



INDEPENDENT
TRANSPORT
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REGULATOR

safe and reliable transport services for new south wales



Report on the status of recommendations arising from independent investigations into rail, bus and ferry incidents in NSW

September to November 2008

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1.0 Introduction

The purpose of this report is to provide the Minister, the transport industry and the community advice on the status of recommendations resulting from independent investigations into rail, bus and ferry incidents in New South Wales. The reports will be published on a quarterly basis. Independent investigations include those conducted by the Office of Transport Safety Investigation (OTSI) and the Australian Transport Safety Bureau (ATSB). It is noted that the recommendations arising from the Special Commission of Inquiry into the Waterfall Rail Accident are already subject to a separate quarterly reporting process.

1.1 Background

Regulators for rail, bus and ferry are required to monitor the implementation of recommendations included in independent investigation reports. These regulators are:

- ITSRR in relation to rail;
- Ministry of Transport in relation to bus; and
- NSW Maritime in relation to ferry.

The relevant regulator is responsible for writing to each of the interested parties, and for any follow-up action, and reports directly to the Minister on the status of the recommendations.

Recommendations by OTSI or ATSB have no binding legal effect. That is, organisations to whom OTSI/ATSB direct recommendations are not legally obliged to implement them. To ensure recommendations are given due consideration, and to provide certainty around obligations to implement recommendations, ITSRR has developed a monitoring methodology to track the handling of recommendations by any interested party. The reporting framework is explained in more detail in the table below.

Under this arrangement, the relevant regulators for rail (ITSRR), bus (the Ministry of Transport) and ferries (NSW Maritime) have agreed to monitor and report to ITSRR on progress. Each regulator seeks advice from interested parties as to whether they accept the recommendation and, if so, the time frame in which they expect to implement it. If the interested party rejects the recommendation, they must demonstrate to the relevant regulator that they have assessed the risk and determined that it is not reasonably practicable. The party may also offer an alternative approach to managing the risk or issue identified in the report.

1.2 Methodology for close out of recommendations

	STATUS	DEFINITION
1.	Open – Await Response	This status is automatically assigned to an accepted recommendation. Affected parties will be asked to submit their response for implementing the recommendation to the relevant regulator.
2.	Open – Response Received	The regulator has received a response from an affected party and this response is under review by the regulator. It has not yet been accepted by the regulator.
3.	Open – Acceptable Response	The regulator agrees that the planned action, when completed, meets the recommendation.
4.	Open – Acceptable Alternative Response	The regulator agrees that alternative action, when completed, satisfies the objective of the recommendation.
5.	Open – Response Rejected by ITSRR	The regulator does not agree that the planned or alternate action meets the recommendation. The company or agency is advised of the rejection and requested to provide a revised response.
6.	Open – Company Claims Closure	The company or agency claims that the planned or alternate action has been completed. The action has not yet been verified by the regulator. The regulator has not yet agreed that the item is closed.
7.	Closed – Recommendation Rejected	The regulator has agreed with the party that following further analysis and review that the recommendation is not appropriate (i.e. will not achieve the desired safety outcomes). The regulator may commission an independent review to assist in determining if a rejection is warranted. If the response is valid the recommendation will be classified as rejected and will therefore be closed.
8.	Closed – No Longer Applicable	The recommendation has been overtaken by events and action is no longer required. For example, a new technology has eliminated the reason for the recommendation, it has been superseded by other recommendations issued, or the operator affected has gone out of business.
9.	Closed – Action Verified	Completion of the planned or alternate action has been verified by the regulator through a compliance inspection or audit.
10.	Closed – Action Not Verified	The regulator accepts that the planned or alternate action has been completed following a review of documentation submitted. Field verification is not necessary.

2.0 OVERVIEW RAIL

2.1 Rail Safety Investigation Reports

A summary of the outstanding OTSI and ATSB Rail Safety Investigation Reports is provided in the table below. The table includes those reports that have been closed this quarter. A summary of the OTSI and ATSB Rail Safety Investigation reports that have been closed previously is provided at annexure "1".

It should be noted that where one recommendation applies to two or more parties, the recommendation is recorded as a multiple to ensure that each party carries out actions to satisfy the one recommendation. For example, if one recommendation applies to 2 parties then in the summary this is reported as 2 recommendations.

No.	Title of Report	Short title	Date Of Incident	Date Tabled by Minister	Area of Operations	No of Recs	Status
RAIL SAFETY INVESTIGATION REPORTS (OTSI)							
1.	Steel Sleeper introduction on NSW Class 1 Main Line track 1996 - 2004	Steel Sleepers	27.4.04	16.9.05	DIRN / CRN	12	Open
2.	Derailment of Freight Australia Limited Cement Service 4VM9 – Bethungra	Bethungra	22.12.04	4.5.06	DIRN	14	Open
3.	Shunting Fatality – Lachlan Valley Railway Society Heritage Steam Train SS84 – Aria Park	Aria Park	15.4.06	27.5.07	CRN	17	Open
4.	Signal passed at danger by CityRail Service 67-R resulting in an opposing movement, North Strathfield	North Strathfield	2.9.06	28.9.07	Metro	10	Open
5.	Tack worker fatality at Baan Baa	Fatality near Baan Baa	22.5.06	3.6.08	CRN	18	Open

No.	Title of Report	Short title	Date Of Incident	Date Tabled by Minister	Area of Operations	No of Recs	Status
6.	Fatal injuring of two rail maintenance workers Singleton	Singleton	16.7.07	21.7.2008	DIRN	18	Open
7.	Derailment of PN Ore Service 4835 – Nevertire – Nyngan	Nyngan	1.10.2006	25.9.2008	CRN	7	Open
RAIL SAFETY INVESTIGATION REPORTS (ATSB)							
8.	Level crossing collision between XPT passenger train ST24 and Passenger car	Albury	5.06.2006	29.6.2007	DIRN	1	Open
9.	Results of trials for heavy vehicle clearance times at level crossings	Heavy Vehicles	12.12.2006	5.10.2007	DIRN	1	Open
10.	Collision between freight train 9351 and an overturned semi-trailer at Illabo, NSW	Illabo	2.11.2006	6.03.2008	DIRN	4	Open
11.	Signal passed at Danger – Gloucester	Gloucester	11.03.2008	15.08.2008	DIRN	2	Closed

2.2 A summary of the status of each of the recommendations included in the outstanding open OTSI and ATSB Rail reports is provided below.

Reporting framework for TREC agencies implementation of reports															
Regulator	Report Agency	Name of report	Date of Incident	Date Report Tabled	Open – await response	Open – response received	Open – acceptable response	Open – alternative acceptable response	Open – response rejected by regulator	Open – Company Claims Closure	Closed – Rec Rejected	Closed – No Longer Applicable	Closed – Action Verified	Closed – Action Not Verified	Total no. of recommendations
	OTSI	Steel Sleepers	27/04/2004	16/09/2005		1	3		1	3			4		12
	OTSI	Bethungra	22/12/2004	4/05/2006	1	2	1			2	2		4	2	14
	OTSI	Ariah Park	15/04/2006	27/05/2007		2				1			10	4	17
	OTSI	Albury	25/06/2006	29/06/2007		1									1
	OTSI	North Strathfield	2/09/2006	28/09/2007			1						8	1	10
	OTSI	Heavy Vehicles	12/12/2006	5/10/2007			1								1
	ATSB	Illabo	2/11/2006	6/03/2008	1					1		2			4
	OTSI	Fatality near Baan Baa	22/05/2006	3/06/2008	5	1	8			1	2		1		18
	OTSI	Singleton	17/07/2007	21/07/2008	3	1	11				1			2	18
	ATSB	Gloucester	11/03/2008	15/08/2008							2				2
	OTSI	Nyngan	1/10/2006	25/09/2008	5	2									7
				TOTAL:	15	10	25		1	8	7	2	27	9	104

2.3 Analysis of OTSI and ATSB Rail Report Recommendations

During the reporting period, four (4) rail recommendations have been marked as “closed”. A total of 18 OTSI, ATSB and Coronial reports are now closed. There are currently 59 “open” recommendations relating to 10 reports, and 196 ‘closed’ recommendations, which represents 77% of all recommendations.

During the reporting period, there were no OTSI reports tabled by the Ministers, nor were there any ATSB or coronial reports issued.

The ATSB report “Gloucester” was closed this quarter.

2.4 **SECTORAL UPDATE RAIL**

Individual summaries have been prepared for each of the following open OTSI Rail Safety Investigation Reports:

1. Steel Sleepers
2. Bethungra
3. Ariah Park
4. Albury
5. North Strathfield
6. Heavy Vehicles
7. Illabo
8. Fatality near Baan Baa
9. Singleton
10. Gloucester
11. Nyngan

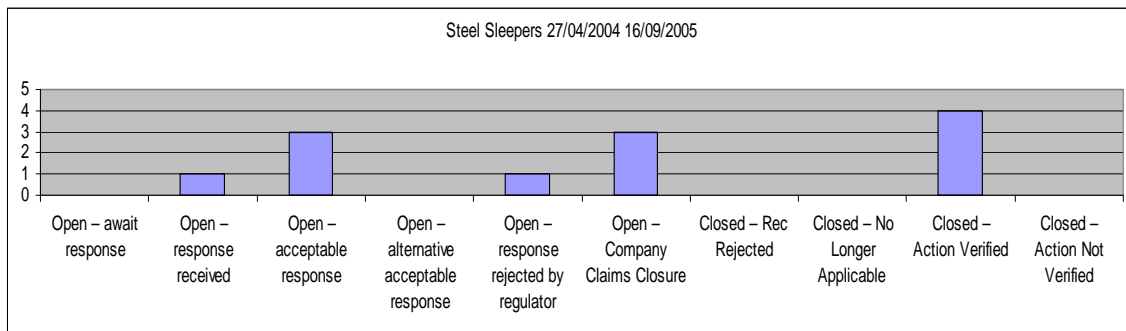
Title: STEEL SLEEPERS
Date of incident: 31.8.05
Date tabled: 6.10.05
No of Recommendations:12 (Regulator: 4; Other 8)

Description of incident: The OTSI investigation into a separate incident involving a derailment at Rocky Ponds in November 2002 included a recommendation that a systemic investigation be conducted into the introduction and performance of steel sleepers in the NSW Rail Network. As a result, OTSI initiated a systemic investigation into the installation of steel sleepers on Class 1 Main Line track.

Focus of recs: Track manager required to inspect steel sleepers on Class 1 Main lines to ensure sleepers are installed to standard. Track manager to review procedures for installation to reduce variation in installation techniques and maintenance of standards. The Regulator to conduct inspection of Class 1 lines to ensure steel sleepers are installed to standards.

Progress with safety outcomes: ITSRR has received a further response from ARTC regarding recommendations from this report that indicate that ARTC and the Network Owner have changed their position on the use of steel sleepers on the Country Regional Network (CRN) (i.e. the utilisation of steel sleepers on the CRN has increased). Currently, ITSRR's Track and Civil Specialists are assessing this response. ITSRR has also commenced a series of inspections in January 2009 to assess the safety impact of this change.

Current status



**DETAILS OF 'OPEN' RAIL RECOMMENDATIONS –
Steel Sleepers on 31.8.05**

No:	Detail of recommendation:	Agency:	'Open' status:
5.2	Inspect all steel sleepers installed on Class 1 Main line track to ensure the current installation meets the approved technical performance standards	ARTC	Open – Agency claims closure
5.3	Ensure future steel sleepers are installed according to approved technical performance standards and procedures	ARTC	Open – Agency claims closure
5.4	Provide adequate training to Installers and Maintainers relating to the installation and maintenance of steel sleepers	ARTC	Open – Agency claims closure
5.7	Further develop and specify a steel sleeper installation procedure that guides the installer in the recommended practices for installing steel sleepers. Such a procedure should recommend the various spot tamping, resurfacing and ballasting processes required. Quality control requirements should also be specified for the installation process. Such controls should ensure sleeper installation performance standards and procedures are met.	ARTC	Open – Response rejected by ITSRR
5.9	Ensure that there is adequate contractor control over both internal and external suppliers of civil infrastructure services (e.g. PRS programs, in-face sleepers programs, rail renewal, etc). Such controls should include appropriate standard references, work scope instructions, quality assurance checks and final work certifications.	ARTC	Open – Response received
5.10	Conduct a Class 1 Main line steel sleeper audit program in order to satisfy itself as to the Maintainers ability to meet the installation performance standard. This program should assess compliance relating to current steel sleeper performance standards	ITSRR	Open – Acceptable response
5.11	Review the adequacy of Infrastructure Maintainers contract controls, covering both internal and external suppliers of civil infrastructure services (e.g. PRS programs, in face sleepers programs, rail renewal, etc). Such controls should include appropriate standard references, quality assurance checks, final work certification and applicable work scope instructions.	ITSRR	Open – Acceptable response
5.12	Review the adequacy of Infrastructure Maintainers configuration management procedures to gauge how effective their system is in requiring configuration changes to have engineering approval, stakeholder consultation and Rail Regulator advice. Bring any identified deficiencies to the attention of the Infrastructure Maintainer for rectification.	ITSRR	Open – Acceptable response

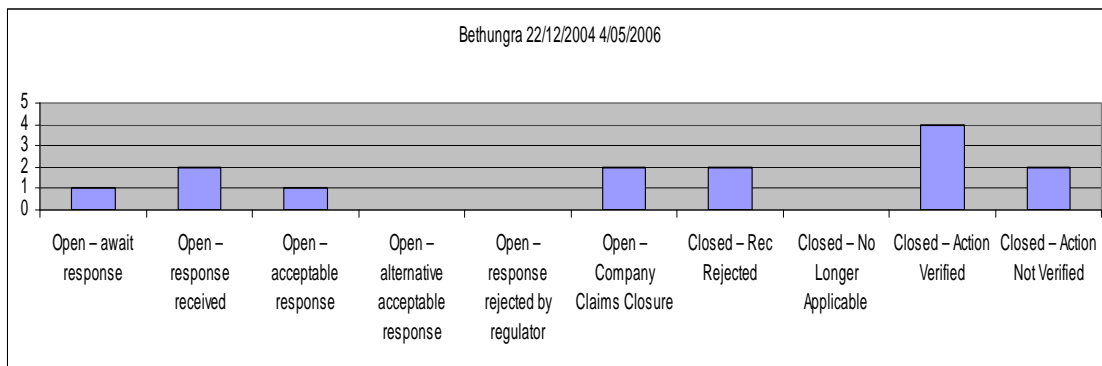
Title: BETHUNGRA
Date of incident: 22.12.04
Date tabled: 4.5.06
No of Recommendations:11 (Regulator: 4, Other 7)

Description of incident: At approximately 8.05pm on 22 December 2004, freight service 4VM9, operated by Freight Australia Limited, derailed whilst descending the grade at Bethungra, on the main South line (part of the Defined Interstate Rail Network (DIRN)). 4VM9 consisted of four locomotives and 11 loaded bulk cement wagons and was enroute from Berrima to Melbourne. All 11 wagons from the train and 288 metres of track were severely damaged as a result of the incident. There were no reported injuries.

Focus of recs: The major safety issues identified related to asset management reporting, competence of track inspectors, event recorders and communication protocols.

Progress with safety outcomes: Track condition at the site has been restored and no speed restrictions apply (RICSPEED 20 Oct 08 refers). The track has also been re-sleepered with concrete sleepers. ITSRR is awaiting further action by ARTC in relation to the remaining recommendations, particularly recommendation 5.1 (a) (i) relating to an assurance that all track related defects in the area of the derailment have been fully repaired, before being satisfied that these recommendations have been implemented.

Current status



**DETAILS OF 'OPEN' RAIL RECOMMENDATIONS –
Bethungra on 22.12.04**

No:	Detail of recommendation:	Agency:	'Open' status:
5.1 (a) i	Provide an assurance to ITSRR that all track related defects in the area of the derailment have been fully repaired.	ARTC	Open – Awaiting response
5.1 (a) ii	Review the competencies and training of those responsible for the conduct of track inspections and track maintenance to ensure that: (1) track inspections are conducted in the scheduled timeframes and track maintenance is conducted in the prescribed manner, and (2) staff can accurately recognise and interpret track related deficiencies and defects.	ARTC	Open – Agency claims closure
5.1(a) iii	Review the competencies and training of those responsible for the interpretation of data obtained from track inspections and the WTSA (Welded Track Stability Analysis) process to ensure that risk can be appropriately identified, categorised and managed.	ARTC	Open – Response received
5.1(a) iv	Audit inspection and maintenance programs to ensure that they are timely and comprehensive, and are performed to specific standards.	ARTC	Open – Agency claims closure
ITSRR 1.	ITSRR will require a briefing and information transfer from ARTC on their view of the asset condition of the main south line.	ITSRR	Open – Response received
ITSRR 3.	ITSRR is to consider ARTC's strategies for improving track condition including the application and implementation of the recommendation from OTSI report into the 'Steel sleeper introduction on NSW Class 1 Main line Track' of 31 st August 2005.	ITSRR	Open – Acceptable response

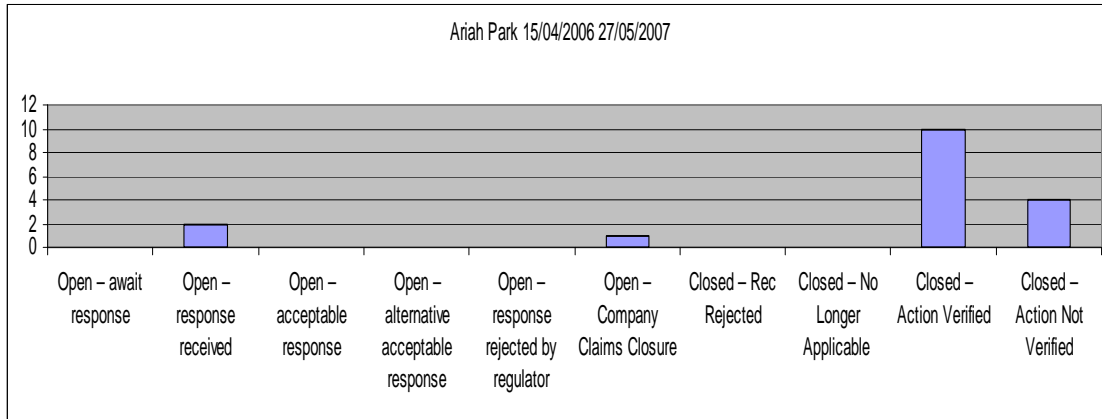
Title: ARIAH PARK
Date of incident: 15 April 2006
Date published: 07 May 2007
No of Recommendations:3 (Regulator: 1; Other 2)

Description of incident: On 15 April 2006, a heritage passenger steam train operated by Lachlan Valley Railway Society Cooperative Ltd (LVRS) was participating in an event to celebrate the centenary of the opening of the rail line between Temora and Arian Park. The train consisted of a 32 Class steam locomotive, No. 3237, its tender and five passenger carriages. For the journey from Temora to Arian Park, it was designated SS83 and configured with the tender of the locomotive leading. It arrived at Arian Park where the locomotive and tender were detached from the carriages. On completion of the ceremony, the locomotive and tender had to be reversed towards the Arian Park platform to be re-coupled with the carriages. To engage the hook and link of the coupling mechanism, the guard stepped into the gap between the tender and the carriage on two occasions; initially to align the coupling link and subsequently to place the carriage's coupling link over the tender's coupling hook. As the guard attempted to effect the coupling manoeuvre, he was crushed between the tender and the carriage. The guard died shortly after at hospital of the injuries he had sustained.

Focus of recs: LVRS to audit its operations and rolling stock to identify risks to persons. ITSRR is to monitor LVRS to determine if LVRS should remain accredited. ARTC is to review its secondary employment policies and rostering processes.

Progress with safety outcomes: ARTC has responded to recommendations 5.1 (c) (i) and (ii) relating to amendments to its External Employment Policy and a review of its rostering processes, which are currently being assessed. All recommendations directed to ITSRR are closed. One remaining recommendation directed to LVRS relating to the governance arrangements of its Board remains open, awaiting verification by ITSRR. ITSRR varied the operator's accreditation to restrict shunting operations until safety measures are fully implemented.

Current status



DETAILS OF 'OPEN' RAIL RECOMMENDATIONS – Ariah Park on 15.4.07

No:	Detail of recommendation:	Agency:	'Open' status:
5.1.c.i	Amend External Employment (Policy Number HR06-004) to require that employees undertaking rail safety work on a voluntary basis declare such work, given that such work is considered as employment under the NSW Rail Safety Act 2002	ARTC	Open – Response received
5.1.c.ii	Review its rostering processes to ensure that changes made to master rosters at a local level are advised to those responsible for the maintenance of the masters rosters	ARTC	Open – Response received
5.1.b.i	Review the operations and focus on its Board to ensure that it is meeting its legal obligations. If the Board does not have the expertise to address fundamental requirements such as risk management, act to acquire or engage the necessary expertise.	Lachlan Valley Railway Society Co-op Ltd	Open – Agency claims closure

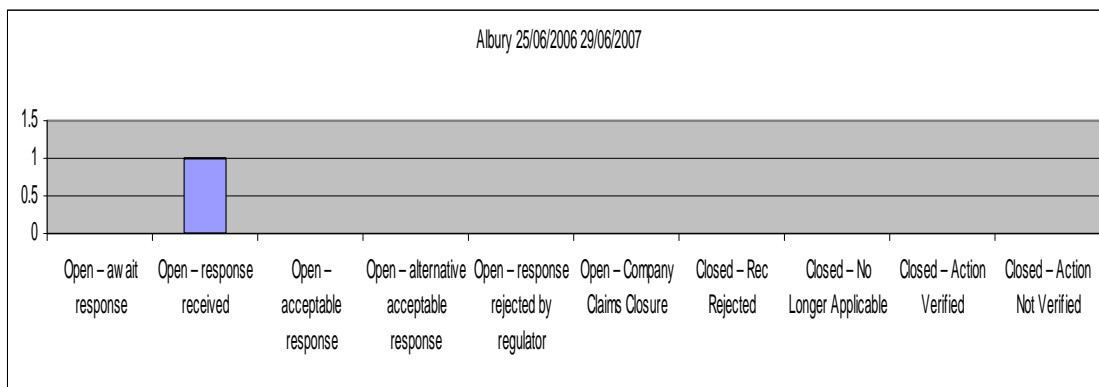
Title: ALBURY
Date of incident: 05.06.06
Date published: 29.06.07
No of Recommendations: 1 (Other 1)

Description of incident: At approximately 1322 on 5 June 2006, a passenger car (a 1986 Holden Commodore sedan) drove into the path of XPT passenger train (ST24) at the Thurgoona Road level crossing, on the northern edge of Albury, New South Wales (NSW). The driver of the passenger car was fatally injured during the collision. The investigation concluded that the effect of non-prescription drugs on driver performance and driver distraction due to mobile phone operation were safety factors which contributed to the collision

Focus of Recs: Level Crossing Co-Ordination Committee (LCCC) consider strategies to reinforce public awareness of risks involving cannabis and mobile phone on driver performance and awareness.

Progress with safety outcomes: Response received from the LCCC. ITSRR is awaiting response from the NSW Roads and Traffic Authority representative on the LCCC. The level crossing at Thurgoona, Albury has now been grade separated.

Current status



**DETAILS OF 'OPEN' RAIL RECOMMENDATIONS –
Albury on 5.6.06**

No:	Detail of recommendation:	Agency:	'Open' status:
RR2007 0003	The ATSB recommends that the NSW Level Crossing Strategy Council (now the Level Crossing Coordination Committee) consider strategies to reinforce public awareness of the risks associated with cannabis use and the resultant impairment of driving performance, and driver distraction in relation to mobile telephone ringing and usage.	Level Crossing Co-ordination Committee	Open – Response received

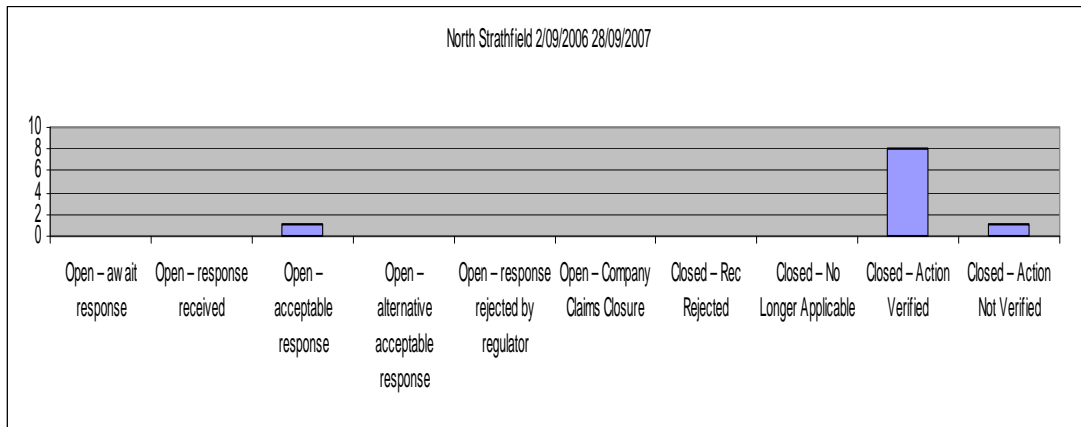
Title: NORTH STRATHFIELD
Date of incident: 02 September 2006
Date published: 28 September 2007
No of Recommendations: 10 (Regulator: 1; RailCorp 9)

Description of incident: At approximately 1:08am (Eastern Standard Time) on 2 September 2006, an empty CityRail service 67-R passed Signal ST 164 at stop without authority on the 'Down Relief' line at North Strathfield and continued onto the single, bidirectional 'Goods' line between North Strathfield and Homebush, as the points were set for this route. At the same time, Pacific National's freight service 5YN2 was travelling on the same 'Goods' line between Flemington and Homebush, but in the opposite direction. 67-R and 5YN2 were proceeding towards each other on the same line. Signallers attempted to contact the Drivers of 67-R and 5YN2 by radio to direct them to stop their trains immediately. The Driver of 5YN2 responded, but the Area Controller was unable to establish radio contact with the Driver of 67-R. The Driver was unaware of these attempts to contact him but eventually realised that he was on the wrong line and brought his train to a stand adjacent to the Strathfield Signal Box and some 194 metres from the stationary 5YN2. There was no injury or damage resulting from the incident.

Focus of Recs: The upgrade of Signal 164 and changes to train control procedures, as well as a review of train radio log-in procedures.

Progress with safety outcomes: RailCorp has one (1) outstanding recommendation, relating to the upgrading of train control panels alarm systems. The track has been upgraded with a train stop installed at the signal, and communication protocols have been reinforced.

Current status



DETAILS OF 'OPEN' RAIL RECOMMENDATIONS – North Strathfield on 2.9.06

No:	Detail of recommendation:	Agency:	'Open' status:
5.1.a.v	Alarm its control panels and indication boards, where it has not already done so, so that Area Controllers are automatically alerted to situations where signals have been passed at stop and/or to opposing movements.	RailCorp	Open – Acceptable response

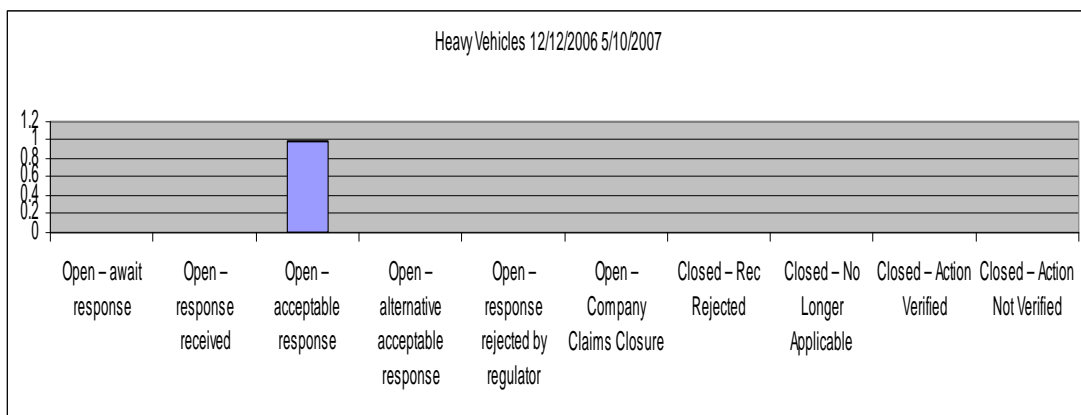
Title: HEAVY VEHICLES
Date of incident: 12 December 2006
Date published: 05 October 2007
No of Recommendations: 1 (Regulator 1)

Description of incident: At approximately 1356 on 12 December 2006, a double trailer road-train truck drove into the path of *The Ghan* passenger train (1AD8) on the Fountain Head Road level crossing at Ban Ban Springs approximately 130 km directly south-east of Darwin, Northern Territory (170 km by road). There were no fatalities, although the truck driver and a female passenger were hospitalised and several other passengers and crew sustained minor injuries. This Supplementary Report was compiled to outline the ATSB's findings during a timing trial for high mass combination vehicles traversing the Fountain Head Road railway level crossing at Ban Ban Springs. The results of the trial may have wider implications in relation to the adequacy of the current standards for sighting distances at level crossings.

Focus of Recs: The Australian Standard for level crossing sighting distances from stop signs is inadequate to cater for the longest road trains authorised on Australian Roads. The report concludes that the certain road trains will not clear the level crossing in time to avoid a collision with trains travelling at line speed (115 KPH).

Progress with safety outcomes: ITSRR is awaiting response from the NSW Level Crossing Strategy Council as to what, if any, actions have been taken by road and rail authorities.

Current status



**DETAILS OF 'OPEN' RAIL RECOMMENDATIONS –
Heavy Vehicles on 4.5.06**

No:	Detail of recommendation:	Agency:	'Open' status:
RS2007 0001	The ATSB advises that State and Territory road transport authorities and rail regulators should consider the implications of this safety issue and take actions where it is considered appropriate.	ITSRR	Open – Acceptable response

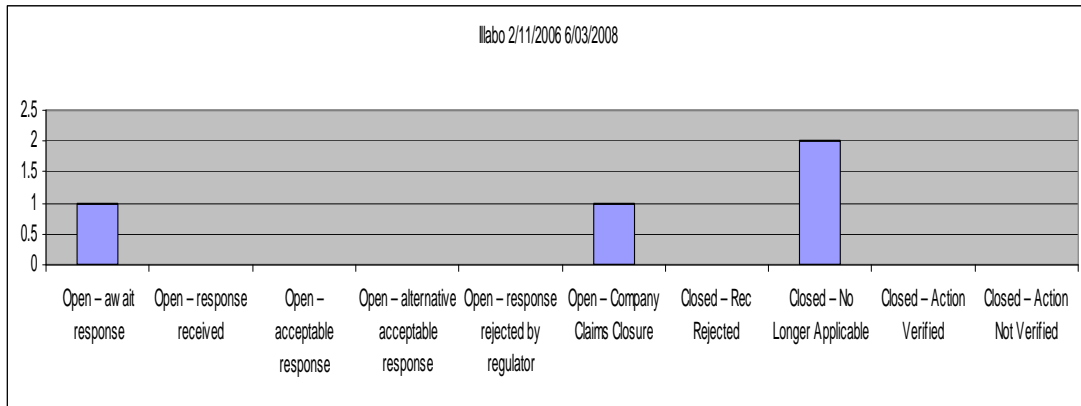
Title: ILLABO
Date of incident: 2 November 2006
Date published: 6 March 2008
No of Recommendations: 4 (ARTC and GrainCorp)

Description of incident: Shortly before 23:14 hours on Thursday 2 November 2006, the driver of a semi-trailer loaded with baled wool lost control of his truck whilst negotiating the approach to the Olympic Highway level crossing at Illabo, NSW. The truck overturned and slid along on its side coming to rest on the level crossing, obstructing both of the railway lines at the crossing. After climbing out of the prime mover cab, the driver realised that his truck was obstructing the railway lines and called the '000' emergency number. The '000' operator received the call and transferred it to the police communication centre who then attempted four times to warn train 9351, which was approaching the crossing, without success. At about 23:24:35 freight train 9351 travelling at about 94 km/h collided with the overturned semitrailer. The leading bogie on the leading locomotive GL 102 derailed as a result of the collision. There was moderate damage to the leading locomotive and the truck's prime mover. The truck's trailer was destroyed. There was significant damage to the level crossing signals, signage, and auxiliary trackside equipment. There were no serious injuries but the train crew were treated for shock.

Focus of Recs: Operational procedures regarding primary communication systems.

Progress with safety outcomes: Two recommendations directed to GrainCorp closed this quarter. Responses received from ARTC. ARTC has enhanced their train control procedures for secondary communication channels.

Current status



DETAILS OF 'OPEN' RAIL RECOMMENDATIONS – Illabo on 2.11.2006

No:	Detail of recommendation:	Agency:	'Open' status:
RR2008 0018	Network rules and procedures were deficient with respect to ensuring the registration of leading locomotive radios on the CountryNet communication system prior to departure. This increased the risk of trains entering the network without being registered on the CountryNet communication system and therefore not being contactable using the primary communication system during emergencies. ATSB recommends that the ARTC continue to take action to address this safety issue.	ARTC	Open – Awaiting response
RR2008 0019	Recording back-up communication systems safety issue – Network rules and procedures were deficient with respect to ensuring that back-up communication details were routinely recorded on train control graphs to allow for a seamless transfer in the event of primary communications failure. The ATSB recommends that ARTC take action to address this safety issue.	ARTC	Open – Agency claims closure

Title: FATALITY NEAR BAAN BAA
Date of incident: 22.05.2006
Date published: 03.06.2008
No of Recommendations: 14 (Regulator: 4; Other 10)

Description of incident: At approximately 9:00am on 22 May 2006, a track worker employed by the Rail Infrastructure Corporation (RIC) and seconded to the Australian Rail Track Corporation (ARTC) was fatally injured while participating in ballasting operations approximately 3km South of Baan Baa. The ballast train (5M23) was crewed by two Southern & Silverton Railway Pty Ltd (Silverton Rail) drivers and consisted of three locomotives and 22 ballast wagons, with a plough van at the rear

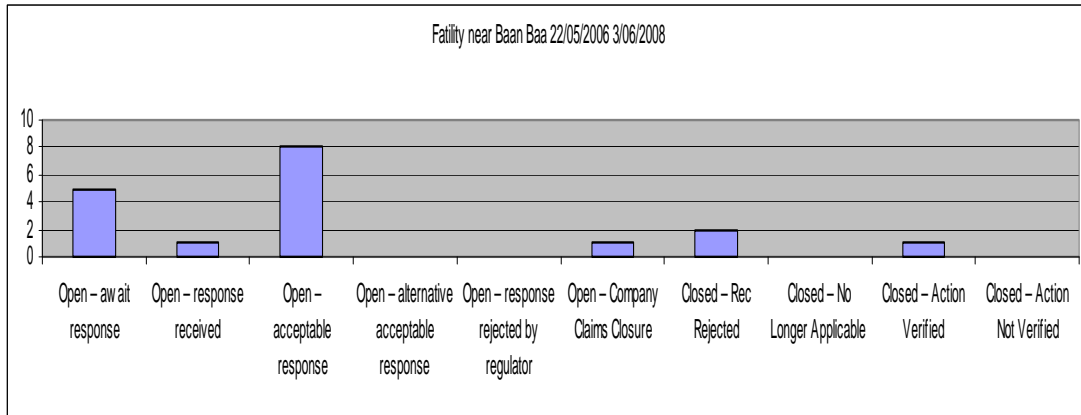
Focus of Recs: ARTC to review its procedures for ballasting operations including wagon design, radio communications and track worker locations. ARTC to review its work scheduling practices to reduce potential pressure on work gangs to meet work program targets. RailCorp to review its ballasting operations to see if any lessons learned can be transferred to its operations. Southern and Silverton Railway to review rolling stock requirements. ITSRR is to review ARTC's work method statements regarding ballasting operations and compare RailCorp and ARTC's ballasting operation procedures for consistency. ITSRR is also to monitor Event loggers on locomotives.

Progress with safety outcomes:

ITSRR monitors aspects of Rolling Stock Standard 001 as part of its compliance activities which includes data loggers/event recorders. ITSRR does not intend to prioritise the monitoring of data loggers/event recorders other than by way of safety compliance activities as the risk profile of railway operations in NSW does not indicate this issue as a high safety risk. One Southern and Silverton recommendation closed. ARTC has been advised to provide a further response to recommendations 4.1.a (iii), (iv) and (v) relating to the planning of track work, the undertaking of risk assessments and the prohibition on workers stepping from or onto moving ballast wagons, as their first response failed to adequately address these recommendations. ARTC has implemented temporary control measures. ARTC is also

modifying its fleet of ballast wagons to enable remote control of ballast distribution.

Current status



DETAILS OF ‘OPEN’ RAIL RECOMMENDATIONS – Fatality near Baan Baa on 22.05.2006

No:	Detail of recommendation:	Agency:	‘Open’ status:
4.1.a (1) a.	Australian Rail Track Corporation Ltd (ARTC) further amend its Work Method Statement (WMS) Unloaded NDFF Air Operated Ballast Wagons to: (a) specifically identify those workers who must have a radio during ballasting operations and specifically include a requirement that all radios be tested prior to the commencement of each days ballasting operations.	ARTC	Open – Acceptable response
4.1.a (1) b. a.	ARTC further amend its WMS Unload NDFF Air Operated Ballast Wagons to: (b) specify what constitutes a normal walking speed and identify a speed which must not be exceeded during ballasting operations where any worker is required to walk alongside the train.	ARTC	Open – Acceptable response
4.1.a (1) c. a.	ARTC further amend its WMS Unload NDFF Air Operated Ballast Wagons to: (c) specify the minimum number of workers that must be involved in a ballasting operation and define their roles and responsibilities.	ARTC	Open – Acceptable response
4.1.a (1) d. a.	ARTC further amend its WMS Unload NDFF Air Operated Ballast Wagons to: (d) identify the contingencies that need to be factored into local planning and subsequently incorporated into the WMS, and referred to in safety briefings.	ARTC	Open – Acceptable response
4.1.a (1) e.	ARTC further amend its WMS Unload NDFF Air Operated Ballast Wagons to: specify the requirement for a risk assessment to be conducted before making any changes to working arrangements, either prior to or during a ballasting operation, and specify who has the authority to make such changes.	ARTC	Open – Acceptable response

No:	Detail of recommendation:	Agency:	'Open' status:
4.1.a (ii)	ARTC is to ensure that all its employees who are required to participate in ballasting operations, including those seconded from RIC, and contractors it engages for the same purpose, are briefed on, understand, and fully comply with its ballasting procedures.	ARTC	Open – Response received
4.1.a (iii)	ARTC is to emphasise the importance of a proper appreciation by its work planners of the time needed to safely conduct track work.	ARTC	Open – Awaiting response
4.1.a (iv)	ARTC is to emphasise the need to identify all of the risks associated with a specific task and the requirement to articulate specific control measures to adequately manage those risks.	ARTC	Open – Awaiting response
4.1.a (v)	ARTC is to maintain its prohibition on workers stepping from or onto moving ballast wagons	ARTC	Open – Awaiting response
4.1.a (vi)	ARTC is to continue, and expedite if possible, its program to convert all ballast wagons so that they may be operated remotely.	ARTC	Open – Acceptable response
4.1.a (vii)	ARTC is to equip all track workers with two-way radios when they are engaged in ballasting operations.	ARTC	Open – Acceptable response
4.1.b (i)	RailCorp is to examine its own ballasting procedures in the light of the lessons arising from this accident.	ARTC	Open – Agency claims closure
4.1.d (i)	ITSRR is to review the risk assessment that has underpinned the development of ARTC's WMS Unload NDFP Air Operated Ballast Wagons and compare its revised requirements with those of RailCorp for the same type of activity to ensure there is a consistent approach to the planning and execution of ballasting operations within NSW	ITSRR	Open – Awaiting response
4.1.d (ii)	ITSRR it to monitor the adherence of ARTC and its employees, including contractors, to the revised procedures for ballasting operations.	ITSRR	Open – Awaiting response
4.1.c (ii)	Southern & Silverton Railway Pty Ltd are to take whatever are necessary to ensure that all of its locomotives are equipped with fully functioning and properly calibrated data recorders.	Southern & Silverton Railway Pty Ltd	Open – Acceptable response

Title: SINGLETON
Date of incident: 16.07.2007
Date published: 21.07.2008
No of Recommendations: 13 (Regulator: 3; Other 10)

Description of incident: At approximately 5:48am on 16 July 2007, a signal electrician and his assistant (hereafter referred to as “the Electrician” and “the Electrician’s Assistant” respectively and collectively as “the two rail maintenance workers”) were struck and fatally injured by Pacific National’s coal service HV161 at No.56A points approximately 445m South of Singleton railway station. The two rail maintenance workers had been called-out to attend to the points which had malfunctioned earlier in the morning. Analysis of recorded conversations between the Electrician and the Network Controller in charge of train movements through Singleton, together with signal records, revealed that the two rail maintenance workers were working under a method of worksite protection known as NAR (*No Authority Required*). Under this arrangement, one of them was required to keep a lookout for approaching trains at all times.

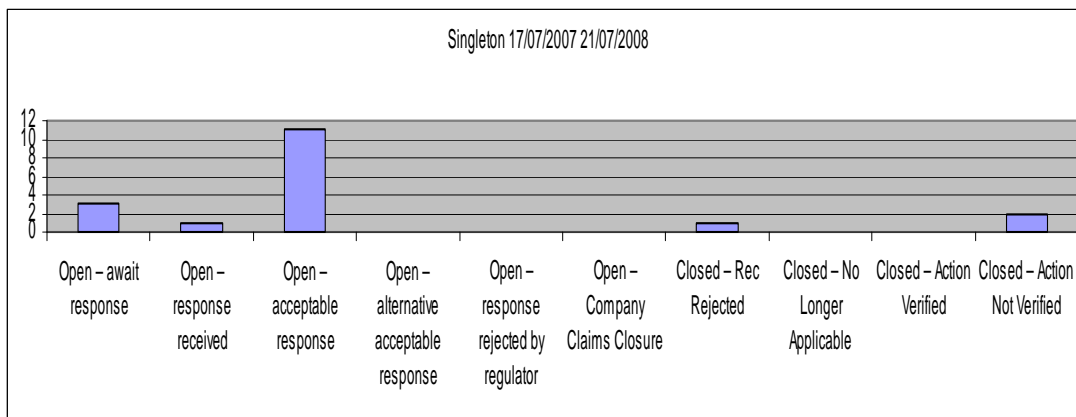
Focus of Recs: Infrastructure Managers and ITSRR to review the applicability of “No Authority Required” (NAR) worksite protection.

Infrastructure manager to review the risks associated with fatigue.

Progress with safety Outcomes:

Responses received from ARTC, Pacific National and RailCorp. ARTC have prohibited the use of “No Authority Required” worksite protection at night or in low light conditions. ARTC has responded to recommendation 4.1 (a) (iii) and ITSRR has closed this element of the recommendation. As the recommendation applies to two parties, the recommendation will remain open until the other party finalises its actions. ITSRR is conducting a compliance investigation into this accident. ARTC has restricted the application of “No Authority Required” worksite protection to daylight hours. ITSRR is conducting risk assessments regarding the use of “No Authority Required” worksite protection in conjunction with the 2 infrastructure managers.

Current status



DETAILS OF 'OPEN' RAIL RECOMMENDATIONS – Singleton on 16.07.2007

No:	Detail of recommendation:	Agency:	'Open' status:
4.1 a.(1). i.	In conjunction with ITSRR, and as a priority, remove Network Rules ANWT 310 and NWT 310 (No Authority Required) and replace them with the Lookout Protection method, but in a modified form which includes specific reference to the requirements that: (a) protection arrangements be documented; (b) the role of Protection Officer be performed by someone with the requisite qualifications, and (c) information pertaining to the presence of workers on the track be passed by Network Controllers to drivers operating rolling stock on the same track.	ARTC	Open – Acceptable response
4.1 a. (ii)	In consultation with ITSRR, amend Network Rules ANTR 406 and NTR 406 (Using Train Lights) to remove the requirement for train drivers in NSW to extinguish their headlights on approaching another train and the option of their doing the same when approaching a motor vehicle on a nearby road, a platform, a signal box or a location where shunting is in progress, and instead, require them to dim their headlight instead in all of these circumstances.	ARTC	Open – Acceptable response
4.1 a. (iv)	Review the range of safety clothing and safety equipment provided to its rail safety workers to ensure that, irrespective of the worksite protection arrangements under which they are working, visibility of them within the danger zone at night is not solely dependent on external sources of illumination.	ARTC	Open – Acceptable response
4.1 a. (v)	Investigate, as a matter of priority, the use of existing technology that automatically alert those that are required to work in the danger zone of an approaching train, or other form of rolling stock, and which also automatically alerts those operating such rolling stock when they are approaching a worksite.	ARTC	Open – Response received

No:	Detail of recommendation:	Agency:	'Open' status:
4.1 b (i)	Review its SMS (Safety Management System) to ensure that there are adequate control measures therein to properly manage the risks associated with fatigue.	ARTC	Open – Acceptable response
4.1 b(ii)	Having satisfied itself that its SMS does contain adequate control measures to properly manage the risks associated with fatigue, or having acted to ensure that the related controls are being acted upon.	ARTC	Open – Acceptable response
4,1 b (iii)	Improve its process for auditing worksites by the inclusion of a requirement that before auditors attend a pre-work safety briefing and go on-site, they first examine the related risk assessment/s, and by requiring that they must subsequently examine the related train control graph/s.	ARTC	Open – Acceptable response
4.1 a (i)	In conjunction with ITSRR, and as a priority, remove Network Rules ANWT 310 and NWT 310 (No Authority Required) and replace them with the Lookout Protection method, but in a modified from which includes specific reference to the requirements that: (a) protection arrangements be documented; (b) the role of Protection Officer be performed by someone with the requisite qualifications, and (c) information pertaining to the presence of workers on the track be passed by Network Controllers to drivers operating rolling stock on the same track.	RailCorp	Open – Acceptable response
4.1 a.(ii)	In consultation with ITSRR, amend Network Rules ANTR 406 and NTR 406 (Using Train Lights) to remove the requirement for train drivers in NSW to extinguish their headlights on approaching another train and the option of their doing the same when approaching a motor vehicle on a nearby road, a platform, a signal box or a location where shunting is in progress, and instead, require them to dim their headlight instead in all of these circumstances.	RailCorp	Open – Acceptable response
4.1 a (iii)	Ensure that radio communication with the territory they control in NSW conforms to the requirements of Network Rules ANGE 204/NGE204 (Network Communications) and Network Procedures. ANPR 721/NPR 721 (Spoken and Written Communication)	RailCorp	Open – Acceptable response
4.1 a (iv)	Review the range of safety clothing and safety equipment provided to its rail safety workers to ensure that, irrespective of the worksite protection arrangements under which they are working, visibility of them within the danger zone at night is not solely dependent on external sources of illumination.	RailCorp	Open – Acceptable response
4.1 a (v)	Investigate, as a matter of priority, the use of existing technology that automatically alert those that are required to work in the danger zone of an approaching train, or other form of rolling stock , and which also automatically alerts those operating such rolling stock when they are approaching a worksite.	RailCorp	Open – Acceptable response

No:	Detail of recommendation:	Agency:	'Open' status:
4.1 d (i)	In light of continuing evidence of its limitations, and as a matter of priority, prohibit the use of NAR as an approved method of worksite protection within NSW	ITSRR	Open – Awaiting response
4.1 d(ii)	Review the adequacy and applicability of Australian Standard AS/NZ 4602:1999 for high visibility vest in the rail application.	ITSRR	Open – Awaiting response
4.1 d (iii)	Monitor ARTC's efforts to ensure that work within the rail corridor in ARTC controlled territory within NSW occurs under arrangements that conform to its revised worksite protection requirements.	ITSRR	Open – Awaiting response

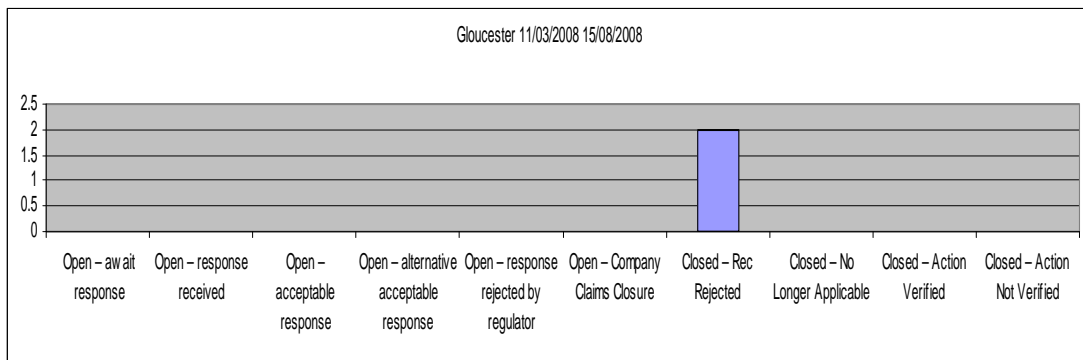
Title: GLOUCESTER
Date of incident: 11.03.2008
Date published: 15.08.2008
No of Recommendations: 2 (Infrastructure Manager)

Description of incident: At 0750 on 11 March 2008 a northbound freight train, numbered 2WB3, passed the outer home signal at red without authority at Gloucester, NSW. Gloucester is located about 140 km north of Broadmeadow (suburb of Newcastle) on the main Sydney to Brisbane rail line. There were no injuries or damage as a result of this incident. .

Focus of Recs: Signal sighting distance at approach to Gloucester and application of a network rule for managing limit of authority

Progress with safety Outcomes: Responses received and report closed this quarter. ITSRR satisfied infrastructure compliance with standards. Network Rules and Procedures applied correctly.

Current status



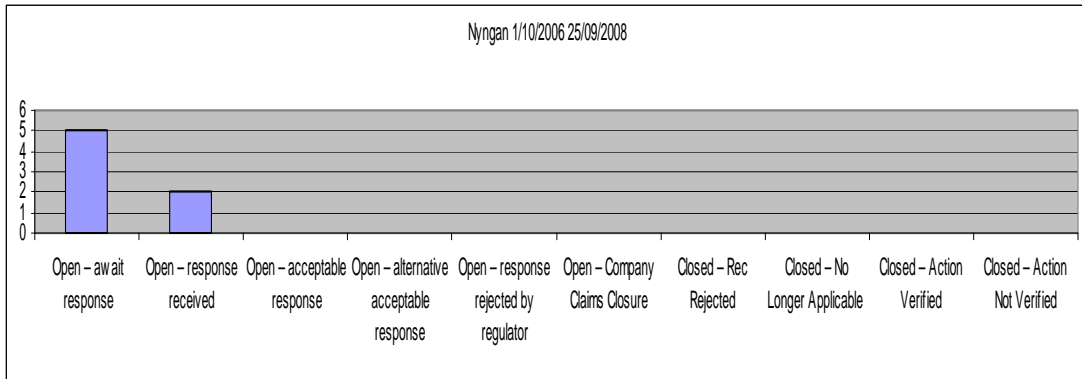
Title: NYNGAN
Date of incident: 01/10/2006
Date published: 25.09.2008
No of Recommendations: 7 (Regulator 1; Others 6)

Description of incident: At approximately 5:46am on 1 October 2006, the trailing locomotive and 14 wagons within Pacific National Limited's ore container service 4835 derailed four kilometres South-East of a locality known as Miowera, on a Class 3 freight line, between Nevertire and Nyngan in the Central West region of NSW. These rail vehicles and 22 containers thereon, suffered varying degrees of damage. Fortunately, there were no injuries.

Focus of Recs: Asset management practices and procedures of ARTC.

Progress with safety Outcomes: ITSRR has received a response from Southern and Silverton in relation to two recommendations. ITSRR is currently awaiting a response from ARTC.

Current status



**DETAILS OF 'OPEN' RAIL RECOMMENDATIONS –
Nyngan on 1.10.2006**

No:	Detail of recommendation:	Agency:	'Open' status:
4.1.a (i)	ARTC is to ensure that all staff involved in the inspection, repair and management of track are properly qualified for their role and have a proper understanding of relevant engineering standards, inspection and repair procedures and documentation.	ARTC	Open – Awaiting response
4.1.a (ii)	ARTC is to ensure that the outcome of track inspections, track maintenance activities and other track management measures are recorded in more specific terms and in a way that more adequately supports its understanding of track condition.	ARTC	Open – Awaiting response
4.1.a (iii)	ARTC is to conduct regular audits of its track management system in order to assure itself of the integrity of that system.	ARTC	Open – Awaiting response
4.1.a (iv)	ARTC is to amend ARTC Network Rule ANTR 400 and Operator Standard Operating Procedures to specify that rolling stock should only be moved at the scene of a running line derailment when there is a compelling safety requirement to do so and/or the movement has been approved by OTSI or ITSRR or, if the occurrence has occurred on the Defined Interstate Rail Network, the ATSB and has subsequently been authorised by Train Control	ARTC	Open – Awaiting response
4.1.c	ITSRR is to ensure that the elements of ARTC's Safety Management System upon which the Corporation relies to monitor and maintain track condition are robust and that the requirements specified therein are being met.	ITSRR	Open Awaiting response
4.1.b (i)	Southern and Silverton is to ensure that event recorders fitted to its locomotives are properly adjusted and are regularly inspected, maintained and calibrated.	Southern & Silverton Railway Pty Ltd	Open – Response received
4.1.b(ii)	Southern and Silverton is to replace faded and/or discoloured PPE throughout its organisation.	Southern & Silverton Railway Pty Ltd	Open – Response received

3.0 OVERVIEW FERRY

3.1 Ferry Safety Investigation Reports

A summary of the outstanding Ferry Safety Investigation Reports is provided in the table below. The table includes those reports that have been closed this quarter. A summary of the OTSI reports that have been closed previously is provided at annexure "1".

No.	Title of Report:	Short title:	Date of incident:	Date tabled:	No. of Recs	Status
1.	Systemic Investigation into incidents of collision involving Freshwater Class Vessels	Freshwater Class Systemic Investigation	October 2004 to October 2005	30.10.06	42	Open
2.	Fatal Collision between Dawn Fraser and dinghy at Walsh Bay	Walsh Bay – Dawn Fraser	5.01.07	22.06.07	11	Open
3.	Fatal Collision between Pam Burrige and recreational cruiser Merinda under Sydney Harbour Bridge	Port Jackson – Pam Burrige	28.03.07	25.03.08	16	Open

3.2 A summary of the status of each of the recommendations included in the outstanding open OTSI ferry reports is provided below.

Reporting framework for TREC agencies implementation of reports															
Regulator	Report Agency	Name of report	Date of Incident	Date Report Tabled	Open – await response	Open – response received	Open – acceptable response	Open – alternative acceptable response	Open – response rejected by regulator	Open – Company Claims Closure	Closed – Rec Rejected	Closed – No Longer Applicable	Closed – Action Verified	Closed – Action Not Verified	Total no. of recommendations
Maritime	OTSI	Freshwater Class Ferries -	Oct 04 to Oct 05	30/10/2006			8				1		32	1	42
	OTSI	Walsh Bay - Dawn Fraser	5/01/2007	22/06/2007			1						10		11
	OTSI	Port Jackson - Pam Burridge	28/03/2007	25/03/2008			1						12	3	16
				TOTAL:			10				1		54	4	69

3.3 Analysis of OTSI Ferry Report Recommendations

During the reporting period, a further three (3) ferry recommendations have been marked as “closed”. A total of eight (8) ferry safety investigation reports are now closed. There are currently ten (10) outstanding ferry recommendations and 127 ‘closed’ recommendations, which represents 93% of all recommendations.

3.4 General comment

On 30 October 2008, NSW Maritime conducted an audit to verify SFC closed recommendations. All SFC recommendations marked as ‘closed – not verified’ were successfully assessed as ‘closed – verified’ by this audit.

3.5 SECTORAL UPDATE FERRY

Individual summaries have been prepared for each of the following open OTSI Ferry Safety Investigation Reports:

1. Freshwater Class Systemic Investigation
2. Walsh Bay – Dawn Fraser
3. Port Jackson – Pam Burrige

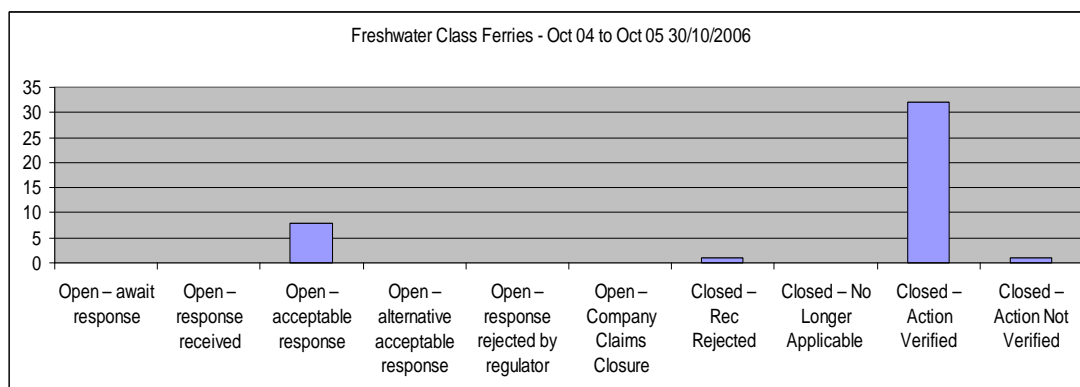
Title: **Freshwater Class Systemic Investigation**
Date of incident: October 2004 to October 2005
Date tabled: 30 October 2006
No of Recommendations:42 (SFC-38, NSWMM -4)

Description of incident: Throughout the period October 2004 to October 2005, Freshwater class vessels operated by Sydney Ferries Corporation, more commonly known as Manly Ferries, were involved in 11 reported collisions. All of these reported collisions were the subject of some form of investigation, either by Sydney Ferries Corporation, the NSW Maritime Authority and/or the Office of Transport Safety Investigation (OTSI). However, in view of what appeared to be an adverse safety trend and recurring safety issues, and in the interests of public transport safety, the Chief Investigator initiated a systemic investigation into the incidents.

Focus of recs: The recommendations to SFC were categorised into the areas of risk management, emergency management, training, communications, crew resource management and maintenance. A number of other recommendations relate to NSW Maritime monitoring and auditing SFC operations and projects.

Progress with safety outcomes: The implementation of the remaining open recommendations is progressing well. SFC recently closed one further recommendation, which is now classed as 'closed – not verified'. This recommendation concerned the appointment by SFC of an officer responsible for the coordination of recommendation implementation. NSW Maritime will continue to monitor the implementation of the outstanding open recommendations. The rejected recommendation referred to SFC masters assessing the fitness-for-duty of all crew prior to each shift. This has been rejected as SFC is still negotiating a higher health standard for ferry crews with the unions as part of the next EBA. The recommendations classed as "closed – not verified" have now been verified by audit by NSW Maritime and are now classed as 'closed – verified'.

Current status



DETAILS OF 'OPEN' FERRY RECOMMENDATIONS – Freshwater Class Systematic Investigation Report on 30/10/2006

No:	Detail of recommendation:	Agency:	'Open' status:
10	Continue to progress, in concert with Unions, the development of a cogent and contemporary fitness-for – work policy and ensure that NSW Maritime is kept informed of the status of this important endeavour.	SFC	Open – acceptable response
11	Institute a standard fitness-for–work assessment, supervised by Masters, to be conducted at sign-on points.	SFC	Open – acceptable response
14	Review the Fleet Emergency Response Plan (FERP) to ensure consistency with the State Disaster Plan (DISPLAN) and legislative requirements	SFC	Open – acceptable response
28	Develop checklists for all classes of vessels, for both normal operations and emergency situations.	SFC	Open – acceptable response
29	Ensure that 'lessons learned' from accidents, incidents, exercises, drills and risk assessments are formally distributed to crews and relevant staff members.	SFC	Open – acceptable response
31	Minimise the rotation of crew members during a shift and ensure that any rotation that must occur does not take place without reference to the Master.	SFC	Open – acceptable response
32	Align shifts so that all members of a crew start work at the same time.	SFC	Open – acceptable response
38	Conduct an analysis of critical failure modes on all classes of vessels, commencing with the Freshwater class, with particular emphasis on propulsion control systems.	SFC	Open – acceptable response

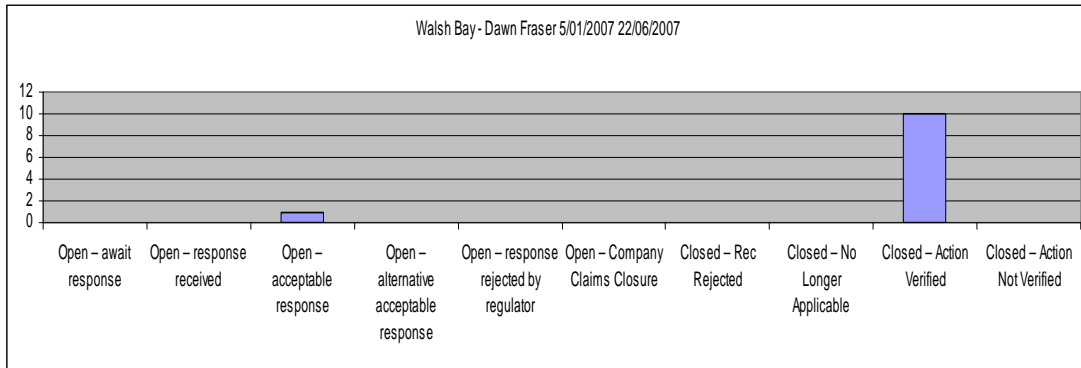
Title: Fatal Collision between Dawn Fraser and dinghy at Walsh Bay
Date of incident: 5 January 2007
Date tabled: 22 June 2007
No of Recommendations: 11 (SFC-6, NSWMM -5)

Description of incident: At about 6:56am on Friday 5 January 2007, Sydney Ferries' Rivercat *Dawn Fraser* was in transit from the Balmain Shipyard to Circular Quay to begin its daily scheduled services when it collided with a small aluminium runabout/dinghy on the Eastern side of Walsh Bay. The point of impact was approximately 300 metres West of the Sydney Harbour Bridge and 150 metres North-West of Dawes Point. The dinghy was occupied by two adult males, one aged in his 60s and the other, who was his son, aged in his 30s. Before the collision, the younger man was able to jump clear of the dinghy into the water, but his father was in the dinghy when it was struck. The older man died as a result of his injuries on 13 January 2007.

Focus of recs: The recommendations directed to NSW Maritime focus on the establishment of a 15 knot speed limit in the approaches to, and under, the Sydney Harbour Bridge; the consideration of extending the Priority Over Sail, "Orange Diamond" signal to all SFC ferries; and the review of the NSW Maritime educational materials distributed to boaters. The recommendations directed to SFC all focus on operational and crew training and procedures.

Progress with safety outcomes: NSW Maritime has accepted all recommendations and four (4) of these actions have been closed and verified. The final remaining open recommendation directed to NSW Maritime concerning the review of educational materials is to be implemented over the 2008-2009 boating season, with education programs and compulsory practical licence testing to be implemented, which will effectively close this recommendation. There are no outstanding open recommendations with SFC.

Current status



DETAILS OF 'OPEN' FERRY RECOMMENDATIONS – Walsh Bay – Dawn Fraser on 5/1/2007

No:	Detail of recommendation:	Agency:	'Open' status:
4	Recognising that not all recreational boaters hold a licence and therefore may not fully appreciate their obligations when operating a vessel, review its educational and safety awareness material, and the means by which it is promulgated, to ensure that its requirements are sufficiently explicit to be understood by, and are readily accessible to, the general public	NSW Maritime	Open – acceptable response

Title: Fatal Collision between *Pam Burrige* and recreational cruiser *Merinda* under Sydney Harbour Bridge

Date of incident: 28 March 2007

Date tabled: 25 March 2008

No of Recommendations: 16 (5 x SFC, 9 x NSW Maritime, 1 x Sydney Ports Corporation (SPC), 1 x Australian Maritime Officers Union)

Description of incident: At approximately 10:50 pm on Wednesday 28 March 2007, Sydney Ferries HarbourCat *Pam Burrige* collided with the starboard side of the motor cruiser *Merinda* some 96 metres East of the Harbour Bridge and 180 metres out from the shoreline of Dawes Point. As a result of the collision, *Merinda* was effectively cut in two and twelve people on board were either thrown into the water or left standing on, or clinging to, the wreckage of the launch. As a result of the collision, four passengers on board *Merinda* were fatally injured and the remaining eight required hospitalisation. Three of the surviving eight passengers were seriously injured.

Focus of recs: The recommendations to SFC focused on the fitting of data recorders and real-time vessel trackers, time-tabling and adherence to the Sydney Cove Code of Conduct. The recommendations to NSW Maritime focused primarily on the review of current licensing arrangements and vessel lighting, as well as increased presence of Boating Service Officers during night hours. The recommendation to SPC involved risk assessments for moving traffic control to Port Botany. The recommendation to the AMOU was to impress on its members who are SFC masters of the need to comply with safe operating requirements at all times.

Progress with safety outcomes: NSW Maritime has closed all but one of the open recommendations. Five (5) of these have been classified as “open – alternative acceptable response”, and have now been closed due to the implementation of the alternate actions developed to address the recommendations.

Three of these recommendations were in relation to navigation lights carried by motor vessels of less than seven metres in length, and by sailing vessels. NSW Maritime has negotiated codes of

conduct with relevant user groups, such as dragon boats, outrigger canoes and sailing clubs which deal with visibility at night. Further, throughout 2008, NSW Maritime has run awareness campaigns on navigation lights, such as the “Be Bright at Night” campaign, in recent months

The other two (2) recommendations concerned the necessity of operator licences for vessels which travel at less than 10 knots, as well as restricting night time operations to the holders of boat licences only. Incident statistics held by NSW Maritime do not support these recommendations. NSW Maritime has committed to continue to study incident data and review its position on the issue of licensing if the data supports such a review.

The remaining ‘open’ recommendation relates to the practical component of licence testing has been accepted and will be implemented on 1 June 2009.

SFC has now implemented all five (5) of the recommendations (two verified through audit, three classified as closed – not verified). These newly closed recommendations relate to the fitting of Voyage Data Recorders and time tracking devices, and the review of ferry timetabling.

NSW Maritime has received advice and supporting documentation from Sydney Ports Corporation (SPC) concerning the one recommendation directed to them concerning stakeholder communications regarding any risk assessments conducted underpinning their move of port control to Port Botany.

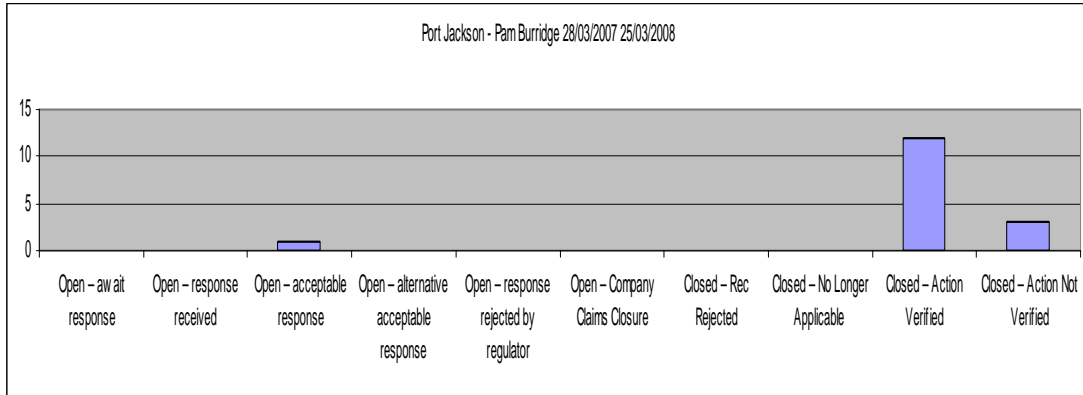
SPC commissioned and promulgated a report entitled “Traffic Risk Assessment – VTS Delivery Requirements”. The report specifically addresses the ports’ current and future risks and provides advice on VTS requirements to mitigate the risks.

The closure of this recommendation has been verified by NSW Maritime.

The recommendation to the AMOU is not being followed up by NSW Maritime as NSW Maritime does not have regulatory oversight of the AMOU.

This action as therefore been marked as “closed – action not verified”.

Current status



**DETAILS OF ‘OPEN’ FERRY RECOMMENDATIONS –
Port Jackson – Pam Burrige on 28/3/2007**

No:	Detail of recommendation:	Agency:	‘Open’ status:
7	Amend the requirements for obtaining a recreational boating licence in NSW to incorporate some form of practical assessment of basic boating competencies.	NSW Maritime	Open – acceptable response

4.0 OVERVIEW BUS

4.1 Bus Safety Investigation Reports

A summary of the outstanding bus Safety Investigation Reports is provided in the table below. The table includes those reports that have been closed this quarter. A summary of the OTSI Rail Safety Investigation reports that have been closed previously is provided at annexure "1".

No.	Title of Report:	Short Title	Date of incident:	Date tabled:	No. of Recs	Status
1.	Blind Spot Buses (Systematic investigation)	'Blind Spot' Buses	22.02.05	6.10.05	5	Open
2.	Eastern Distributor Tunnel (Collision between two STA buses)	Eastern Distributor Tunnel	25.02.05	7.11.05	10	Open
3.	Fatal injuries sustained by a pedestrian struck by a Veolia Bus Kensington and Montgomery Streets Kogarah	Kogarah	2.05.06	28.02.07	10	Open
4.	Overseas-sources buses – systemic Investigation	System Investigation	N/A	30.01.08	5	Open
5.	Bus accidents occasioning death and serious injury	Various Accidents	19-27.06.07	14.08.08	12	Open

4.2 A summary of the status of each of the recommendations included in the outstanding open OTSI bus reports is provided below.

Reporting framework for TREC agencies implementation of reports															
Regulator	Report Agency	Name of report	Date of Incident	Date Report Tabled	Open – await response	Open – response received	Open – acceptable response	Open – alternative acceptable response	Open – response rejected by regulator	Open – Company Claims Closure	Closed – Rec Rejected	Closed – No Longer Applicable	Closed – Action Verified	Closed – Action Not Verified	Total no. of recommendations
MoT	OTSI	'Blind Spot' Buses	27/09/2005	6/10/2005			1						1	3	5
	OTSI	Eastern Distributor Tunnel	25/02/2005	7/11/2005		1					2		2	5	10
	OTSI	Veolia Bus Kogarah	2/05/2006	28/02/2007			1						1	8	10
	OTSI	Overseas sourced buses - systemic invest				1	1				1		2		5
		Various Accidents	19-27/6/2007	14/08/2008	6		2	1					3		12
				TOTAL:	6	2	5	1			3		9	16	42

4.3 Analysis of OTSI bus Report Recommendations

During the reporting period, the status of all recommendations remained the same. There are currently 14 outstanding bus recommendations and 59 'closed' recommendations, which represent 80% of all recommendations.

4.4 SECTORAL UPDATE BUS

Individual summaries have been prepared for each of the following open OTSI Bus Safety Investigation Reports:

1. Blind Spot Buses (systematic investigation)
2. Eastern Distributor Tunnel (collision between two STA buses)
3. Kogarah (Fatal injuries sustained by pedestrian struck by a Veolia Bus)
4. Overseas-Sourced Buses (systemic investigation)
5. Bus accidents occasioning death and serious injury

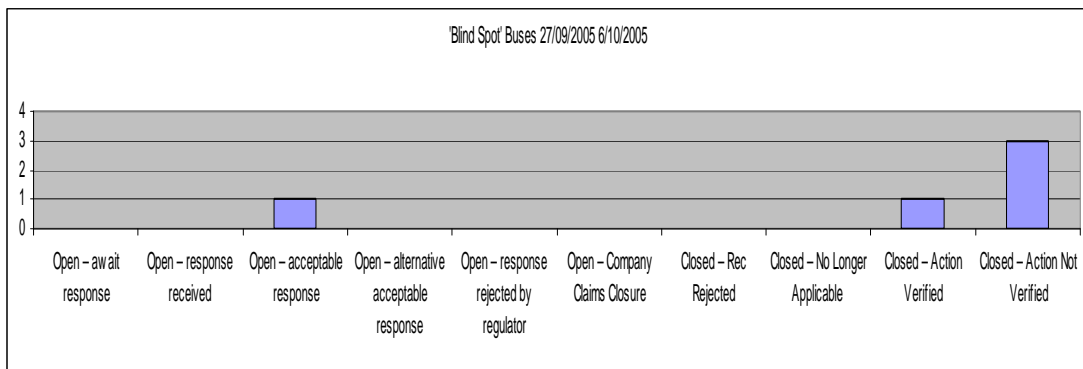
Title: BLIND SPOT BUSES (systematic investigation)
Date of incident: 22.2.05
Date tabled: 6.10.05
No of Recommendations:5 (MoT 1, Other 4)

Description of incident: In October 2004, the NSW Senior Deputy Coroner approached OTSI seeking assistance to investigate an alleged blind spot on Mk II Mercedes buses operated by the State Transit Authority (STA). The Coroner's request was made in the context of a coronial inquiry into a series of fatal incidents occurring between 1994 – 2002 where pedestrians were fatally injured after having struck by a Mk II Mercedes bus operated by STA.

Focus of recs: Operator to include specific references and requirements in relation to blind spots, by vehicle type in their driver education and assessment, and examine the fitting and replacement of alternative side mirror types. The MoT to make other operators aware of the specific risks posed by blind spots.

Progress with safety outcomes: In relation to the final recommendation, The MK II and MK III Mercedes-badged buses have been independently assessed by IAG "blind spot" laser tests. Results have been evaluated by EP&S in conjunction with their Driver Training division. STA also advise the withdrawal of Mk II and Mk III badged buses is continuing. All Mk II buses have been withdrawn from service and it is planned for all Mk III buses to be withdrawn from service by end of 2009

Current status



**DETAILS OF 'OPEN' BUS RECOMMENDATIONS –
Blind Spot Buses on 22/2/05**

No:	Detail of recommendation:	Agency:	'Open' status:
1.	The State Transit Authority to examine the fitting and placement of alternative side mirror types to its MK II and MK III Mercedes-badged buses.	STA	Open – Acceptable response

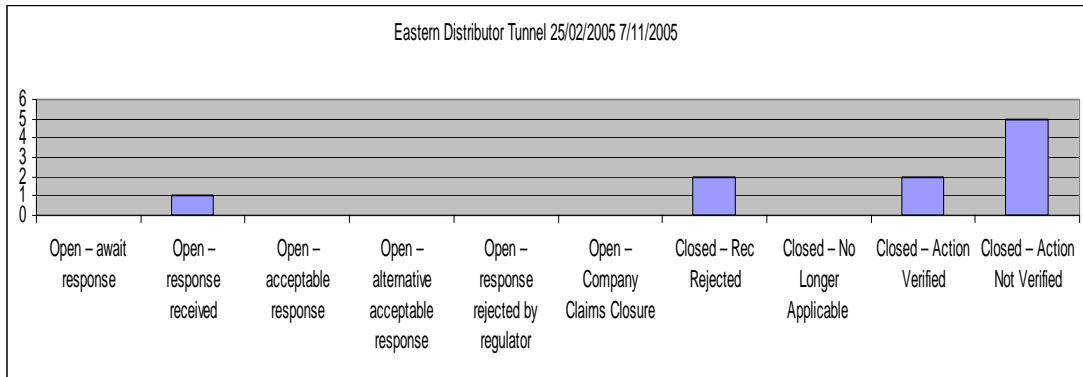
Title: EASTERN DISTRIBUTOR TUNNEL (collision between two STA buses)
Date of incident: 25.2.05
Date tabled: 7.11.05
No of Recommendations:10 (MoT 2, RTA 1, Other 7)

Description of incident: About 8.30am on Friday 25 February 2005, three buses operated by the State Transit Authority (STA) entered the Northbound carriageway of the Eastern Distributor Tunnel in Sydney via the Moore Park Road entrance. As the leading bus approached the rear of the built-up traffic, the driver changed from the right-hand lane into the middle lane. The second, following, bus remained in the right-hand land also began slowing in response to the build-up of traffic. The driver of the third bus, also following in the right-lane, applied his bus's brakes but failed to stop in time and collided with the rear of the second bus. Sixteen passengers sustained injuries ranging from bruising and lacerations, through to neck and back injuries. The rear window of the second bus shattered, showering some passengers with glass.

Focus of recs: Operator required to provide specific training on bus stopping distances, ensure bus radio communications are effective in tunnels implement a system which provides emergency guidance to passengers in the event that a driver becomes incapacitated. MoT to conduct an audit of STA driver training program to ensure emphasis on the need for safety driving, and confirm that STA satisfactorily educates drivers on reaction time and hazard avoidance.

Progress with safety outcomes: In relation to the outstanding recommendation requiring a system to be implemented to provide guidance to passengers in the event that a driver becomes incapacitated, automated announcements have been included as part of the MetroBus trial. This system will be assessed at the conclusion of the MetroBus trial.

Current status



DETAILS OF 'OPEN' BUS RECOMMENDATIONS – Eastern Distributor Tunnel on 25/2/05

No:	Detail of recommendation:	Agency:	'Open' status:
4.	Implement a system which provides emergency guidance to passengers in the event that a driver becomes incapacitated. Such a system might include signage, public address systems, automated announcements and remote radio advisory systems.	STA	Open – Response received

Title: **KOGARAH (Fatal injuries sustained by pedestrian struck by a Veolia Bus)**

Date of incident: 2.5.06

Date tabled: 28.2..07

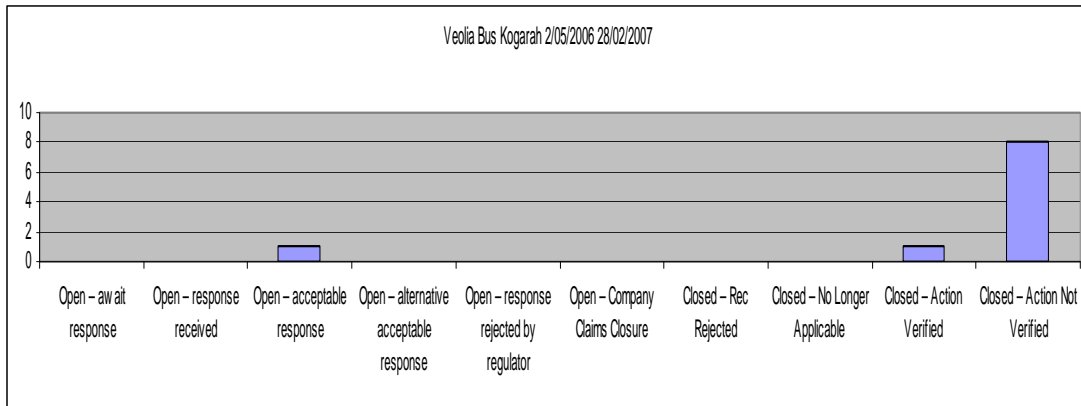
No of Recommendations:10 (MoT 2, RTA 4, Other 4)

Description of incident: At approximately 4.00pm on 2 May 2006, a passenger bus operated by Veolia Transport (formerly operating as Connex) struck an elderly female pedestrian at the intersection of Kensington and Montgomery Streets in Kogarah, Sydney. The bus driver did not see the pedestrian as he commenced a right turn at the four way intersection, but stopped the bus when he felt the impact. However, the pedestrian was trapped between the front right wheel and the wheel arch and was dragged approximately two metres before the bus came to rest. She sustained serious injuries and died shortly after admission to St George Hospital. The bus driver was charged by NSW Police with Negligent Driving Causing Death. Pending the outcome of legal proceedings, the Ministry of Transport (MoT) suspended the driver's accreditation.

Focus of recs: Veolia to review the positioning of all external mirrors throughout its fleet and to alert drivers to the presence of known blind spots. The RTA to conduct a survey of both pedestrian and vehicular traffic density and behaviour at the site of the accident, and consider reconfiguring the traffic lights. MoT to bring this accident to the attention of the bus industry and to monitor implementation of safety recommendations.

Progress with safety outcomes: Three (3) recommendations have recently been closed. In relation to the recommendation that the RTA give consideration to reconfiguring the traffic lights at the intersection of Montgomery and Kensington Streets, the RTA have undertaken a road safety audit in conjunction with Kogarah Council. Council are undertaking minor remedial work. The RTA will review the pedestrian facilities at the signalised intersection of Montgomery and Kensington Streets.

Current status



DETAILS OF 'OPEN' BUS RECOMMENDATIONS – Veolia Bus Kogarah on 2/5/06

No:	Detail of recommendation:	Agency:	'Open' status:
2.	Ensure that its drivers are reminded of the need for additional caution at tight intersections and are refreshed periodically in the required driving techniques	Veolia Transport Pty Ltd	Open – Acceptable response
4.	Give particular consideration to reconfiguring the traffic lights at the intersection of Montgomery and Kensington Streets to provide pedestrians with exclusive use of the intersection for limited periods. That is, make the intersection a 'scramble crossing', or, alternatively, install red arrows, to reduce the likelihood of conflicting movements of vehicle with pedestrian using the designated crossings.	RTA	Open – Acceptable response

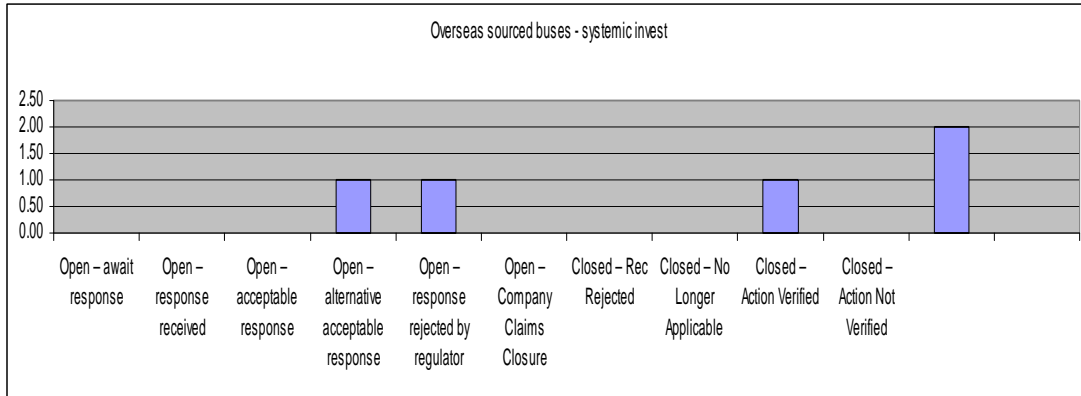
Title: The importation and registration of overseas-sourced buses in NSW (Systemic Investigation)
Date tabled: 30.01.08
No of Recommendations: 5 (RTA 4 and MoT1)

Description of incident: On 5 September 2005, a driver with only five weeks driving experience in Australia lost control of a bus carrying 24 occupants while descending Jamberoo Mountain Road. Two passengers died at the scene and a third died later in hospital as a result of injuries sustained in the crash. OTSI's investigation into this accident established that the driver lost control of the bus because of poor driving technique which caused the bus's brakes to overheat. It also established that at the time of its importation as a second-hand vehicle into Australia, the bus had been equipped throughout with seat belts but that these had been removed because they, and the associated anchorages, did not meet the related Australian Design Rules (ADRs). The bus was then presented for registration as a commercial vehicle in NSW by the importer. Although the bus did not meet the specific ADRs relating to seat-belts, and therefore the requirements for registration as a commercial vehicle in NSW, it was registered. Concerned by this and other anomalies, the Chief Investigator initiated a 'systemic' investigation into the importation and registration of buses from overseas for commercial operations in NSW.

Focus of recs: A review of the concession that allows the importation of pre-1989 buses that do not meet safety standards, and a review of the training and information provided to Authorised Unregistered Vehicle Inspection Scheme inspectors. A requirement that all applicants for LR, MR and HR class driver licences to undertake and pass a road knowledge test in English.

Progress with safety outcomes: Three (3) recommendations have recently been closed. MoT is currently undertaking further consultation with the RTA in relation to the recommendation that applicants undertake and pass the road knowledge test in English.

Current status



DETAILS OF 'OPEN' BUS RECOMMENDATIONS – Overseas-Sourced Buses (Systemic Investigation)

No:	Detail of recommendation:	Agency:	'Open' status:
3.	Remove the anomaly which permitted some types of new buses in NSW that were not intended to convey standing passengers to be registered even though they were not fitted with seatbelts throughout.	RTA	Open – Awaiting response
5.	Institute a requirement for all applicants for a public passenger bus driver's authority to provide evidence that they have been examined and passed the road knowledge test in English	MoT (subject to RTA capability)	Open – Acceptable response

Title: **Bus accidents occasioning death and serious injury West Pennant Hills, Rutherford and Sydney CBD 19-27 June 2007**

Date tabled: 14.08.08

No of Recommendations: 12 (MoT 1, RTA 3, STA 2, Transurban Group 2, Hillsbus 2, Hunter Valley 2)

Description of incident: During the period 19 – 27 June 2007 two pedestrians and a cyclist were killed and a fourth person was seriously injured in separate accidents after being struck by a bus.

- **M2 Motorway, West Pennant Hills:** On 19 June 2007, a male adult pedestrian sustained fatal injuries after being struck by a bus, operated by Hillsbus, on the M2 Hills Motorway at West Pennant Hills. The pedestrian had alighted from a car and was attempting to cross three lanes of traffic when hit by the bus in a 'Buses Only' lane.
- **Clarence Street, Sydney CBD:** On 19 June 2007, a female adult pedestrian sustained fatal injuries after being struck by a bus operated by the State Transit Authority (STA), while crossing Clarence Street near where it intersects Druiitt Street in the Sydney CBD.
- **Arthur Street, Rutherford:** On 20 June 2007, a 16 year old male cyclist was killed after he lost control of his bicycle and was run over by a bus, operated by Hunter Valley Buses, at the intersection of Hillview and Arthur Streets at Rutherford.
- **Druiitt Street, Sydney CBD:** On 27 June 2007, a female adult pedestrian sustained serious injuries after being struck by a bus, operated by the STA, while crossing Druiitt Street near its intersection with Kent Street in Sydney CBD.

OTSI found that in relation to each accident, the pedestrians and the cyclist placed themselves at risk and that the ensuing accidents could not, in any way, be attributed to the actions of the bus drivers.

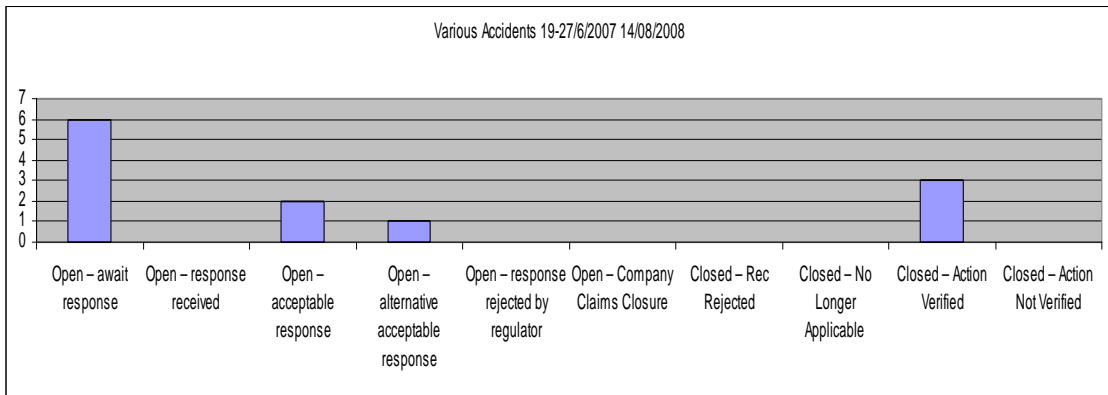
Focus of recs: The recommendations focused on the need for buses to be equipped with external CCTV, for operators to review the positioning of external mirrors, to revise pedestrian management in the CBD and at bus interchanges as well as the need

to improve barriers and signage at various locations.

Progress with safety outcomes:

Revised traffic arrangements in DrUITT Street have been made permanent. Follow-up correspondence has been sent to interested parties seeking advice on implementation of recommendations.

Current status



**DETAILS OF 'OPEN' BUS RECOMMENDATIONS –
Various Bus Accidents - 19-27 June 2007**

No:	Detail of recommendation:	Agency:	'Open' status:
1.	Require that all large buses operating on regular passenger and school service routes, and those operating on longer distance tours and charters throughout NSW, be equipped with forward-looking and rear facing digital CCTV.	MoT	Open – Alternative acceptable response
3.	In cooperation with the City of Sydney Council, conduct a trial of 'countdown' pedestrian signals at selected locations in the Sydney CBD to determine whether such equipment should be used more widely within the City.	RTA	Open – Awaiting response
4.	Assist the Transurban Group to improve barriers, signage and fencing in the vicinity of its bus interchanges on the M2, especially in the vicinity of the Pennant Hills Road off-ramp near the Oakes Road interchange at Carlingford, to further deter pedestrians from attempting to access or depart from the interchanges by other than the designated routes.	RTA	Open – Awaiting response
5.	Conditional upon confirmation that the recently revised traffic arrangements in Druitt Street are permanent, permanently reintroduce Eastbound running along Druitt Street.	RTA	Open – Awaiting response
6.	Re-issue its Safety Alert relating to pedestrian safety to all its drivers at the start of June each year.	STA	Open – Awaiting response
7.	In conjunction with the RTA, improve barriers, signage and fencing in the vicinity of its bus interchanges on the M2, especially in the vicinity of the Pennant Hills Road off-ramp near the Oakes Road interchange at Carlingford, to further deter pedestrians from attempting to access or depart from the interchanges by other than the designated routes.	Transurban Group	Open – Awaiting response
8.	Include a phone number on its signage at its interchanges to facilitate the public reporting of unsafe acts to Transurban.	Transurban Group	Open – Awaiting response
10.	Continue to emphasise to its employees the importance of reporting any instance of unsafe activity.	Hillsbus	Open – Acceptable response
11.	Review the positioning of all external mirrors throughout its fleet to ensure that the requirements of ADR 14/02 are met and to eliminate blind spots to the extent that it is possible. In the interim, bring to the attention of all of its drivers information concerning blind spots that are already known to exist, and the strategies that should be used to compensate for them.	Hunter Valley Buses	Open – Acceptable response

ANNEXURE “1”

5.0 A summary of completed Rail, Ferry and Bus Safety Investigation Reports is provided in the table below:

No.	Title of Report	Short title	Date Of Incident	Date Tabled by Minister	Area of Operations	No of Recs	Status
COMPLETED <u>RAIL</u> SAFETY INVESTIGATION REPORTS (OTSI and Coroners)							
1.	Pacific National train 4YN2 derailed due to misalignment	Rocky Ponds	7.11. 2002	7.7.04	DIRN	12	Closed
2.	Pacific National train G9821 derailed due to misalignment	Yass Junction	19.11.02	5.8.04	DIRN	23	Closed
3.	Signal passed at Danger resulting in derailment of Pacific National Service B9162	Unanderra	20.6.03	5.8.04	Metro (Illawarra)	7	Closed
4.	Road Motor Vehicle Struck By Countrylink Xplorer Service NP23a on Barabah Street Level Crossing (530.780 kms)	Baan Baa	4.5.04	23.5.05	CRN	17	Closed
5.	Coroner’s Inquiry into the above incident	Bann Baa (Coroners)	As above	N/A	As above	2	Closed
6.	Shunting Fatality – Port Botany Rail Yard	Port Botany	1.7.04	6.7.05	Yard	15	Closed
7.	Derailment of Pacific National Wheat Service 5424 – Old Burren	Old Burren	6.4.05	25.11.05	Grain Line	12	Closed
8.	Fatal Level crossing Collision – Grawlin Plains	Grawlin Plains	31.5.05	3.1.06	CRN	10	Closed

No.	Title of Report	Short title	Date Of Incident	Date Tabled by Minister	Area of Operations	No of Recs	Status
9.	Opposing Movement between coal trains – Bloomfield	Bloomfield	20.8.05	27.7.06	Balloon Loop	6	Closed
10.	Derailment of 4BM7 Lidcombe	Lidcombe	4.11.05	21/12/06	Metro	14	Closed
11.	Derailment of Pacific National Freight Services CB76 and 1WB3	Lapstone - Wauchope	1.3.05 and 7.3.05	31/01/07	DIRN, Metro (Blue Mtns)	5	Closed
COMPLETED RAIL SAFETY INVESTIGATION REPORTS (ATSB)							
12.	Pacific National train 4YN2 derailed due to misalignment	Beresfield	23.10.1997	1.1.1998	DIRN	6	Closed
13.	Near collision between stationary Coal Train LD 166 and an empty Endeavour Passenger Train D743	Sandgate	25.2.2004	21.9.2005	DIRN	11	Closed
14.	Derailment of coal train DS212 departing Bloomfield colliery loop Thornton, NSW	Thornton	11.10.2004	23.1.2006	Intersection between Balloon Loop and DIRN	6	Closed
15.	Derailment of XPT Passenger Train ST22 at Harden New South Wales	Harden	9.02.2006	28.6.2007	DIRN	1	Closed
16.	Derailment of Freight Train 3AB6 Yerong Creek, NSW	Yerong Creek	4.01.2006	29.01.2008	DIRN	3	Closed
17.	Level crossing collision – Back Creek NSW	Back Creek	10.03.2007	31.07.2008	DIRN	1	Closed

No.	Title of Report:	Short title:	Date of incident:	Date tabled:	No. of Recs	Status
COMPLETED <u>FERRY</u> SAFETY INVESTIGATION REPORTS						
* These reports were prepared by the Australian Transport Safety Bureau (ATSB) for OTSI at the request of the Chief Investigator.						
1.	Collision of Betty Cuthbert with Wharf No 5 Circular Quay	Circular Quay – Betty Cuthbert	29.09.05	03.03.06	10	Closed
2.	Collision of the Manly Ferry Collaroy Number 3 West Wharf, Circular Quay	Circular Quay – Manly Ferry	04.03.05	01.12.05	11	Closed
3.	Collision of the Louise Sauvage at the Rose Bay Wharf	Rose Bay – Louise Sauvage	12.05.04	08.07.05	13	Closed
4.	Lady Herron – Collision with Wharf	Circular Quay Lady Herron	20.02.04	* Published 16.02.06	6	Closed
5.	Collision between Betty Cuthbert and two moored vessels at Fern Bay	Cockatoo Island – Betty Cuthbert	11.01.06	31.07.06	6	Closed
6.	Betty Cuthbert – Collision with Wharf	Sydney Harbour – Betty Cuthbert	19.02.04	* Published 16.02.06	4	Closed
7.	Collaroy Collision with Wharf No 2 Circular Quay	Circular Quay – Collaroy	19.09.05	20.04.06	11	Closed
8.	Collision of the Manly Ferry Narrabeen Number 5 Wharf, Circular Quay	Circular Quay – Narrabeen	26.05.05	01.04.06	7	Closed

No.	Title of Report:	Short title:	Date of incident:	Date tabled:	No. of Recs	Status
COMPLETED <u>BUS</u> SAFETY INVESTIGATION REPORTS						
1.	Woodpark (air brake failure on bus resulting in a collision)	Woodpark	3.03.04	15.03.05	9	Closed
2.	Gosford (Sudden brake application resulted in multiple injuries)	Gosford	8.06.04	13.01.05	3	Closed
3.	JAMBEROO (Fatal bus accident – Jubo Travel)	Jamberoo	5.09.05	1.09.06	8	Closed
4.	STA Bus Collision – Spit Road, Mosman	Spit Road, Mosman	14.11.05	22.09.06	11	Closed