

2007/08



**RAILWAY LEVEL CROSSING
SAFETY IMPROVEMENT
PROGRAMS**

YEARLY REPORT 2007/08



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EXECUTIVE SUMMARY

There are more than 3,800 railway level crossings in NSW. 1400 of these crossings are public road/public rail crossings. Individual rail and road agencies are responsible for the management of safety of the various components of their railway level crossing infrastructure.

Regulatory oversight is provided by the Independent Transport Safety and Reliability Regulator (ITSRR) for rail operations and infrastructure and by the Roads and Traffic Authority (RTA) and Police for roads.

The safety of the road and rail network is a high priority for the Government and the Level Crossing Strategy Council (LCSC) is the interagency forum which promotes coordination between agencies and railway level crossing safety. It is made up chief executive level representation of the RTA, RailCorp, RIC, the ARTC, ITSRR, and the Ministry of Transport, with officer level representation of the NSW Local Government Association and Shires Association (LGA&SA), the peak body representing local government and the NSW Police.

In 2007, the NSW Government announced the enhanced level of funding which had applied in previous years to the RTA Railway Level Crossing Improvement Program would continue to 2011. Specifically, starting in 2007/08, \$7m will be available each year for the RTA Program.

Under this Program seven major level crossing upgrade projects were commissioned across the ARTC and RailCorp networks during the year. Preliminary development and planning also commenced on projects due for commissioning in 2008/09 and beyond. A further 15 minor works were completed during 2007/08.

During the year, the Minister for Transport approved closure of 41 level crossings, most of them providing access to private properties.

In 2006/07, the Level Crossing Strategy Council commenced consultation with councils on the corridor strategy (Cootamundra to Albury). As a result of consultation, issues were resolved and safety improvements implemented. During 2007/08 it has been more difficult to achieve consensus on the issue of providing acceptable level crossing safety for the broader community while meeting the access needs of the local community. Higher level consultation has been sought by councils to advance this process.

During the year level crossing safety awareness campaigns were again conducted. The annual motorist advertising campaign was launched in September 2007 to promote awareness of road rules at level crossings targeting rural drivers in NSW. RailCorp launched two major pedestrian advertising campaigns in the Illawarra, Metropolitan and Hunter regions. RailCorp also launched a trial enforcement campaign with the co-operation of NSW Police at six locations. Additionally, the level crossing safety awareness message "*Stay Safe, Stay Alert and Stay on the Path*" was included in the RailCorp Youth Outreach Schools Program during the year.

In December 2007, the Department of Planning (DoP) gazetted the State Environmental Planning Policy (Infrastructure). The new policy requires councils to notify rail authorities of development applications impacting on level crossings and to not grant approval for the development without the concurrence of the rail authority.

There were no fatalities involving motor vehicles at railway level crossings in NSW during 2007/08. There were three collisions at passive and three at active level crossings. There was one fatality involving a pedestrian at Ekerts private crossing (between Leeville and Casino) on the ARTC Rail Network. In the previous year there was 1 fatality that resulted from a collision between a road vehicle and a train at a passively protected level crossing. There were no other fatalities that year. Trends over the past ten years indicate a downward pattern in accident collisions at both passively and actively protected level crossings.

In addition to the RTA Level Crossing Improvement Program, RIC spent \$1.94m and the ARTC \$6.9m on maintenance, improvement and upgrade of level crossings. RIC also commenced a major review of all public and private level crossings on the CRN to establish a priority list of required works. The ARTC works covered 124 level crossings and included grade separation of the level crossing at Swinging Ridge Road through the construction of an over bridge at the cost of \$4m, which was completed as part of the Ardglan Loop Extension Project in the Hunter Valley Corridor. RailCorp provided \$2.65m towards safety improvements at level crossings on its network.

1. NSW RAILWAY LEVEL CROSSINGS – 2007/08 PROFILE

There are more than 3,800 railway level crossings in NSW. 1,400 of these crossings are public road/public rail crossings. The interface of road and rail at railway level crossings represents a significant risk to road and rail users. The level of protection provided at railway crossings is determined by a risk assessment of each site. Railway level crossing traffic controls fall into two categories:

- **Passive controls:** stop or give way signs warn motorists about a level crossing. Signs warn pedestrians and mazes control entry to the rail corridor.
- **Active controls:** lights, bells, boom gates warn motorists; and lights, bells, booms, and locking swing gates warn pedestrians.

1.1. Administration

NSW road and rail agencies are responsible for level crossing safety and are supported by the Level Crossing Strategy Council (LCSC) an interagency forum which has a coordination role.

The LCSC members are:

- Roads and Traffic Authority (RTA).
- Rail Infrastructure Corporation (RIC), RailCorp and Australian Rail Track Corporation (ARTC).
- Ministry of Transport (MoT)-chair.
- Independent Transport Safety & Reliability Regulator (ITSRR).
- NSW Police.
- Local Government Association and Shires Association (LGA&SA).

The LCSC is supported by a Level Crossing Working Group (LCWG) which comprises officer level representatives from the member agencies. The RailCorp Level Crossing Unit (LCU) manages the Australian Level Crossing Assessment Model (ALCAM), undertakes level crossing assessments, works with the RTA in implementing its Level Crossing Improvement Program (LCIP) and provides secretariat support and assistance to the LCSC and LCWG.

Level crossing safety improvements and upgrades are generally undertaken by the relevant infrastructure owner/manager. LCIP, administered by the RTA, is the major source of funding for safety upgrades across NSW. The LCSC endorses and monitors delivery of the program and promotes collaboration and consultation between all agencies involved in the works. During the past financial year the NSW Government increased funding to LCIP to \$28m over the next four years until 2011.

The RTA distributes LCIP funding generally according to a priority list of sites. ALCAM is used to assist in determining this priority list of sites.. This assessment tool was developed by Queensland Transport and endorsed by Australian Transport Council (ATC) in 2003 for use throughout Australia. It is used to assess, evaluate and prioritise the (relative) safety risk of railway level crossings, and to assist in determining the treatment options for individual sites.

In addition to upgrading railway level crossing protections, the closure of railway level crossings, both public and private is actively pursued by LCSC member agencies. Thorough inspection and detailed assessment of the crossing is conducted before closure is pursued. Consultation with the local council, the community, the RTA, emergency services and other road and rail users is conducted prior to recommending closure to the Minister for Transport, whose approval is required before a closure is implemented. During the year the Minister for Transport approved closure of 41 level crossings, most of which were on private property.

1.2. Funding

Year	RTA Level Crossing Safety Improvement Program including accelerated funding	Rail Contribution	Total
2003/04	\$3M RTA	RIC \$2M (NSW)	\$5M
2004/05	\$5M RTA	-	\$5M
2005/06	\$6M RTA	\$1.3M (RailCorp)	\$7.3M
2006/07	\$7 M RTA	\$2.4M (RailCorp) \$1.65M (ARTC) \$0.277M (RIC)	\$11.327M
2007/08	\$7 M RTA	\$2.65M (RailCorp) \$6.9M (ARTC) \$1.94M (RIC)	\$18.49M

1.3. National Developments

During the first half of the year, the RailCorp Level Crossing Unit Manager chaired the Australian Railway Crossing Strategy Implementation Group (ARCSIG). ARCSIG had representation from all state and territories and New Zealand and its role was to implement the ATC endorsed national level crossing safety strategy and management plan.

There is also a National ALCAM Committee, which previously reported to ARCSIG, and is responsible for the ongoing development of nationally consistent risk assessment methodologies as well as promoting a co-ordinated approach to the ongoing improvement of ALCAM.

In each of 2006/07 and 2007/08 NSW allocated \$93,000 to the ATC endorsed National Railway Level Crossing Behavioural Strategy research project. The ITSRR and RTA were represented on the National Behavioural Coordination Group (BCG) which managed the project and reported to the Standing Committee on Transport (SCOT) Rail Group. This Group completed a survey of community attitudes and behaviour at level crossings, a targeted education and enforcement project in Victoria and Western Australia and developed an inventory of existing Australian and international behavioural programs. Details of the three project elements are available on the Australasian Railways Association (ARA) website at www.ara.net.au.

A proposal for continuation of the work of the Group was presented to the SCOT Rail Group in February 2008. This proposal was for a comprehensive communications package targeting specific user groups and further national research into vulnerable road users. However, the national arrangements under SCOT have changed, the ATC has decided to develop a National Transport Policy Framework and the SCOT Rail Group is no longer meeting. The future work proposed by the Behavioural Change Group is being considered for inclusion as part of the newly established Level Crossing Working Group under the National Transport Policy initiative as will the work previously being progressed by the ARCSIG and the ALCAM National Group.

1.4. Risk Assessment - ALCAM

As previously mentioned ALCAM is used in NSW to assist in prioritising sites to help develop the annual RTA Level Crossing Safety Improvement Program. During the year,

NSW moved from using the NSW based Level Crossing Assessment Model to the enhanced Australian Level Crossing Assessment Model.

The priority list of sites for development and upgrade in 2007/08 was developed using ALCAM. A number of sites previously prioritised under LCAM carried over to this year's program due to their advanced stage of development.

The LCSC commissioned traffic survey contractors to undertake CCTV and pedestrian / road volume count research projects in 2005/06 and 2007/08. This work has generated valuable information on both exposure and user behaviour at railway level crossings. This data is used to evaluate and understand the risks and behavioural trends at railway level crossings and for the development of more effective safety improvements. Data collection was undertaken on the RIC Network on the Main North West line.

Review of the CCTV footage and data collected from 2005 to 2008 has proven to be more resource intensive than originally anticipated. Further data collection will commence once a determination has been made on the most effective method for analysing and reporting data. One option being considered is the engagement of traffic engineering expertise to undertake the analysis and commence a four year cycle of maintaining the data set for each public level crossing in NSW.

1.5. StaySafe

The LCSC continues to monitor implementation of the Government's response to its 2004 report on level crossings. The Government supported or supported with change the majority of the StaySafe recommendations.

Implementation of a number of key recommendations was progressed during the year. It was recommended (59 and 60) that the Attorney General review the current criminal and civil law regarding motorists and pedestrians using railway level crossings to determine if the current offences are sufficient to deter unsafe and inappropriate behaviour or if further specific offences are required. The Attorney General's Department completed its review this year and concluded that the current offences and maximum penalties are sufficient to address a broad range of unsafe behaviours by level crossing users and that specific new offence provisions to deter unsafe behaviour are not necessary.

The Attorney General's Department suggested the deterrent effect of existing offences could be increased by publicising the existence of the criminal liabilities and their potential application to level crossing users. The RTA has been asked to consider including these provisions as part of future level crossing awareness campaigns.

StaySafe recommended (45) that local councils consider land use planning and development issues, take account of issues associated with railway level crossings, and document the considerations of local council traffic committees. In December 2007, the Department of Planning (DoP) gazetted the State Environmental Planning Policy (Infrastructure). The new policy requires councils to notify rail authorities of development applications impacting on level crossings and to not grant approval for the development without the concurrence of the rail authority.

2. SAFETY IMPROVEMENT PROGRAM ACHIEVEMENTS

2.1. RTA Level Crossing Safety Improvement Program

Major projects

During 2007/08 seven major upgrades to level crossings were commissioned across the NSW rail network. The funding for the program is administered by the RTA.

7 Major Upgrade Projects Commissioned in 2007/08:

1. **Pine Road, Fairfield** (September 2007), on the RailCorp network.
2. **Baranbah Street (to Caloola), Baan Baa** (September 2007), on the RIC network.
3. **Robert Street, Tamworth** (December 2007), on the RIC network.
4. **Green Street, Tamworth** (December 2007), on the RIC network.
5. **Grogan Road, Stockinbingal** (May 2008), on the ARTC network.
6. **Schnapper Beach Road, Valla:** (June 2008), on the ARTC network.
7. **Runnymede (also known as Andersons) Road, Kyogle** (June 2008), on the ARTC network.

1. Pine Road, Fairfield

Commissioned on 16/09/2007.

Total cost over \$500,000 (2007/08: \$248,000)

The existing lights, booms and bells have been interfaced with new RTA traffic signals at the intersection of Pine Road and Fairfield Street (to provide for clearance of road motor vehicles queued across railway tracks). This is the first site constructed using the newly agreed interface arrangements between RTA and RailCorp.

The RTA, RailCorp and Fairfield City Council worked together to deliver the works on the RailCorp Network.



2. Baranbah Street (to Caloola), Baan Baa

Commissioned on 28/09/2007

Total cost over \$600,000 (2007/08: \$592,000)

The upgrade from passive stop signs to active protection included the following:

- lights, bells and retro-reflective boom gates, with high intensity (LED) lights and additional warning lights.
- removal of non-frangible material.
- road works including new curb and guttering.
- improved road marking and signage to comply with AS1742.7.

The RTA, ARTC, Narrabri Shire Council and RailCorp's Level Crossing Unit worked together to deliver this site on the Country RIC Network.

On 4 May 2004, there was a fatal collision at this site involving a CountryLink Xplorer and car.



3. Robert Street, Tamworth

Commissioned on 20/12/2007.

Total cost over \$600,000

In 2007/08 a total of \$1.06 million was spent on the two sites in Tamworth (Robert Street and Green Street.)

Traffic Controls for motorists were upgraded from flashing lights with the upgrade including the installation of:

- lights, bells and retro-reflective boom gates, with high intensity (LED) lights and additional warning lights.
- alterations to train detection including installation of a constant warning time device.
- removal of non-frangible material.
- other minor improvements to comply with AS1742-7.

Traffic Controls for pedestrians were upgraded from a passive maze on one side of the street to facilities on both side of the street the same as provided at Green Street.

The RTA, ARTC, Tamworth City Council and RailCorp's Level Crossing Unit worked together to deliver this site on the RIC Rail Network.



4. Green Street, Tamworth

Commissioned on 20/12/2007.

Total cost over \$300,000.

This is a pedestrian access only crossing – there is no access for motor vehicles.

The existing pedestrian maze was replaced with audible (bells), physical (gates) and visual (lights) warnings of approaching trains through the installation of:

- locking pedestrian swing gates with emergency exits (the locks prevents the gates from being forced open when a train is approaching).
- active 'red man' light.
- improved pedestrian fencing, to encourage pedestrians to use the facility to cross the tracks.
- yellow tactile marking on path edge and at start of the crossing; improving path delineation.
- wide path across the tracks.

This work provides safer and easier access for all pedestrians, particularly those less mobile.

The RTA, ARTC, Tamworth City Council and RailCorp's Level Crossing Unit worked together to deliver this site on the RIC Rail Network.



5. Grogan Road, Stockinbingal

Commissioned on 11/05/2008.

Total cost over \$500,000 (2007/08: \$90,000)

Traffic Controls for motorists were upgraded from passive Give Way signs to active traffic controls with the installation of:

- lights, bells and retro-reflective boom gates, with high intensity (LED) lights and additional warning lights.
- removal of non-frangible material.
- road works including road widening.
- other minor improvements to comply with AS1742-7 (2007).

The RTA, ARTC, Cootamundra Shire Council and RailCorp's Level Crossing Unit worked together to deliver this site on the ARTC Network.



6. Schnapper Beach Road, Valla

Commissioned on 26/06/ 2008.

Over \$500,000 has been invested in improved safety facilities at Schnapper Beach Road, Valla railway level crossing. In 2007/08 \$588,000 was invested.

Motorists stop sign traffic controls were removed and the following facilities installed:

- flashing lights (high intensity or LED lights).
- retro-reflective boom gates with high intensity (LED) lights.
- additional lights.
- improved fencing.
- improved road marking and signage to comply with Australian Standard 1742-7 (2007).
- installation of delineating guardrail and removal of non-frangible material.
- road widening and road works.
- other minor improvements to comply with AS1742-7 (2007).

The RTA, ARTC, Bellingen Shire Council and RailCorp's Level Crossing Unit worked together to deliver this site on the ARTC rail network.



7. Runnymede Road (also known as Andersons), Kyogle

Commissioned on 24/06/2008.

Over \$500,000 has been invested in improved safety at Runnymede Road, Kyogle railway level crossing. In 2007/08, \$501,000 was invested.

Motorists stop sign traffic controls were removed and the following facilities installed:

- high intensity or LED flashing lights.
- retro-reflective boom gates with high intensity (LED) lights.
- improved road marking and signage to comply with Australian Standard 1742-7 (2007).
- installation of delineating guardrail and removal of non-frangible material.
- road widening and other road works.
- other minor improvements to comply with AS1742-7 (2007).

The RTA, ARTC, Kyogle Council and RailCorp's Level Crossing Unit worked together to deliver this site on the ARTC rail network.



RTA Safety Improvement - Minor Projects

Through the RTA Program 15 minor works were completed during 2007/08. Work at these sites included the installation of advanced warning lights, high intensity lamp units, Safeflash technology (i.e. improved signalling technology that is proven not to have unsafe failure modes), road and pedestrian facility improvements, signage and road markings. The RTA, Councils and rail network managers worked together to deliver these projects.

Location	Sites	Commissioned
Condobolin	2	August 2007
Ivanhoe	1	August 2007
Menindee	2	August 2007
Broken Hill	2	August 2007
Werris Creek	1	November 2007
Nyngan	3	June 2008
Cobar	1	June 2008
Parkes	3	June 2008
Total	15	

In addition to infrastructure projects commissioned in the year, the LCIP included a large number of projects in the development phase, which is a pre-construction phase and includes design and consultation to determine the scope of works for projects for construction in future upgrade programs.

2.2. RailCorp Program - Level Crossing Safety Improvement Program

There were no major projects commissioned during 2007/08 as the focus of the RailCorp Program this year was on design and development work for projects staged for completion from 2008-10 as outlined below.

1. Cowan Station Pedestrian Crossing

2. Park Road, Woonona. Design and Development work was completed in conjunction with RTA.

3. Wharf Road, Berry

Stage 1: Construction was completed in 2007/08, which entailed the removal of a redundant passing loop and sidings. This also provided an opportunity to remove a bad hump in the road surface and general re-grading and cosmetic changes.

Stage 2: Level crossing safety improvements due to commence in 2008/09, which includes the upgrade of the Level Crossing to boom gates and flashing lights. A new cycleway and pedestrian crossing facility is also planned, together with road medians and kerb and guttering improvements.

4. East Richmond Station

Concept design is ongoing based on the upgrade of the existing pedestrian facilities on the Sydney side and a new pedestrian facility provided on the country side, including the conversion to automatic swing gate.

5. Princes Hwy, Unanderra

Installation of advanced warning lights.

6. Bundarra St, Blackheath

Upgrading of the existing pedestrian crossing, installation of a new pedestrian crossing, upgrading of the road crossing surface, widening of the road, installation of traffic lights at Bundarra Street and Station Street with traffic lights interfaced with level crossing.

7. Sir Henry's Parade, Faulconbridge

8. Telopea – Uninterruptible Power Supply (UPS)

Installation of an uninterrupted power supply and battery backup system at the level crossing.

9. Minor Works – Magnetic Latches

Installation of magnetic latches on escape gates in pedestrian maze facilities at Springwood and Faulconbridge, due to be completed in 2008/09.

10. Parramatta Road, Granville

Rationalisation of level crossing signage, installation of cross hatching, road marking and advance warning signs to Australian Standard. This project is currently in concept development.

2.3. ARTC Program: Level Crossing Improvement Works

In 2007/08 ARTC contributed \$6.9m in separate funding for maintenance, improvement and upgrades to level crossings.

North Coast Corridor

Minor Works

- \$71,000 for civil upgrades to level crossings including roadway crossing upgrades and renewals and level crossing sighting distance improvements.
- \$153,000 for signal upgrades to level crossing including the provision of remote monitoring and the upgrade of light control to Safeflash technology.

Hunter Valley Corridor

Major Works

Level crossing improvement projects were completed as part of the Ardglen Loop Extension Project for commissioning in July 2008 including grade separation of the level crossing at Swinging Ridge Road at a cost of \$4m. Old Great Northern Highway Level Crossing was upgraded to active protection with access roads improved at an approximate cost of \$400,000.

Minor Works

- \$1,079,000 for civil upgrades to level crossings including roadway crossing upgrades and renewals and level crossing sighting distances improvements.
- \$273,000 for signal upgrades to level crossings including: upgrade of level crossing lamps to LED technology; upgrade of light control to Safeflash technology and upgrade of earthing and lightning protection.

South Corridor

Major Works

- The Bomen level crossing was upgraded to active protection and the access roads were improved at an approximate cost of \$400,000.

Minor Works

- \$140,000 for civil upgrades to 24 private and public level crossings included roadway crossing upgrades and renewals.

Western Region

Minor Works

- \$676,500 for civil upgrades to level crossings which including resurfacing, reconditioning, pedestrian crossing upgrades and level crossing sighting distance improvements.
- \$60,600 for signal upgrades to level crossing including: upgrading level crossing lamps to LED technology, upgrade of light control to Safeflash technology, and upgrade of earthing and lightning protection.

Low Cost Level Crossing Protection System

ARTC is developing a low cost level crossing protection system that can be installed where full active lights and bells protection, grade separation or level crossing closure are not viable. This new type of protection is most suited to private level crossings.

The warning device consists of two green lights installed on the standard stop and cross buck signs on both sides of the level crossing. The lights are installed on the back of the stop sign so that they are visible to approaching traffic on the opposite side of the crossing. These lights are illuminated when there is no train approaching the level crossing and it is safe to cross. The same lights are extinguished if there is a train approaching. The track circuitry is used to detect the approach of the train. The device is designed to be failsafe, if the lights fail, it will indicate that the motor vehicle driver should assume the approach of a train.

The design of the device has been assessed against the known risk factors in ALCAM as well as the UK Level Crossing Risk Management Tool Kit. Also, human factors experts have visited the site where a prototype has been installed to conduct a review of the system in context to identify any potential issues for that location. Recommendations of this review have been incorporated into the design of the device.

The warning device has been installed at a level crossing at Braunstone on the North Coast Line. It is still in the prototype stage but it is expected that the ARTC safety committee will accept the final design for rollout to the ARTC network. The device is particularly suited to private level crossings on single lines that are associated with loop extension works. It is intended to use this device where it is deemed appropriate on a site-by-site basis.

2.4. RIC Program: Level Crossing Improvement Works

RIC completed a number of level crossing improvement projects under a separate program and budget in 2007/08.

RIC spent \$1.94m on civil and signal works at level crossings, including on maintenance activities such as resurfacing, reconditioning, pedestrian crossing upgrades and sighting distance improvements. Included in this amount is \$349, 800 for upgrading level crossings, including:

- Installation of Light Emitting Diodes at 22 level crossings on the CRN;
- Installing swing gates at Fitzroy Street level crossing Tamworth;
- Minor level crossing upgrade works at Parkes Road Borenore, Manildra Road. Molong and Norah Creek Road Molong;
- Installation of Light Emitting Diodes, Alternating Current and an Earth Leakage Detector at three level crossings: Molong Bank Street , Manildra Trunk Road , Manildra Parkes Road;
- Installation of Light Emitting Diodes, Safeflash, an Earth Leakage Detector, and frangible booms at Bank Street Molong;
- Installation of level crossing Light Emitting Diodes, and an Earth Leakage Detector and Safeflash at 3 sites (Wellington to Dubbo); and
- Installation of level crossing Light Emitting Diodes, an Earth Leakage Detector and Safeflash at 4 sites (Wellington Yard).

2.5. Rationalisation – Railway Level Crossing Closure

LCSC agencies actively pursue closure of both public and private level crossings, wherever possible. Sites for potential closure are identified either by their ALCAM score, by local government, the RTA, the rail industry or the general public. The Minister for Transport approved the closure of 41 private and public railway level crossings in 2007/2008.

Consultation is also underway to examine the potential to close level crossings at Camellia Station (pedestrian only); Oolong Road, Oolong; Middle Falbrook Road, Nundah; and Crowthers Road, Stratford.

Costs associated with level crossing closures include traffic management studies, consultation with stakeholders, alternative route construction and general construction associated with the closure.

Location and Rail Kilometres	Rail owner consent	Minister Approved	Gazetted
1. North Coast line at 195.334	April '07	Aug '07	Sep 07
2. North Coast line at 196.923	April '07	Aug '07	Sep 07
3. North Coast line at 197.728	April '07	Aug '07	Sep 07
4. North Coast line at 198.271	April '07	Aug '07	Sep 07
5. North Coast line at 202.295	April '07	Aug '07	Sep 07
6. North Coast line at 203.622	April '07	Aug '07	Sep 07
7. North Coast line at 206.781	April '07	Aug '07	Sep 07
8. North Coast line at 209.215	April '07	Aug '07	Sep 07
9. North Coast line at 211.770	April '07	Aug '07	Sep 07
10. North Coast line at 212.365	April '07	Aug '07	Sep 07
11. North Coast line at 212.755	April '07		

Location and Rail Kilometres	Rail owner consent	Minister Approved	Gazetted
12. North Coast line at 214.284	April '07	Aug '07	Sep 07
13. North Coast line at 225.308	April '07	Aug '07	Sep 07
14. North Coast line at 231.444	April '07	Aug '07	Sep 07
15. North Coast line at 233.415	April '07	Aug '07	Sep 07
16. North Coast line at 258.521	April '07	Aug '07	Sep 07
17. North Coast line at 263.349	April '07	Aug '07	Sep 07
18. North Coast line at 265.783	April '07	Aug '07	Sep 07
19. North Coast line at 432.471	April '07	Aug '07	Sep 07
20. Singleton Spur line at 265.884	April '07	June 07	July 07
21. North Coast line at 212.755	April '07	Feb '08	May '08
22. Ulan Line at Wollar at 409.728	Nov '07	Feb '08	May '08
23. North Coast Line at 433.900	Nov '07	Feb '08	May '08
24. North Coast Line at 457.601	Nov '07	Feb '08	May '08
25. North Coast Line at 400.284	Nov '07	Feb '08	May '08
26. North Coast Line at 348.035	Nov '07	Feb '08	May '08
27. North Coast Line at 614.050	Nov '07	Feb '08	May '08
28. North Coast Line at 599.902	Nov '07	Feb '08	May '08
29. North Coast Line at 469.070	Nov '07	Feb '08	May '08
30. Ulan Line at 312.986	Feb '08	May '08	-
31. Ulan Line at 320.852	Feb '08	May '08	-
32. Ulan Line at 322.573	Feb '08	May '08	-
33. Ulan Line at 331.646	Feb '08	May '08	-
34. Ulan Line at 339.343	Feb '08	May '08	-
35. Ulan Line at 340.940	Feb '08	May '08	-
36. Ulan Line at 410.543	Feb '08	May '08	-
37. Ulan Line at 410.910	Feb '08	May '08	-
38. Ulan Line at 439.100	Feb '08	May '08	-
39. Main North Line at 284.934	Feb '08	May '08	-
40. Main South Line – Bomen – Trahairs Lane at 510.323	Feb '08	Apr '08	May '08
41. Main South Line – Bon Accord at 541.670	Feb '08	Apr '08	May '08

2.6. Corridor Strategy

The implementation of a corridor strategy approach continued on the Southern Line between Cootamundra and Albury. The corridor strategy involves a precinct based management approach of the road and rail interface with the view to increase safety. Priority precincts within the corridor include Bon Accord, Table Top, Yerong Creek, The Rock, Bomen, Gerogery and Uranquinty and Henty.

As part of the Corridor Strategy five crossings were closed, two of which involved construction of alternative road access and one involved mitigation works. In addition upgrades to three level crossings were designed in consultation with the community with construction scheduled for 2008/09. These initiatives were funded under the RTA Level Crossing Safety Improvement Program.

During 2007/08 it proved more difficult to achieve consensus on the issue of providing acceptable level crossing safety for the broader community while meeting the access needs of the local community. Councils in the area are concerned that consultation, especially around proposals for level crossing closures, needs further development and the LCSC Chair, the ARTC Chief Executive and the RTA are to meet with Councils in the area in February 2009 to identify a way forward which addresses the needs of all stakeholders.

A summary of progress to 2007/08 by precinct is provided below.

- **Albury Council:**

- **Table Top Precinct:** Council and the community supported closure of Perrymans Lane level crossing which was then approved by the Minister for Transport. The closure required construction of an alternative route to Tynan's Road. A private level crossing (Gibbons/North Skog) was also closed.

- **Lockhart Council:**

- **Yerong Creek Precinct:** Council and the community have indicated conditional support for closure of Neuhaus Lane which is now under review by ARTC. The Plunkett Street level crossing upgrade design was developed in consultation with the community and Council which has agreed to in kind contributions. This upgrade is scheduled for constructed in 2008/09.
- **The Rock Precinct:** The Council and community support upgrade of the Urana Street level crossing and this is scheduled for constructed in 2008/09. The Council and community were consulted regarding options for Yerong Street. The community was not supportive of its closure.

- **Wagga Wagga Council**

- **Bomen Precinct:** The Minister approved closure of Trahairs Lane level crossing following community consultation.
- **Uranquinty Precinct:** Council and community support proposal for pedestrian facilities at Yarragundry Street level crossing, to which Council will contribute funding. The upgrade is scheduled for constructed in 2008/09.
- **Bon Accord Precinct:** Council and the community were consulted on the potential closure of Bon Accord Road. This was approved by the Minister following ARTC agreement to provide alternative access.

- **Greater Hume Council**

- **Gerogery Precinct:** Weedings private level crossing was closed.
- **Culcairn Precinct:** Higher level consultation has been sought by Council on the corridor strategy prompted by proposals for the Culcairn Precinct.

3. PUBLIC SAFETY AWARENESS

Safe behaviour at level crossings is promoted through community awareness and education campaigns targeting motorists and pedestrians interacting with the NSW rail network. The campaigns are monitored and their effectiveness reported to the LCSC.

3.1. Motorist Awareness

The motorist campaign, launched in September 2007, repeated the successful theme used in prior campaigns "Stop or Get stopped in your tracks". The campaign is designed to educate drivers about the speed, power and sheer size of trains and to encourage motorists to obey the traffic signals at railway level crossings. The campaign included billboard, print and radio advertising. The RTA and RailCorp each contributed \$100,000 for both metropolitan and rural campaigns. The Rail Infrastructure Corporation and the Australian Rail Track Corporation also contributed \$50,000 each to the rural advertising campaigns led by the RTA.

In June 2008, RailCorp and the Police launched an enforcement campaign targeting motorists. Variable message signs were located at eight high risk traffic sites in the Illawarra, Hunter and Western Sydney over a period of 3 weeks. The RailCorp media team liaised extensively with NSW Police Media to gain supportive local media coverage.

3.2. Pedestrian Awareness

Two major advertising campaigns targeting pedestrians were launched across the Illawarra and Hunter regions in November 2007 and February 2008. Using the powerful image of a train trespass/crash survivor and the tagline "*I found out the hard way*", the campaign, using a mix of suburban print, radio, targeted media, point of contact station posters and brochures was designed specifically to illustrate the consequences of inappropriate behaviour at Railway Level Crossings.

In May 2008, RailCorp launched a pedestrian enforcement program targeting six railway level crossing sites in the Central Coast, Illawarra and Greater Sydney regions. The campaign was supported by media, letterbox drop and face to face community relations to remind commuters of the dangers at Railway Level Crossings and Transit Officers were actively deployed at targeted stations across the network in the final two weeks of the campaign.

3.3. National Rail Safety Week

The Australasian Railway Association (ARA) co-ordinated the second National Rail Safety Week, from 22 to 28 July 2007. RailCorp participated by focusing on three major safety issues including, trespassing (crossing tracks, taking shortcuts); railway level crossings and passenger behaviour-related issues. The campaign included Sydney Metropolitan television advertising – the pedestrian level crossing safety advert - and point of contact materials such as brochures and station posters on RailCorp stations.

3.4. Level Crossing Website

The webpage www.levelcrossings.nsw.gov.au was developed in 2004/2005. In 2006/2007 the website was redesigned to include support for the community awareness campaigns. In 2007/08 the website has a steady visitation rate and it is expected that the site will undergo further work in the future to maintain its viability as a communications tool.

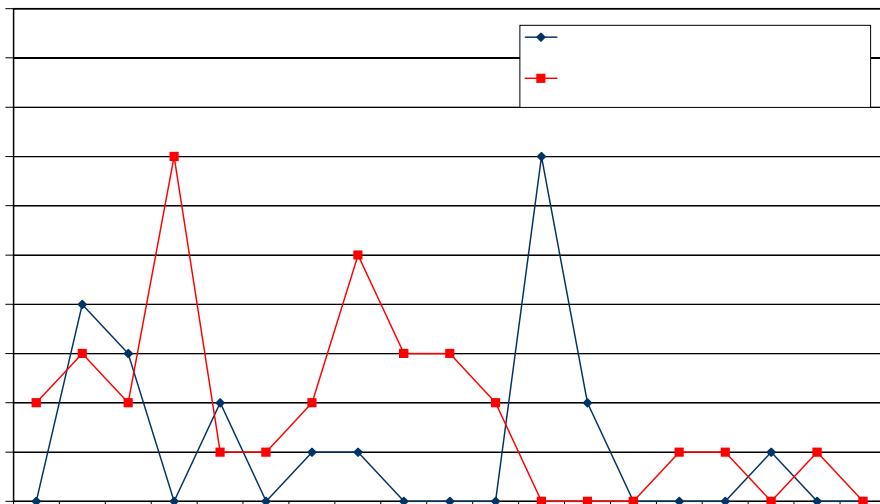
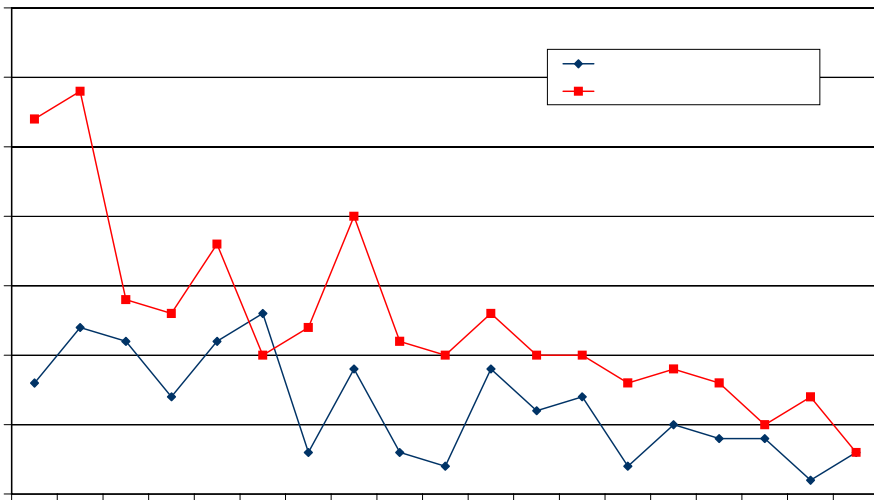
4. ACCIDENT TRENDS

NSW railway level crossing incident data is collected by ITSRR and distributed to all relevant road and rail agencies and the LCSC. Trends over the past ten years indicate a downward pattern in accident collisions at both passively and actively protected level crossings.

4.1. Collisions and Fatalities – Motorists

There were six collisions at railway level crossings in 2007/08, three at active crossings and three at passive crossings. There were no fatalities involving motor vehicles on the NSW network during the year.

The graphs below chart the current period and illustrate long term trends.

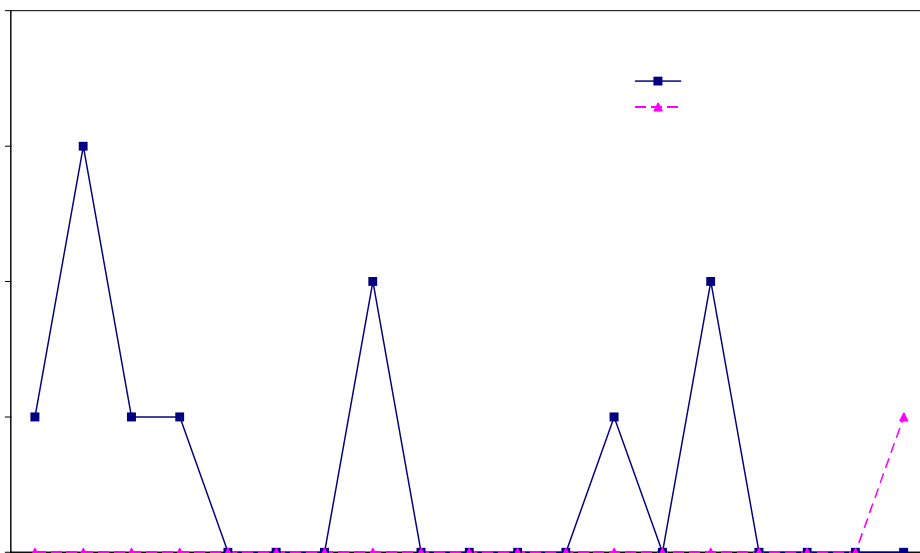
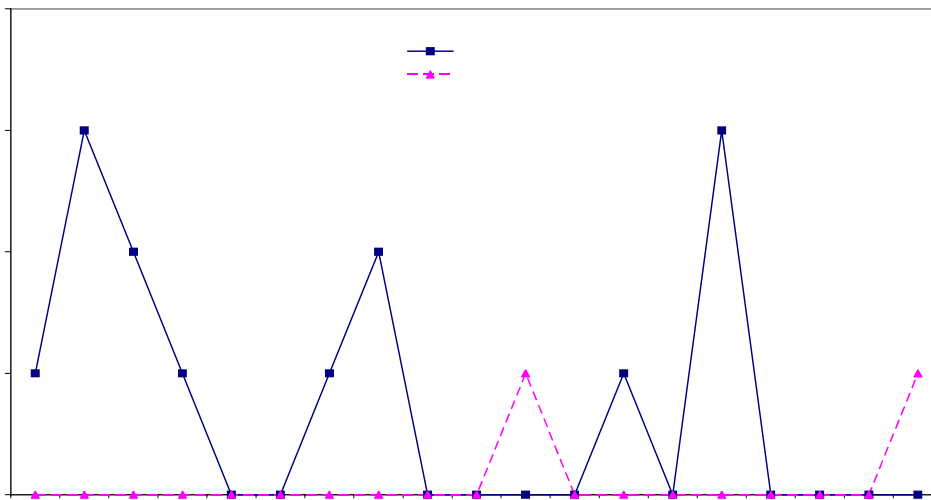


4.2. Collisions and Fatalities – Pedestrians

There was a fatal incident involving a pedestrian on the ARTC network at Ekerts private level crossing at 801.754km (between Leeville and Casino) this year.

During the past 19 years there have been 16 collisions at level crossings involving pedestrians, 12 of which were fatal.

The graphs below chart the current period and illustrate long term trends.



5. FUTURE DIRECTIONS

5.1. Level Crossing Safety Improvement Program

The RTA Level Crossing Safety Improvement Program will continue in future years. In June 2007, the Minister for Transport announced the levels of funding which applied over the previous three years would continue into the future i.e. \$7million each year for 2007/08 to 2010/11.

5.2. National Rail Safety Legislation

In June 2006 the Australian Transport Council (ATC) agreed to adopt the National Model Rail Safety Bill in Australian states and territories. At that time, ATC requested further provisions be developed in relation to road/rail interfaces. The Rail Safety (Amendment No 2) Bill was subsequently prepared, which introduces obligations on rail infrastructure managers and road managers to seek to enter into interface agreements for the joint management of safety risks at railway road/rail level crossings and other road/rail interfaces. This Amendment Bill was approved by ATC in December 2007.

The provisions of the Amendment Bill are expected to be implemented in NSW in 2008/09.

5.3. StaySafe

The LCSC will continue to monitor the implementation of the Government's response to the 2004 StaySafe report on level crossings.

5.4. Corridor and Rationalisation Strategies approach

Implementation of the Corridor Strategy between Cootamundra and Albury and the Rationalisation Strategy will continue.

5.5. Public awareness

Promotion of safe behaviour at railway level crossings through public awareness campaigns will continue.

Appendix A: LCIP Expenditure 2007/08

	Town	Location	Cost (000)
MAJOR SAFETY IMPROVEMENTS			
1	Nolan Street (Commissioned in 2006/07)	Unanderra	10
2	Pine Road (Commissioned)	Fairfield	248
3	Robert and Green Street (Commissioned)	Tamworth	1060
4	Schnapper Beach Road (Commissioned)	Valla	588
5	Runnymede, Andersons Road (Commissioned)	Kyogle	501
6	Baranbah Street (to Caloola) (Commissioned)	Baan Baa	592
7	Burradoo Road	Burradoo	731
8	Garfield Road	Riverstone	473
9	Park Road	Woonona	85
10	Bellambi Lane	Bellambi	32
11	Holten Drive (commissioned)	Broken Hill	43
12	Bundarra Street	Black Heath	22
13	Clarinda Street	Faulconbridge	13
14	Couche Crescent	Koolewong	102
15	Liverpool Street	Scone	56
16	Fern Street	Gerringong	20
17	Parramatta Road	Clyde	20
18	Military Road	Yennora	25
19		Whittingham	82
20	Beaumont Street	Hamilton	104
21	Woy Woy Road/Rawson Road	Woy Woy	32
22	Shamrock Street	Hexham	4
23	Lansdowne Road	Kundle Kundle	88
24	King Street	Paterson	60
25	Cessnock Road	Kearsley	54
26	Hubert Street	Sawtell	19
27	Summerland Way	Koollkhan	14
28	Summerland Way/Kyogle Road	Namoona	11
29	Tilly Willy Street/McKay Street	Macksville	8
30	Princes Highway	Unanderra	27
31	Creamery Road	Albion Park	27
32	Bong Bong Road	Dapto	61
33	Sheepwash Road	Calwalla	5
TOTAL			5217

MINOR SAFETY IMPROVEMENTS

1	Middle Falbrook Road	Nundah	1
2	Woods Road	Craven	2
3	Brown's Crossing Road	Macksville	3
4	Single Street (commissioned)	Werris Creek	79
5	Boothenbah Road	Dubbo	1
6	Railway Parade	Corrimal	36
7	Clyde Street	Islington	12
8	Jacks Road	Gloucester	6
9	Brook Street	Muswellbrook	42
10	Henry Street	Quirindi	2
11		Metford	2
12	Oxley Highway	Wauchope	1

	Town	Location	Cost (000)
13	Browns Crossing Road	Macksville	3
14	Shellharbour Road	Shellharbour	3
15	Boothenbah Road	Dubbo	1
16	13 LED sites in Western Region (commissioned)		56
17	Dudauman Street	Stockinbingal	1
18	Pryor Street (Pedestrian- Closed)	Quirindi	3
19	Barker Street (Pedestrian- Closed)	Casino	1
TOTAL			255

CORRIDOR STRATEGY

1	Grogan Road (Commissioned)	Stockinbingal	90
2	Perryman's Lane (Bypass built)	Tabletop	1700
3	Yarragundry St	Uranquinty	232
4	Plunkett Street	Yerong Creek	321
5	Rail Strategy Griffith Council	Griffith	14
6	Urana Street	The Rock	234
7	Strategy Cootamundra to Albury		56
8	Balfour Street/Olympic Highway	Culcairn	2
TOTAL			2649

CLOSURE DEVELOPMENT

1	Public Road (Closed)	Bogan Gate	2
2	May Street (Closed)	Condoblin	9
3	Private road (Closed)	Burradoo	7
4	Wingham to Taree Rationalisation		3
5	Ulan Line Rationalisation		5
6	Junction Hill	Grafton	1
7	Lowes Creek Road	Quipolly	1
8	Oolong Road (Closed)	Gunning	6
9	Mitchell Highway (Closed)	Nyngan	10
10	Stroud Road to Craven Rationalisation		1
TOTAL			45

OTHER

1	Development		63
2	Education and Enforcement Campaign		121
3	Minor Works		9
4	Queue Monitoring		29
5	Onsite Level Crossing Data Collection		83
6	Motorist Campaign		145
TOTAL			450

GRAND TOTAL	8616
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