN BAD.		
STEEL REPAIRS	PRIORITY		
COMMENTS	NOMINATED CIVIL ENGINEERING REPRESENTATIVE		