

Level Crossing Strategy Council Yearly Report 2002/03



owner and maintainer of the new rail network
RAILINFRASTRUCTURE
CORPORATION



MINISTRY OF TRANSPORT



Local Government Association of NSW  Shires Association of NSW

Chairman's Report

The LCSC has built on the achievements of the 2001/02 level crossing upgrade program by reducing safety risk at 137 level crossings in 2002/03. Over \$4.9 Million was spent on level crossing safety during the year, not counting in-house staff or cost of grade separation.

2002/03 saw the Government commit to an acceleration of the level crossing upgrade program, with an additional \$13 Million allocated over 4 years until 2007/08. It should be noted however, with over 3,800 level crossings in NSW, many of them on interstate track, the LCSC will continue to argue in national forums that the Commonwealth needs to contribute to quickly bring all level crossings into the twenty-first century.

2002/03 major achievements include the risk assessment of all public road / public rail level crossings (over 1400 sites), the establishment of a dedicated level crossing closures team (with 14 closures facilitated), and the successful continuation of the public press, billboard and radio education campaign to alert locals, especially in country areas, to the dangers of complacency when using level crossings.

While there were no fatal road accidents at NSW level crossings during the year, the LCSC was greatly assisted by the recommendations from two Coronial Inquiries and a NSW Parliamentary Staysafe Committee. The LCSC is indebted to these broad community efforts to investigate and understand how safety of road users and rail passengers can be improved. The LCSC is committed to implementing all the recommendations to the best of its ability

The LCSC has taken note of incidents interstate, with particular interest in the traffic queuing issues associated with the level crossing accident at Salisbury in Adelaide and the review of pedestrian requirements (particularly persons with disabilities) arising from incidents in Victoria.

NSW has achieved world's best practice by basing its risk reduction program on a model that prioritises where resources can best be deployed. This means that taxpayer dollars are targeted at the level crossings where there will be the greatest safety benefit.

The key to the success of the LCSC is that it ensures that State and local agencies responsible for level crossings speak and act collectively. That this simple arrangement generated such an impressive safety achievement is in large part due to the leadership of Michael Deegan who chaired the LCSC for the first nine months of the year.

JOHN LEE
Chairman

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Upgrade to Type-F Active Protection - Upper Burringbar West (Upper Burringbar Road)

Report prepared by the NSW Level Crossing Upgrade Project

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Highlights

- 123 Sites Safety Upgraded
- 14 Level Crossings Closed
- Risk Assessments Carried Out
- ALCAM Group Formed
- LCAM Adopted Nationally
- Public Education and Awareness Program
- Staysafe Report
- Dedicated Closure Team
- Pedestrian Level Crossing Strategy
- Queuing Treatment

Highlights

123 sites safety upgraded	<ul style="list-style-type: none"> • 11 Major Upgrades. • 11 Advanced Warning Upgrades. • 101 Minor Upgrades. • Various levels of upgrade: from passive (Stop / Give Way signs) to active, from flashing lights to booms, installation of advanced warning lights, improved signage, LED retrofits, sighting improvements, other minor works. • Further 25 sites commenced in 2002/03 for completion in 2003/04.
14 level crossings closed	<ul style="list-style-type: none"> • Various locations across NSW. • Based on sites identified by RIC / SRA.
Risk assessments carried out on all public road / public rail level crossings in NSW	<ul style="list-style-type: none"> • LCAM (Level Crossing Assessment Model) priority listing established using available data. • 1,467 crossings assessed. • List now in use to determine the future program of works.
ALCAM group formed	<ul style="list-style-type: none"> • National group (Australian LCAM group) with a focus on the standardisation of risk assessment of level crossings nationally as well as a coordinated approach to the ongoing improvement of the LCAM. • Representatives from Queensland, New South Wales, Victoria, South Australia, Tasmania, and Northern Territory.
LCAM adopted nationally	<ul style="list-style-type: none"> • LCAM model endorsed by the Standing Committee on Transport (SCOT) and adopted nationally by the Australian Transport Council (ATC).
Public education and awareness program	<ul style="list-style-type: none"> • Funded and prepared jointly by RTA and RIC. • Aimed at improving awareness of risks at level crossings and changing driver behaviour.
Staysafe report	<ul style="list-style-type: none"> • 40 recommendations covering the management of level crossings in NSW. • Monitor progress on recommendations with review in 2007.
Dedicated closures team	<ul style="list-style-type: none"> • Joint RIC / DOT Team with a focus on the closure of level crossings. • Formal process introduced including community consultation.
Pedestrian level crossing strategy	<ul style="list-style-type: none"> • Development of the pedestrian LCAM commenced. • Consideration of disability standards for assessable public transport. • Initial report and database compiled of pedestrian crossings in NSW.
Queuing treatment development and implementation	<ul style="list-style-type: none"> • Motor vehicles queuing across level crossings has been identified as a high risk. • Queuing treatment consisting of signage and pavement marking developed by RTA. • Treatment implemented at 9 high-risk queuing level crossings across NSW.



Upgrade Program

- Upgrade Summary
- Upgrade Map
- Photo Gallery



Upgrade Program – Summary

The following maps illustrate the location of level crossing safety improvements carried out in the 2002/03 financial year along with a brief scope of works for each site. A summary table and description of improvement types is also included for ease of reference.

Summary of 2002/03 level crossing safety improvements

	Number of Sites Completed in 2002/03	Number of sites commenced in 2002/03 due for completion 2003/04	Dollars spent in 2002/03
Active Upgrade Sites	11	9	\$3,613,213
Advanced Warning Sites	8	8	\$196,478
Minor Works Sites	98	-	\$305,877
Federal Funded Sites	6 (3 advanced warning / 3 minor works)	5 (2 major upgrade, 1 advanced warning, 2 minor works)	\$227,372
Closure Sites	14	-	\$316,070
TOTALS:	138	25	\$4,939,621

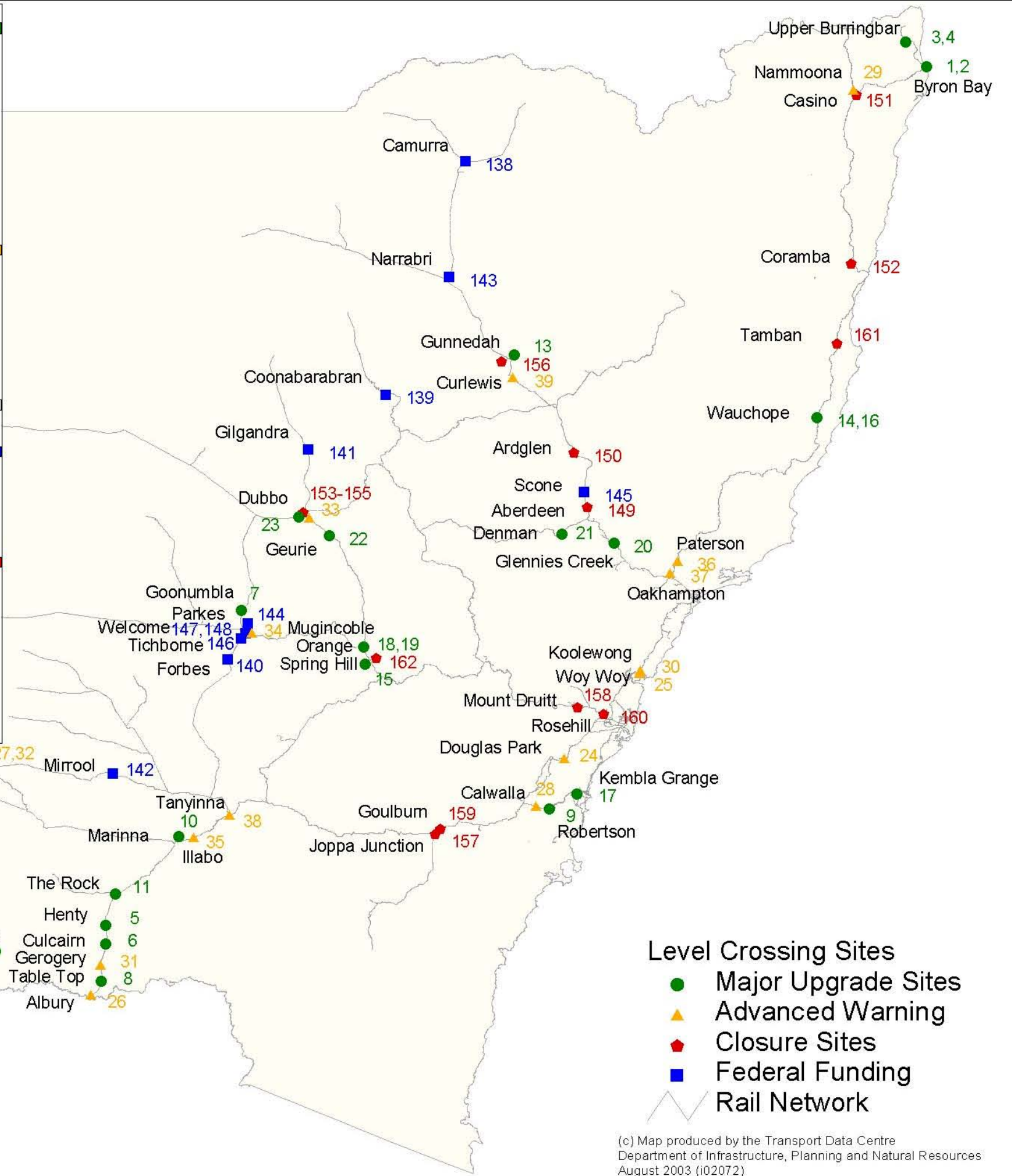
Descriptions of Upgrade Types referred to on maps.

F Lights & Booms:	Type-F Flashing Lights and ½ Boom Barriers.
F Lights:	Type-F Flashing Lights.
Pedestrian Facilities:	Installation of / or improvements to pedestrian facilities adjacent to the road crossing.
Insulated Sleepers:	Installation of insulated steel sleepers or insulating biscuits as required for train detection on active level crossing upgrades
Signal Interlocking:	Signalling works to allow active crossing protection to interface with adjacent signal interlocking (eg. turnouts, loops, other crossings etc).
Road Works:	Road works in association with level crossing upgrade (eg road widening, new crossing track panel etc).
Advanced Warning Lights:	Train activated flashing amber lights positioned on the approach to the level crossing for the purpose of improving visibility of the level crossing active warning operation particularly on approaches with curves and/or other sighting constraints.
Additional Cross-arm	Additional set of red flashing lights on an existing light post to improve sighting of active protection from side street or curved approach.
Retro LED's	Change out of existing incandescent lamp units and replacement with high intensity Light Emitting Diode units providing improved visibility of the crossing in operation.
Queuing Treatment	Yellow crosshatched pavement marking on the crossing road surface in combination with "Keep Clear" signs.
Composite Booms	Replacement of existing ½ boom barrier arms with new composite boom arms.
Extended Post	Install extended post to allow for additional cross-arm.
Sighting Improvements	Embankment widening and vegetation removal to improve sighting of approaching trains for vehicles at the crossing.
Non-frangible Items Removal	Removal of non-frangible (rigid eg rail line post) items to reduce the risk of vehicles being crushed after impact with a train.
Closure of Level Crossing	Closure of level crossing to road vehicles.
Install Electronic Flasher	Installation of an electronic flasher unit to allow the installation of LED lamp units.
Realign Road Approaches	Realignment of road approaches to allow improved sighting of approaching trains for vehicles at the crossing.



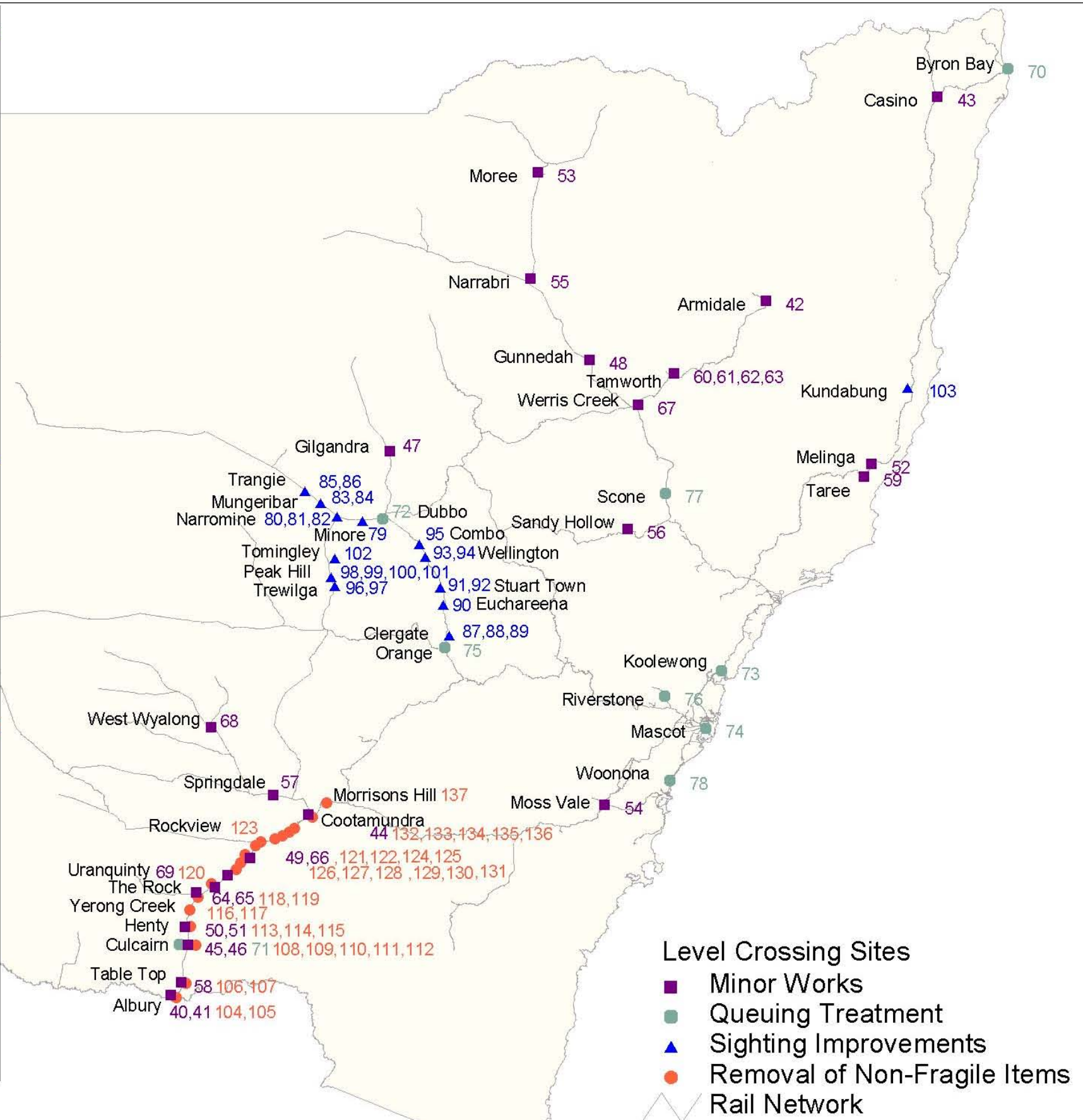
2002/03 Level Crossing Program Works

No.	Location	Scope overview	2002/2003 cost
Major Upgrade Sites			
1	Byron Bay: Old Bangalow Rd # *	F Lights, Pedestrian Facilities	\$0
2	Byron Bay: Bayshore Drive #	F Lights, insulated sleepers.	\$72,342
3	Upper Burringbar - U/B Rd East #	F Lights, additional F Lights, insulate sleepers.	\$99,283
4	Upper Burringbar - U/B Rd West #	F Lights, additional F Lights, insulate sleepers.	\$99,283
5	Henty: Williams Crossing *	F Lights & Booms, additional F Lights, signalling interlocking, road works.	\$13,234
6	Culcairn: Taylors Rd *	F Lights & Booms, additional F Lights, road widening & upgrade.	\$3,974
7	Goonumbra: Bogan Rd	F Lights, signal interlocking, advanced warning lights.	\$298,382
8	Table Top: Perrymans Lane *	F Lights & Booms, additional F Lights, signalling interlocking.	\$11,500
9	Robertson: Meryla St #	F Lights & Booms, major signalling alterations.	\$123,519
10	Marinna: Public Rd #	F Lights & Booms, signal interlocking.	\$233,541
11	The Rock: Burkes Creek Rd #	F Lights & Booms, additional F Lights, signal interlocking.	\$158,230
12	Savemake: SH20 #	F Lights.	\$108,000
13	Gunnedah: Oula Rd #	Grade separation, road underbridge, level crossing closure.	RTA
14	Wauchope: Kings Creek Rd	F Lights & Booms.	\$288,228
15	Spring Hill: Beasley Rd *	F Lights & Booms, signalling interlocking.	\$185,482
16	Wauchope: Oxley Hwy *	Retro fit Booms, pedestrian facilities, queuing treatment, signalling interlocking	\$225,744
17	Kembla Grange: West Dapto Rd *	Retro fit Booms, queuing treatment.	\$0
18	Orange: Byng St *	Retro fit Booms, pedestrian facilities, queuing treatment	\$98,612
19	Orange: Dalton St *	Retro fit Booms, pedestrian facilities, queuing treatment	\$81,583
20	Glennies Creek: Glennies Creek Rd *	F Lights & Booms, major signal interlocking, advanced warning lights.	\$75,188
21	Denman: Rosemount Rd *	F Lights.	\$39,398
22	Geurie: Mitchell St *	F Lights & Booms, insulated sleepers, pedestrian facilities.	\$301,956
23	Dubbo: Fitzroy St	F Lights & Booms, major signalling alterations, road works, ped facilities.	\$1,118,834
Advanced Warning Sites			
24	Douglas Park: Camden Rd *	Composite Booms, Retro LED's, additional signage, street lighting.	\$7,164
25	Woy Woy: Rawson Rd *	Additional cross-arm, Non-frangible items removed	\$7,788
26	Albury: Fallon St *	Advanced Warning Lights.	\$2,912
27	Griffith: Blumer Ave Branch *	Additional cross-arm, Retro LED's.	\$4,894
28	Calwalla: Sheepwash Rd	Advanced warning lights (x2), Retro LED's.	\$80,325
29	Namoon: Summerland Way	Retro LED's.	\$3,459
30	Koolewong: Couche Cres	Additional Cross-arm, Retro LED's (incl booms).	\$15,298
31	Gerogery: East St *	Additional Standard, Retro LED's.	\$8,256
32	Griffith: Blumer Ave Main *	Retro LED's.	\$3,480
33	Dubbo: Sheraton Ave *	Extended Posts, Retro LED's.	\$10,403
34	Mugincoble: Eugowra Rd	Additional cross-arm, Retro LED's, earthworks.	\$16,160
35	Illabo: Olympic Hwy *	Additional Standard, Composite Booms, Retro LED's, earthworks.	\$8,098
36	Patterson: King St	Composite Booms, Non-frangible items removed.	\$12,407
37	Oakhampton: Oakhampton Rd	Additional cross-arm.	\$1,248
38	Tanyinna: Olympic Hwy	Composite Booms, Retro LED's.	\$13,028
39	Curlewis: Kamilari Hwy	Retro LED's, Non-frangible items removed.	\$20,880
Minor Work Sites			
40-69	Various Locations	LED Retrofits	\$127,569
70-78	Various Locations	Queuing Treatments	\$29,798
79-102	Various Locations	Sighting Improvements	\$93,070
103-137	Various Locations	Non Frangible Items Removal	\$55,440
Federal Funded Sites			
138	Camurra: Newell Hwy	Retro LED's.	\$3,398
139	Coonabarabran: Newell Hwy	Retro LED's.	\$3,395
140	Forbes: Newell Hwy *	Retro fit Booms, Additional Standard, Retro LED's.	\$79,998
141	Gilgandra: Newell Hwy *	Retro LED's, install electronic flasher.	\$8,400
142	Mirrool: Newell Hwy *	Retro LED's, install electronic flasher.	\$7,973
143	Narrabri West: Newell Hwy	Retro LED's.	\$7,349
144	Parke: Newell Hwy *	Retro LED's, install electronic flasher.	\$20,091
145	Scone: New England Hwy *	Retro Booms, Pedestrian Facilities, signalling interlocking	\$59,889
146	Tichborne: Newell Hwy	Advanced warning lights, Retro LED's, install electronic flasher.	\$18,024
147	Welcome: Newell Hwy	Additional advanced warning lights (x2).	\$15,435
148	Welcome: Newell Hwy	Retro LED's, install electronic flasher.	\$4,230
Closure Sites			
149	Aberdeen 298.493 km	Closure of Level Crossing	RIC
150	Ardglen 363.048 km:	Closure of Level Crossing	RIC
151	Casino: Bennetts Rd	Closure of Level Crossing	\$100,070
152	Coramba: Landyan's Road	Closure of Level Crossing	\$74,000
153-155	Dubbo: Public x3	Closure of Level Crossing	RIC
156	Gunnedah: Oula Road:	Closure of Level Crossing	RIC
157	Joppa Junction: Marzanet Road	Closure of Level Crossing	\$1,000
158	Mt Druitt Station: Internal Crossing	Closure of Level Crossing	RIC
159	North Goulburn Pedestrian	Closure of Level Crossing	\$1,000
160	Rosehill Station: Country End	Closure of Level Crossing	RIC
161	Tamban: Collombatti Rd	Closure of Level Crossing	\$140,000
162	Spring Hill: 309.356	Closure of Level Crossing	RIC
Other Miscellaneous Costs			
	Project Development	Estimating, Concept Design, Stakeholder Inspections.	\$65,601
	Safety Campaign	Joint RTA & RIC Safety Initiative.	\$200,000
	Outstanding Items 2001/2002	Update design drawings 2001/2002 plus miscellaneous outstanding items	\$15,010
		Grand Total :	\$4,939,821



2002/03 Level Crossing Program Works – Minor Works Sites

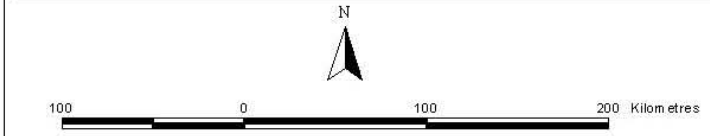
No.	Location	Scope overview	2002/2003 cost
Minor Work Sites			
40	Albury: Olive St	Retro LED's (incl booms).	\$8,833
41	Albury: Dalling Rd	Retro LED's	\$3,571
42	Armidale: Markham St	Retro LED's	\$2,700
43	Casino: Hotham St	Retro LED's	\$3,369
44	Cootamundra: Berthong Rd	Retro LED's	\$2,650
45	Culcairn: Ashleigh Park	Retro LED's	\$3,571
46	Culcairn: Balfour St	Retro LED's (incl booms).	\$8,833
47	Gilgandra: Oxley Hwy	Retro LED's, install electronic flasher.	\$8,400
48	Gunnedah: New St	Retro LED's	\$4,490
49	Harefield: Harefield Rd	Retro LED's	\$890
50	Henly: Rosler Pde	Retro LED's	\$3,571
51	Henly: Sladen St	Retro LED's (incl booms).	\$8,833
52	Melina: Landsdowne Rd	Retro LED's	\$3,404
53	Moree: Bullus Drive	Retro LED's	\$3,046
54	Moss Vale: Suttor Rd	Retro LED's	Nil
55	Narrabri: Old Turrawan Rd	Retro LED's	\$3,853
56	Sandy Hollow: Rylstone Rd	Retro LED's	\$4,100
57	Springdale: Stock-Temora Rd	Retro LED's, install electronic flasher.	\$3,841
58	Table Top: Tynan Rd	Retro LED's	\$3,571
59	Taree: Bushland Drive	Retro LED's	\$3,543
60	Tamworth: Darling St	Retro LED's	\$3,944
61	Tamworth: Hall St	Retro LED's	\$3,228
62	Tamworth: Mt Falcon Drive	Retro LED's	\$3,161
63	Tamworth: White St	Retro LED's	\$3,351
64	The Rock: The Avenue	Retro LED's (incl booms).	\$8,833
65	The Rock: Yerong St	Retro LED's	\$3,071
66	Wagga: Docker St	Retro LED's (incl booms).	\$890
67	Werris Creek: Single Street	Retro LED's	\$3,116
68	West Wyalong: Mid Western Hwy	Retro LED's	\$2,983
69	Uranquinty: Yarragundry St	Retro LED's (incl booms).	\$8,833
	Total:		\$127,689
Queuing Treatment Sites			
70	Byron Bay: Lawson St	Queuing Treatment (Pavement Marking and signage).	\$10,547
71	Culcairn: Balfour St	Queuing Treatment (Pavement Marking and signage).	\$4,872
72	Dubbo: Darling St	Queuing Treatment (Pavement Marking and signage).	\$5,752
73	Koolewong: Couche Drive	Queuing Treatment (Pavement Marking and signage).	\$417
74	Mascot: General Homes Dr	Queuing Treatment (Pavement Marking and signage).	RTA
75	Orange: Summer St	Queuing Treatment (Pavement Marking and signage).	\$8,110
76	Riverstone: Garfield Rd	Queuing Treatment (Pavement Marking and signage).	RTA
77	Scots: Liverpool St	Queuing Treatment (Pavement Marking and signage).	RTA
78	Woonona: Park Rd	Queuing Treatment (Pavement Marking and signage).	RTA
	Total:		\$29,798
Sighting Improvements			
79	Minore: Lagoon Creek Rd	Embankment widening, vegetation removal to improve sighting	\$1,763
80	Narramine: Tanttha Rd	Embankment widening, vegetation removal to improve sighting	\$1,096
81	Narramine: McNamara Ln	Embankment widening, vegetation removal to improve sighting	\$512
82	Narramine: Angleone Rd	Embankment widening, vegetation removal to improve sighting	\$876
83	Mungeribar: Cares Siding Rd	Embankment widening, vegetation removal to improve sighting	\$1,268
84	Mungeribar: Mungeribar Rd	Embankment widening, vegetation removal to improve sighting	\$996
85	Trangie: Brigodoon Rd	Embankment widening, vegetation removal to improve sighting	\$824
86	Trangie: Herrings Rd	Embankment widening, vegetation removal to improve sighting	\$723
87	Clergate: Cullya Rd	Embankment widening, vegetation removal to improve sighting	\$7,014
88	Clergate: Cullya Rd	Embankment widening, vegetation removal to improve sighting	\$3,773
89	Clergate: Clergate Lane	Embankment widening, vegetation removal to improve sighting	\$4,025
90	Eucharee: Keele Creek	Embankment widening, vegetation removal to improve sighting	\$5,399
91	Stuart Town: Store Creek Rd	Embankment widening, vegetation removal to improve sighting	\$7,771
92	Stuart Town: Mt Aquila Rd	Embankment widening, vegetation removal to improve sighting	\$4,842
93	Wellington: Charles St	Embankment widening, vegetation removal to improve sighting	\$5,828
94	Wellington: Merryvale Rd	Embankment widening, vegetation removal to improve sighting	\$2,131
95	Combo: Gibbs Lane	Embankment widening, vegetation removal to improve sighting	\$3,073
96	Trewilga: Trewilga Rd	Embankment widening, vegetation removal to improve sighting	\$1,264
97	Trewilga: Private Xing	Embankment widening, vegetation removal to improve sighting	\$1,117
98	Peak Hill: Whitton Park Rd	Embankment widening, vegetation removal to improve sighting	\$1,059
99	Peak Hill: Mingello Rd	Embankment widening, vegetation removal to improve sighting	\$1,182
100	Peak Hill: Bogan Rd	Embankment widening, vegetation removal to improve sighting	\$978
101	Peak Hill: Stanfords	Embankment widening, vegetation removal to improve sighting	\$1,080
102	Tomingley: Tomingley Rd	Embankment widening, vegetation removal to improve sighting	\$5,403
103	Kundabung: River Rd	Re-align road approaches	\$29,373
	Total:		\$93,070
Removal of Non-Fragile Items - Albury to Culcairn			
104	Albury: Olive St	Removal of Non-Fragile Items	
105	Albury: Ettamogah Rd	Removal of Non-Fragile Items	
106	Table Top: Perryman's Ln	Removal of Non-Fragile Items	
107	Table Top: Nursey Rd	Removal of Non-Fragile Items	
108	Culcairn: Benambra Rd	Removal of Non-Fragile Items	
109	Culcairn: Odewahns Rd	Removal of Non-Fragile Items	
110	Culcairn: Taylors Rd	Removal of Non-Fragile Items	
111	Culcairn: Balfour Rd	Removal of Non-Fragile Items	
112	Culcairn: Baird St	Removal of Non-Fragile Items	
113	Henly: Ashleigh Park Feed Lot	Removal of Non-Fragile Items	
114	Henly: Rosler Pde	Removal of Non-Fragile Items	
115	Henly: Williams Crossing	Removal of Non-Fragile Items	
116	Yerong Creek: Eulensteins Ln	Removal of Non-Fragile Items	
117	Yerong Creek: Plunkett St	Removal of Non-Fragile Items	
118	The Rock: Kubara St	Removal of Non-Fragile Items	
119	The Rock: Yerong St	Removal of Non-Fragile Items	
120	Uranquinty: Yarragundry St	Removal of Non-Fragile Items	
121	Bomen: Trahalis Ln	Removal of Non-Fragile Items	
122	Shepards Siding: Shepards Rd	Removal of Non-Fragile Items	
123	Rockview: Main Rd 243	Removal of Non-Fragile Items	
124	Harefield: Old Wagga Rd	Removal of Non-Fragile Items	
125	Junee: Olympic Hwy	Removal of Non-Fragile Items	
126	Ilabo: Shire & Carter	Removal of Non-Fragile Items	
127	Ilabo: Ilabo	Removal of Non-Fragile Items	
128	Ilabo: Olympic Hwy	Removal of Non-Fragile Items	
129	Aringa: Forest Lodge	Removal of Non-Fragile Items	
130	Bethungra: Olympic Hwy	Removal of Non-Fragile Items	
131	Tanyinna: Olympic Hwy	Removal of Non-Fragile Items	
132	Cootamundra: Ryan's Crossing	Removal of Non-Fragile Items	
133	Cootamundra: Back Brawlin Rd	Removal of Non-Fragile Items	
134	Cootamundra: Cowcumbra Rd	Removal of Non-Fragile Items	
135	Cootamundra: Gundagai Rd	Removal of Non-Fragile Items	
136	Cootamundra: Temora Rd	Removal of Non-Fragile Items	
137	Morrison's Hill: off Morrison's Hill Rd	Removal of Non-Fragile Items	
	Total:		\$65,440



Level Crossing Sites

- Minor Works
- Queuing Treatment
- ▲ Sighting Improvements
- Removal of Non-Fragile Items
- Rail Network

(c) Map produced by the Transport Data Centre
 Department of Infrastructure, Planning and Natural Resources
 August 2003 (i02072)



Upgrade Program – Photo Gallery

BYRON BAY BAYSHORE DRIVE

Previous protection: Stop signs (urban area)
Upgrade: Type F lights
Road authority: Byron Shire Council
Comments:



UPPER BURRINGBAH U/B ROAD EAST

Previous protection: Stop signs (rural area)
Upgrade: Type F lights
Road authority: Tweed Shire Council.
Comments:

- Modified bell installation as requested by community.

UPPER BURRINGBAH U/B ROAD WEST

Previous protection: Stop signs (rural area)
Upgrade: Type F lights
Road authority: Tweed Shire Council
Comments:

- Additional lights due to curved approach



Upgrade Program – Photo Gallery

GOONUMBLA BOGAN ROAD

Previous protection: Give Way signs (rural area)

Upgrade: Type F lights, booms, advanced warning lights.

Road authority: Parkes Shire Council

Comments:

- Solar power used
- Advanced warning lights installed due to road conditions (heavy vehicles, high speed) and occurrence of fog
- Funding contribution Jointly by Parkes Shire Council and Nth Parkes Mine.



ROBERTSON MERYLA STREET

Previous protection: Stop signs (urban area)

Upgrade: Type F lights, booms

Road authority: Wingecarribee Shire Council

Comments:

- Previous fatality at the crossing.
- Half booms installed due to the occurrence of fog.

MARINNA PUBLIC ROAD

Previous protection: Stop signs (rural area)

Upgrade: Type F lights, booms

Road authority: Junee Shire Council

Comments:

- Double Track / High Speed.
- First double track grade crossing predictor installed in NSW.
- Additional lights due to alignment of approach roads.



Upgrade Program – Photo Gallery

THE ROCK BURKES CREEK ROAD

Previous protection: Stop signs (rural area)

Upgrade: Type F lights, booms

Road authority: Wagga Wagga City Council

Comments:

- High speed corridor
- Additional lights due to alignment of approach roads.



SAVERNAKE STATE HIGHWAY 20

Previous protection: Stop signs (rural area)

Upgrade: Type F lights

Road authority: RTA

Comments:

- Broad gauge Victorian network.
- Constructed by VIC Track.

GUNNEDAH QUIA ROAD

Previous protection: Stop signs (urban/rural area)

Upgrade: Grade Separation

Road authority: Gunnedah Shire Council

Comments:

- Road underpass upgraded.
- Quia Rd level crossing closed.



Upgrade Program – Photo Gallery

WAUCHOPE KINGS CREEK ROAD

Previous protection: Stop signs (urban/rural area)

Upgrade: Type F lights, booms

Road authority: Hastings Shire Council

Comments:

- High speed corridor.
- Recorded near miss prior to installation of active protection.



DUBBO FITZROY STREET

Previous protection: Stop signs, rail operated gates (urban area)

Upgrade: Type F lights, booms, road works

Road authority: Dubbo City Council

Comments:

- Multiple lines.

DOUGLAS PARK CAMDEN ROAD

Previous protection: Booms (urban area)

Upgrade: Retro fit composite booms / install LED's

Road Authority: Wollondilly Shire Council.

Comments:

- Signage improvements.
- Queuing treatment to be installed in 2003/04.



Upgrade Program – Photo Gallery

WOY WOY RAWSON ROAD

Previous protection: Booms (Metro area)

Upgrade: Install LED's , Additional lights

Road authority: Gosford City Council

Comments:

- High speed corridor



CALWALLA SHEEPWASH ROAD

Previous protection: Type F (100km/hr area)

Upgrade: Advanced Warning Lights

Road authority: Wingecarribee Shire Council

Comments:

- High speed road.
- Susceptible to fog.

NAMOONA SUMMERLAND WAY

Previous protection: Type F (100kmh area)

Upgrade: LED Upgrade

Road authority: RTA (Richmond Valley Shire Council)

Comments:

- Previous fatality
- Curved approach Northbound



Upgrade Program – Photo Gallery

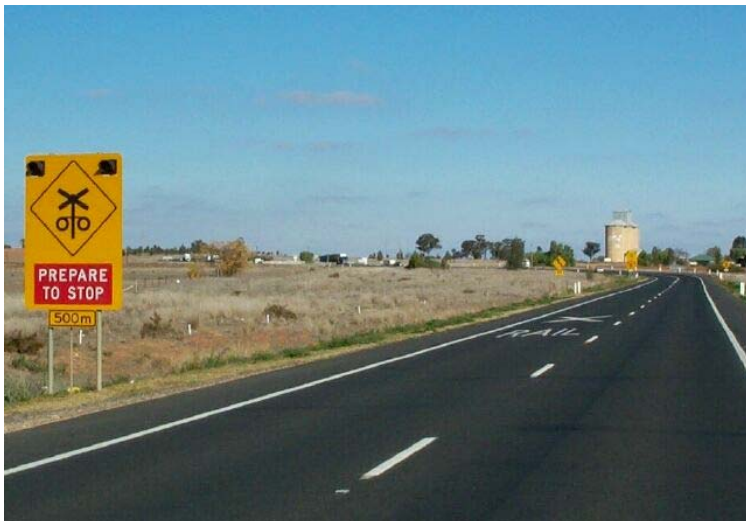
KOOLEWONG COUCHE CRESENT

Previous protection: Booms (Metro area)
Upgrade: LED's, Queuing Treatment, Additional lights.

Road authority: Gosford City Council

Comments:

- Pedestrian and traffic improvements proposed in 2003/04.



TICHBOURNE NEWELL HIGHWAY

Previous protection: Type F (100kmh area)
Upgrade: Additional Advanced Warning Lights

Road authority: RTA (Parkes Shire Council)

Comments:

- Significant level of heavy vehicles.
- History of incidents.
- High road speed.

WELCOME NEWELL HIGHWAY

Previous protection: Type F (100kmh area)
Upgrade: Additional Advanced Warning Lights

Road authority: RTA (Parkes Shire Council)

Comments:

- Significant level of heavy vehicles.
- History of incidents.
- High road speed.



Upgrade Program – Photo Gallery

OAKHAMPTON OAKHAMPTON ROAD

Previous protection: Type F (rural area)

Upgrade: LED's, Additional Lights.

Road authority: Maitland City Council

Comments:

- Curved road approaches



CURLEWIS KAMILAROI HIGHWAY

Previous protection: Type F (100kmh area)

Upgrade: LED's, Improved signage.

Road authority: RTA (Gunnedah Shire Council)

Comments:

- Curved road approaches

MASCOT GENERAL HOLMES DRIVE

Previous protection: Booms (Metro area)

Upgrade: Queuing Treatment

Road authority: RTA.

Comments:

- High traffic urban site.



Upgrade Program – Photo Gallery

BOMEN TRAHAIRS LANE

Previous protection: Stop signs (rural area)

Upgrade: Removal/Replacement of Non-Frangible Items.

Road authority: Wagga Wagga City Council

Comments:

- Previous rail post cattle grid hazard to motorists.
- High speed corridor.



TAMBAN LEVEL CROSSING CLOSURE

Previous protection: Stop signs

Closure: Crossing closed to road traffic

Comments:

- Alternated access provided.

PUBLIC EDUCATION STRATEGY

**“Stop or Get Stopped in Your Tracks”
Billboard and Radio campaign**

- Joint RTA / RIC funding
- Proposed yearly campaign to reinforce message.



Achievements

- Table of Achievements



Table of Achievements

Level Crossing Assessment Model	<ul style="list-style-type: none"> • LCAM development under way with the aim of improving assessment outcomes. • Independent Verification of NSW LCAM carried out – minor improvements recommended. • Commencement of a national workshop to fine tune the LCAM and implement a standard national risk assessment model.
Working List	<ul style="list-style-type: none"> • Risk assessments carried out at all intersections between public roads and public rail (standard gauge) lines currently in use in NSW. • Priority order listing of all public roads/rail level crossings identifying existing characteristics and controls as well as proposed treatments and budgets used to manage the upgrade program and report to the LCSC.
Public release of LCAM Working List	<ul style="list-style-type: none"> • Details future upgrade sites based on priorities. • Proposed distribution to stakeholders.
Additional state funding	<ul style="list-style-type: none"> • Additional funding announced for level crossing upgrades of \$13M over the next 4 years. • Total program funding now \$23M over 4 years.
Federal funding	<ul style="list-style-type: none"> • Federal Funding of \$270K in 2002/03 and \$560K in 2003/04 for improvements on National Highways.
Public education and awareness program	<ul style="list-style-type: none"> • Development of a public awareness program targeting driver behaviour. • Program carried out with a billboard and radio campaign. • Focus group testing with Positive outcomes achieving the original goals.
Level crossing closures team	<ul style="list-style-type: none"> • Dedicated closures team introduced with the focus on level crossing closures. • 14 Level Crossings Closed.



Table of Achievements (cont)

Close-out process	<ul style="list-style-type: none"> • Process developed and implemented to ensure the close out of issues raised in relation to level crossing safety. • Close our register maintained by LCSC secretariat.
Pedestrian report	<ul style="list-style-type: none"> • Identifies issues associated with pedestrian crossings. • First cut database of pedestrian crossings in NSW. • Recommendations for future strategy.
Pedestrian disability issues	<ul style="list-style-type: none"> • SKM report to Victorian Department of Infrastructure. • Impact on design of pedestrian facilities. • Additional information being gathered.
Pedestrian level crossing standards forum	<ul style="list-style-type: none"> • Level of protection to be applied. • Impact of high speed lines. • Disability Issues.
Pedestrian assessment model	<ul style="list-style-type: none"> • Development commenced. • In conjunction with ALCAM group.
Queuing treatment	<ul style="list-style-type: none"> • Development by the RTA of a NSW Standard for the application of queuing treatment at level crossings, including road surface painting and associated signage. • Application of queuing treatment at 9 sites identified as potential queuing locations.
Culcairn Shire study	<ul style="list-style-type: none"> • Road/Rail study under way to review the requirements of rail crossings in the Culcairn Shire. • “Whole of Shire” strategy. • High speed closed corridor principles to be considered. • Options to be prepared for consideration by stakeholders.



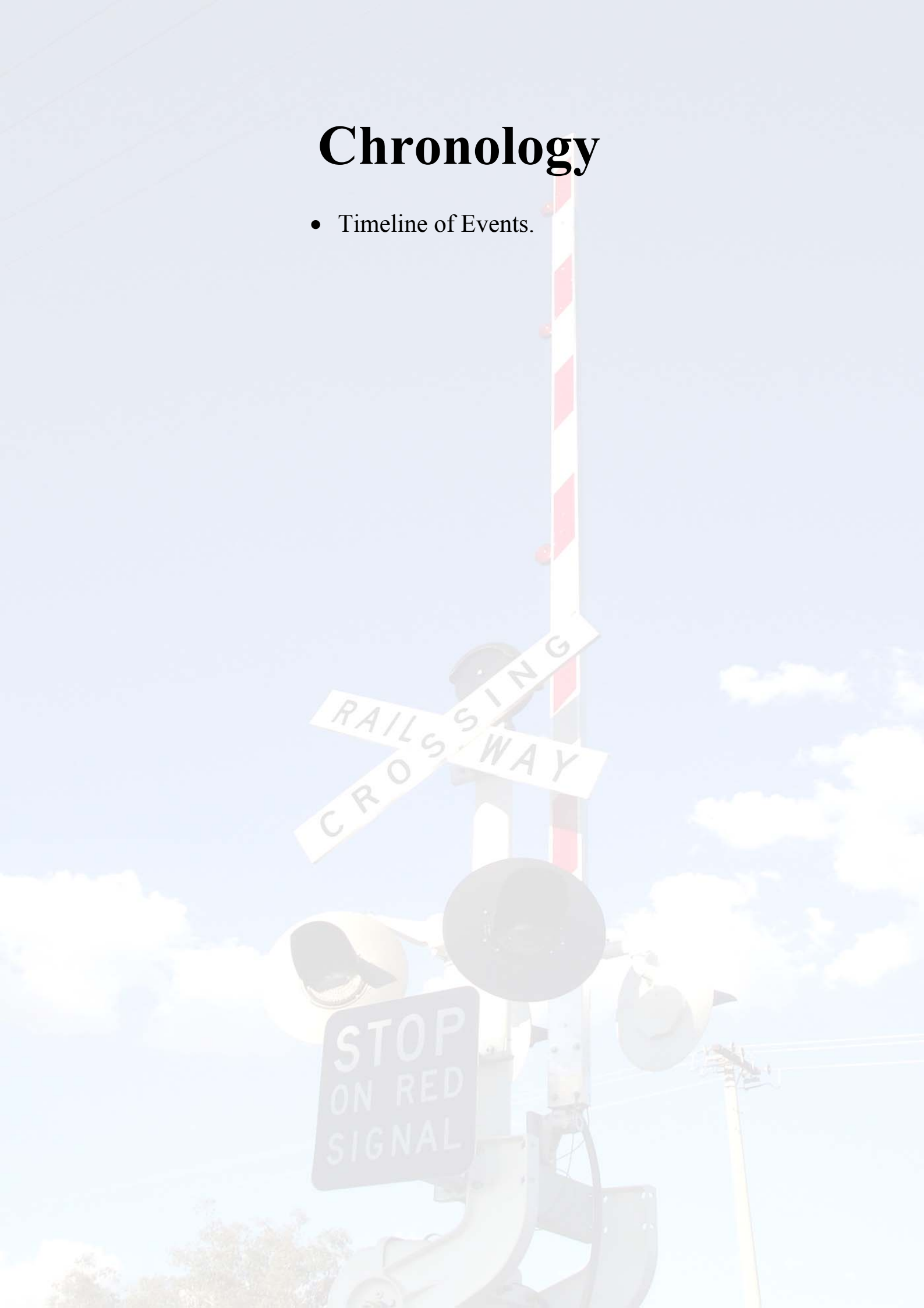
Table of Achievements (cont)

Corridor approach to improvements commenced	<ul style="list-style-type: none"> • LED installations completed Wagga to Albury. • Non-frangible items removed Cootamundra to Albury.
Program of minor works safety improvements	<ul style="list-style-type: none"> • An initiative to remove Non-Frangible Items in the section of track from Cootamundra to Albury on the Main South. • Implementation of a program of sighting improvements in the West involving embankment widening and the removal of unwanted vegetation to improve sighting of oncoming trains. • Upgrade of 30 Active crossing from incandescent lights to LED's to achieve greater visibility and reliability.
Gerogery Coronial Inquiry	<ul style="list-style-type: none"> • Submission to coronial. • Assessment and implementation of recommendations.
Albury Coronial Inquiry	<ul style="list-style-type: none"> • Submission to coronial. • Assessment and implementation of recommendations.
Review of guardrail use at level crossings	<ul style="list-style-type: none"> • RTA recognise safety issues with use of guard rails. • RTA / RIC working together to develop new guide post delineation treatment.
LCSC / LCWG co-operation	<ul style="list-style-type: none"> • Program activity supported by committee members. • Entities working together to deliver outcomes.
Outsourcing of Signal Design	<ul style="list-style-type: none"> • Used to supplement RIC resources. • Assists delivery of accelerated program.



Chronology

- Timeline of Events.

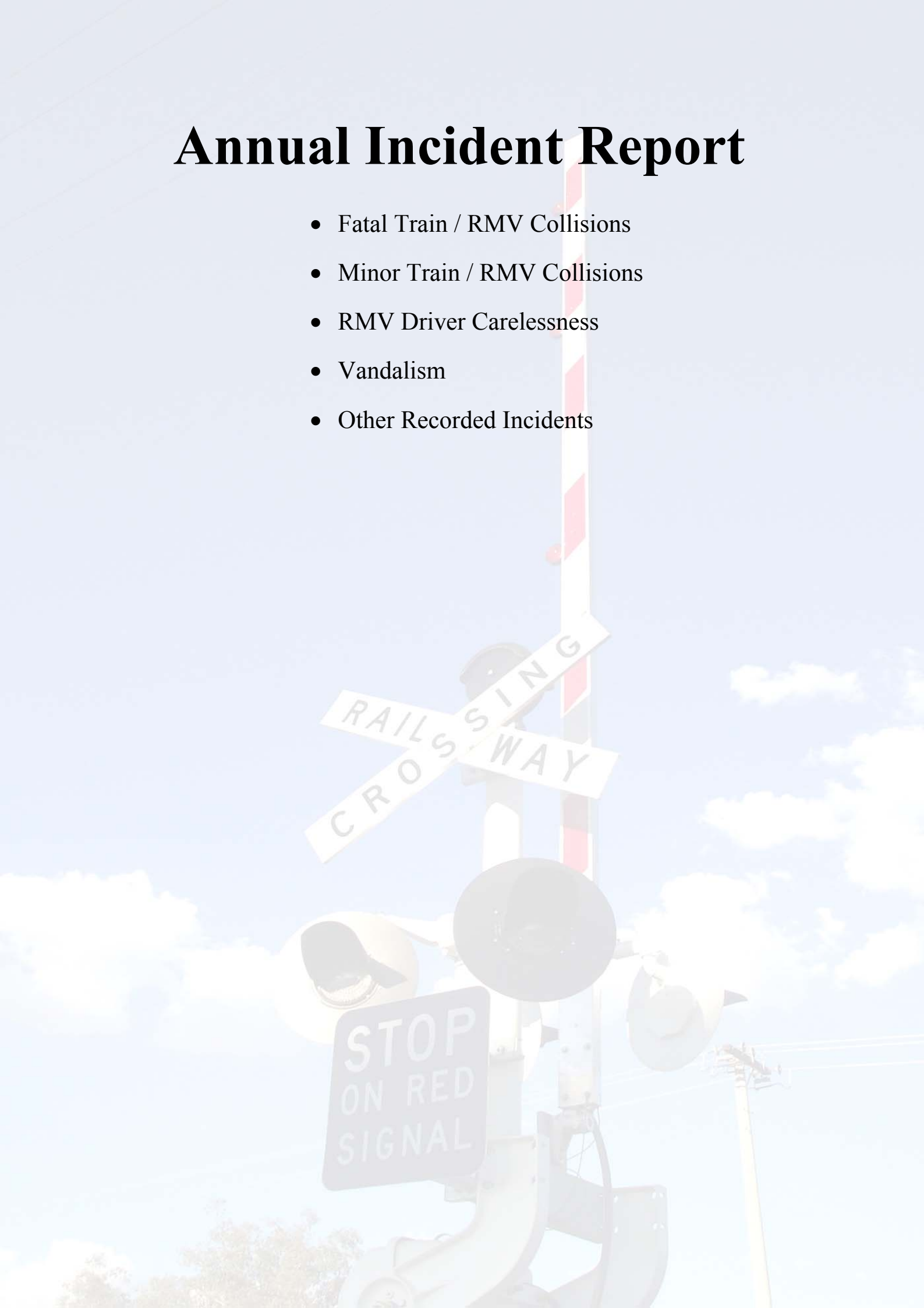


Timeline of Events



Annual Incident Report

- Fatal Train / RMV Collisions
- Minor Train / RMV Collisions
- RMV Driver Carelessness
- Vandalism
- Other Recorded Incidents



2002/03 Level Crossing Incident Summary

Issue:

- Level crossing incidents between 1 July 2002 and 30 June 2003

For information:

- Provide a summary of reported major level crossing incidents for the above period.

Important facts:

- 7 Train/RMV collisions recorded (1 SRA XPT, 5 Freight, 1 RIC track machine)
 - only minor injuries reported
- 33 broken boomgate incidents caused by vehicles
 - 7 relate to Pine Road, Fairfield
- 29 “near miss” incidents
 - 5 incidents where RMV deliberately drove around boomgates (1 NSWFB)
- 1 incident where RMV “playing chicken”
- 4 incidents reported where vehicle blocking rail lines
- 34 vandalism incidents recorded

Comment:

- The blocked crossing, “near miss” and broken boom gate incidents are all potential collision occurrences.
- A disturbing aspect is the deliberate behaviour of driving around boom gates. All 5 incidents were reported in the Newcastle/Hunter region.
 - NSWFB have investigated the incident and suspended the driver
 - Penalty Infringements issued are to be obtained from the Infringement Bureau if data is available
- Due to the nature of the data, it has not been determined if these figures indicate trends or better incident reporting

Close out process:

- As indicated at the 19 June LCSC a number of actions proposed to the LCSC to address such occurrences are :
 1. Increased public awareness advertising
 2. Increased enforcement focus by all agencies to ensure prosecution, in line with the increased penalties introduced in January 2003

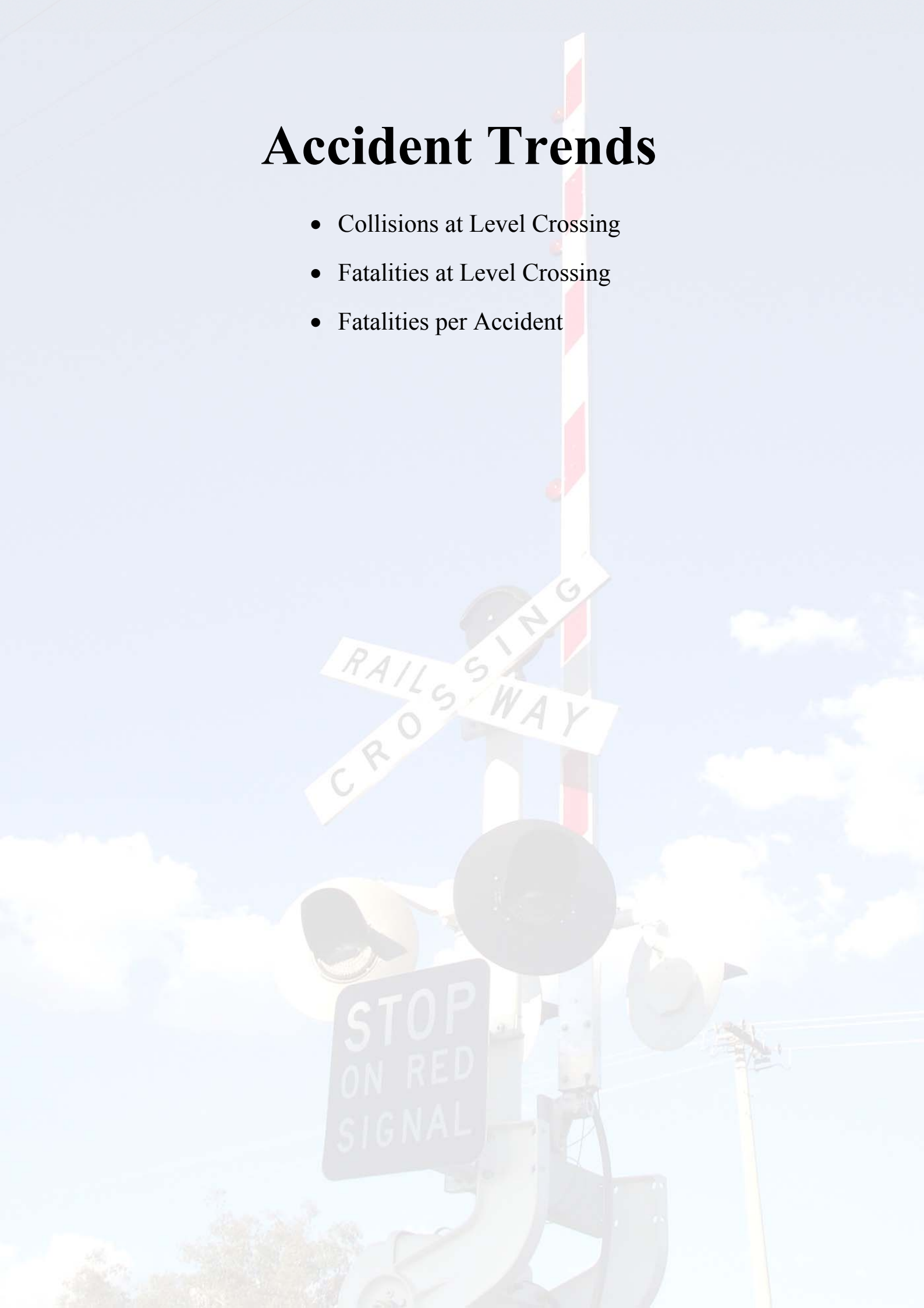
Prepared by: Steven Ford, Transport Safety Ph 9268 2986

25 August 2003



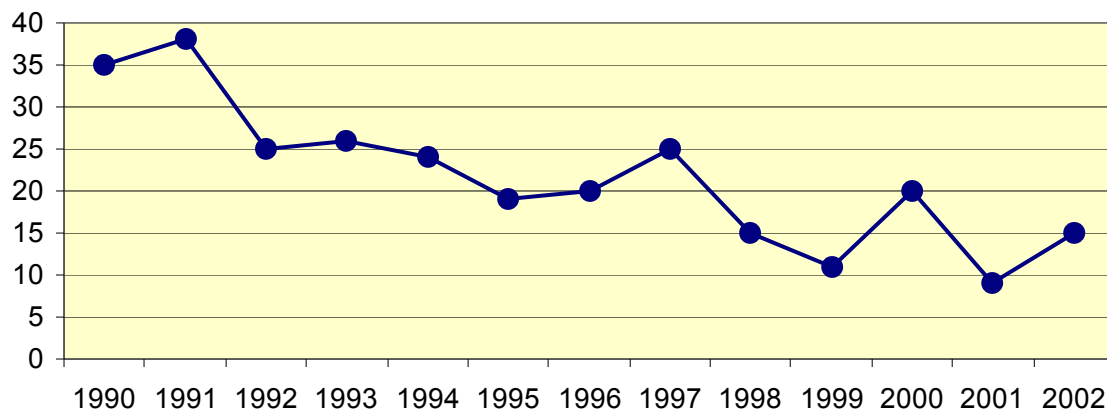
Accident Trends

- Collisions at Level Crossing
- Fatalities at Level Crossing
- Fatalities per Accident

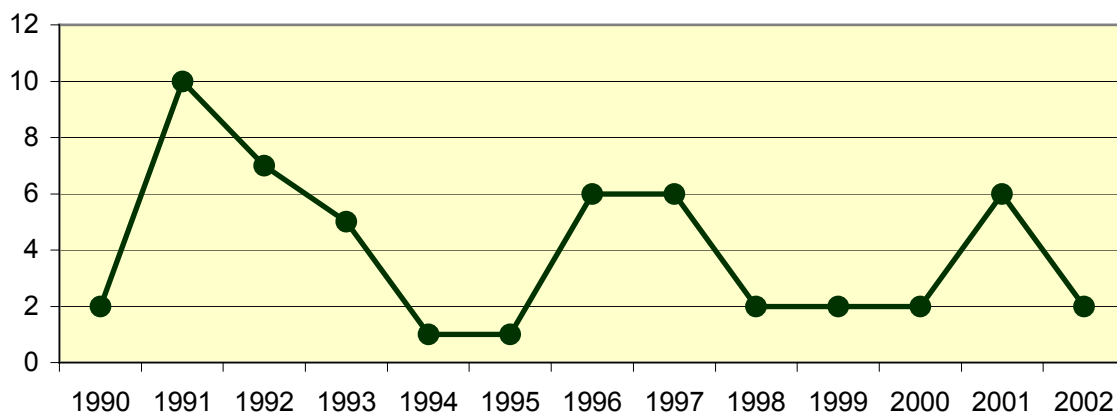


Accident Trends

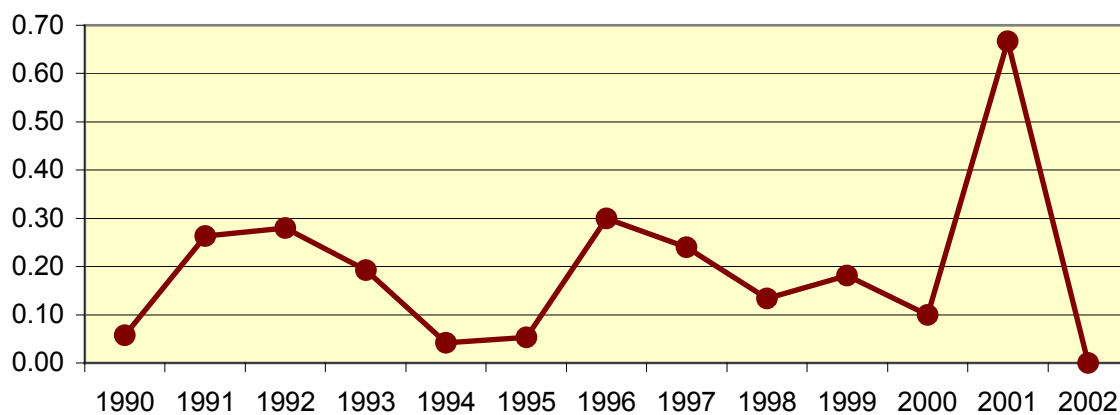
Collisions at Level Crossings by Year



Fatalities at Level Crossings by Year

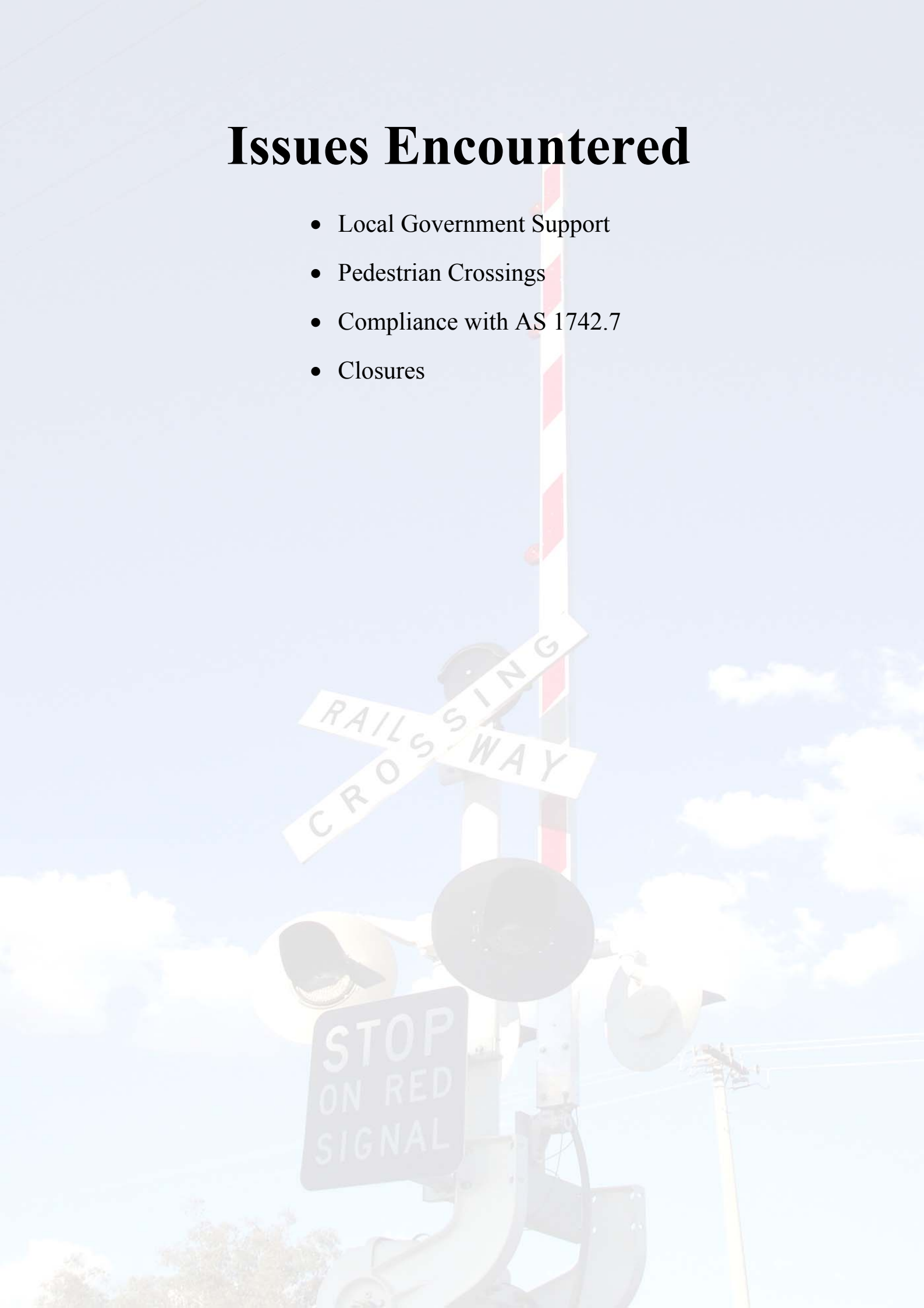


Average Number of Fatalities per Collisions at Level Crossings by Year



Issues Encountered

- Local Government Support
- Pedestrian Crossings
- Compliance with AS 1742.7
- Closures



Issues Encountered

Funding for the current upgrade program	<ul style="list-style-type: none"> • Program based on the LCAM List. • Potential funding requirements over \$70 million.
Funding for high speed closed corridor program	<ul style="list-style-type: none"> • On public road level crossings with rail speed greater than 120km/hr. • Potential funding requirements over \$50 million.
Funding for pedestrian level crossing improvements	<ul style="list-style-type: none"> • Over 500 level crossings in NSW provide pedestrian access across the rail corridor. • A number of sites will require safety improvements and/or improvements in accordance with the accessibility standards for public transport. • Budget requirements yet to be determined.
Funding for private road level crossing improvements	<ul style="list-style-type: none"> • Over 2,000 private level crossings, with many on high-speed lines. • Budget requirements yet to be determined. • There is currently no LCSC funding allocated for safety improvements.
Local government funding contributions	<ul style="list-style-type: none"> • Limited availability and willingness for financial support from Local Government • Local Government agreement under preparation.
Pedestrian crossings standards	<ul style="list-style-type: none"> • Requirements at level crossings in relation to the Disability Standards for accessible public transport. • The design requirements of “Mobility Devices” at level crossing mazes are unresolved. • Requirements for pedestrian access on high-speed corridors (train speeds up to 160km/hr).
Local government compliance with as 1742.7 (signage and road markings for level crossings)	<ul style="list-style-type: none"> • Many Local Councils do not have regular audits or maintenance programs for level crossing approach signage and road markings.
Signalling design and construction resources	<ul style="list-style-type: none"> • RIC signalling design and construction resources are in short supply due to demands from major country resignalling works. • This has the potential to delay the upgrade program.
Opposition to level crossing closures	<ul style="list-style-type: none"> • Communities can be strongly opposed to the closure of level crossings. • Significant community consultation is required



Acknowledgments



Acknowledgments

MEMBERS OF THE LEVEL CROSSING STRATEGY COUNCIL

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Michael Deegan (Chair) July 2002 – March 2003

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Ken Ryan
Bill Dupesvoski

Kent Donaldson
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Chris Ford

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Bruce Lord
Andrew Vickery

John Cowling
Derek Williams

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Richard Connors

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Ron Dorrough



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Leah Szabo	Rail Infrastructure Corporation

RTA Grafton Road Safety Managers and Officers
RTA Newcastle Road Safety Managers and Officers
RTA Parkes Road Safety Managers and Officers
RTA Wagga Road Safety Managers and Officers
RTA Wollongong Road Safety Managers and Officers

Byron Shire Council Road Safety and Engineering
Corowa Shire Council Safety and Engineering
Dubbo City Council Road Safety and Engineering
Dungog Shire Council Road Safety and Engineering
Gosford City Council Road Safety and Engineering
Gunnedah Shire Council Road Safety and Engineering
Hastings Shire Council Road Safety and Engineering
Junee Shire Council Road Safety and Engineering
Maitland Shire Council Road Safety and Engineering
Parkes Shire Council Safety and Engineering
Richmond Valley Shire Council Safety and Engineering
Tweed Shire Council Safety and Engineering
Wagga City Council Road Safety and Engineering
Wingecarribee Shire Council Road Safety and Engineering
Wollondilly Shire Council Road Safety and Engineering

RIC Bathurst Signal Construction Team
RIC Cootamundra Signal Construction Team
RIC Hamilton Signal Construction Team
RIC Rail Equipment Centre Staff
RIC Signal Design Staff
RIC Signalling Standards Staff
RIC Stores and Supply Managers and Staff
RIC Signalling Asset Engineers / Managers

