

cross-modal transport safety report (rail, bus and ferry)

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background

The following report has been prepared by ITSRR with input from the Ministry of Transport and NSW Maritime. Under the *Transport Administration Act 1988*, ITSRR is expected to report on safety performance across the three transport service modes of rail, bus and ferry. An industry overview of these transport services is in Part 2.1.

There are three transport safety regulators each responsible for one of the three transport service modes: ITSRR regulates rail passenger safety; the Ministry of Transport regulates bus passenger safety; and NSW Maritime regulates ferry passenger safety. Each of these regulators has additional responsibilities for safety regulation beyond those outlined in this Report e.g. ITSRR also regulates rail freight operators, the Ministry of Transport regulates taxis and NSW Maritime regulates commercial vehicles and vessels.

This is the first safety report on the three transport modes of rail, bus and ferry services. Its focus is public passenger safety, primarily reporting on safety incidents, such as fatalities and collisions. It is hoped that this report will expand over time to cover other safety issues such as a wider range of contributing factors to transport safety and regulator effectiveness. The three regulators are reviewing what is currently reported for the three transport modes of rail, bus and ferry services as well as what could be reported. This work is expected to result in improvements to the reporting framework for future reporting.

safety performance across transport modes

Introductory context for safety performance across modes

This report does not provide a comparison of safety across the three transport modes of rail bus and ferry services since the operating environments are quite different and therefore a direct comparison would not be valid. For example, buses operate on a road system shared with private vehicles and signals set to local conditions; whereas the railway network is a self-contained highly coordinated track and signaling system. Ferries operate in a marine environment with other boating vessels and minimal signaling infrastructure. Additionally, criteria for classification of incidents may also vary between modes, reflecting the needs of each sector.

Nevertheless, whilst safety outcomes between transport modes will vary, the same safety principles apply across modes. Consequently, there is much to be gained by the work of the three transport safety regulators through the sharing of safety information and learnings. This should lead to the identification of further safety reforms, enhanced reporting and regulatory frameworks and as a result, safety performance improvements for the rail, bus and ferry sectors.

This Report therefore aims to consolidate cross-modal safety information into one place to assist regulators, Government, operators and the public to better understand safety issues across transport modes.

The following information reflects the current state of knowledge of safety outcomes for each passenger transport sector – rail, bus and ferry. As indicated above, work is ongoing to improve the quality of reporting.

In accordance with the *Rail Safety Act 2002*, ITSRR has prepared its Annual Rail Industry Safety Report that outlines in more detail rail safety outcomes, performance indicators and issues. A summary of the rail safety outcomes is outlined here. Clarifications on how the data is reported and its criteria are outlined in the Annual Rail Industry Safety Report at Part 2.2.

summary of rail safety trends

consequence of rail incidents

Fatalities

For the third successive year there were no multiple fatality train incidents on the NSW rail network. Thirty six fatalities were reported in separate incidents during 2005-06. The majority (31) were trespasser and suicide fatalities, beyond the control of the rail network. The 2005-06 result reflects a longer-term decreasing trend over the last decade. The graphs on page 126 of the Annual Rail Safety Report reflect the number of passenger, public, employee and trespasser fatalities on the network over a ten-year period.

Serious injuries

During 2005-06, 403 serious injuries were sustained by rail passengers and 25 by rail employees. Most passenger injuries (90%) were the result of falls on railway property. The two highest causes for employee injuries were falls and assaults. Approximately 10% of all passenger and employee serious injuries in 2005-06 were the result of assault. The graphs on page 129 of the Annual Rail Safety Report reflect the number of serious injuries sustained by public, passenger, employee and trespassers on the NSW rail network over a ten year period.

Types of rail incidents

Collisions

The number of train to person collisions in 2005-06 (26) was the lowest recorded over the last 10 years.¹ Ten of these incidents resulted in a fatality. Six of the ten fatalities arose from injuries to trespassers. The graphs on page 131 outlined the number of collisions on the NSW rail network over a ten year period using the following categories – train-to-train collisions, train to person collisions, rolling stock collisions and train to infrastructure collisions.

1. Under the National Rail Incident Classification Scheme the category Train to Person Collision excludes incidents classified as "Suspected/Attempted Suicide" and "incidents at level crossings"

The number of collisions at level crossings is at, or close to, the lowest level observed over the last 10 years. There were ten collisions between train and road vehicles in 2005-06. This is lower than for 2004-05 (11) and consistent with a longer term decrease in these types of incidents. The graphs on page 135 detail the ten-year trends in level crossing incidents identifying the types of incidents as well as reflecting whether the incident involved a collision with a person or a vehicle or was a result of an equipment defect.

Derailments

Derailments have the potential to lead to serious incidents and injuries. During 2005-06, 43 derailments were reported to ITSRR, down from 65 in 2004-05 but consistent with the longer term count for these types of incidents. No injuries were reported for any of these incidents. Ten-year trend data is reported on page 132 of the Annual Rail Safety Report.

factors that can contribute to incidents

As noted above, there is a range of contributing factors to rail safety incidents, such as the state of infrastructure and human behaviours. For this Cross-Modal Report, those factors relating to derailments, track and rolling stock condition are included. Future reports are expected to expand on these categories.

Track irregularities

Problems with track condition and rolling stock (any vehicle using the track, e.g. railway carriages etc) operation can be an important indicator of rail safety given the potential to cause more serious incidents, for example a broken rail causing a train derailment. The following summarises issues explored in more detail alongside trend data on pages 139-142 in the Rail Industry Safety Report:

- The largest number of track irregularities (233) in 2005-06 was associated with buckled track and consistent with the historical record.
- There were 147 broken rails reported in 2005-06, consistent with a decrease over the past four years since a peak in 2001-02.
- The largest number of rolling stock irregularities in 2005-06 was associated with brake faults (480). Most incidents were associated with passenger trains (286).

compliance enforcement activities

Details on ITSRR's compliance enforcement activities are outlined in Part 1.2 of this Annual Report (pages 38-40).

bus safety outcomes

context for reporting

The following information has been provided by the Ministry of Transport.

From mid-2004, a new bus incident reporting regime was implemented. Given this, data included in this report is that reported from July 2004.

From 14th July 2004 all NSW bus operators accredited by the Ministry of Transport were required to notify the Office of Transport Safety Investigations (OTSI) immediately if any vehicle is involved in an accident or incident. OTSI reviews each incident report and determines if further investigative action is required. This determination is made based on a range of criteria including the severity of the incident. For information on investigation reports undertaken by OTSI, see OTSI's website www.otsi.nsw.gov.au.

OTSI passes all information received on incidents to the Ministry of Transport. The Ministry of Transport records this information and analyses it for further action as appropriate. Such action can include random and targeted vehicle inspections, as well as full audits on bus companies to ensure that the operator is complying with the requirements of their accreditation. In this regard, the data on incidents involving buses in NSW is one of the key lead indicators used by the Ministry of Transport to fulfil its obligations under the *Passenger Transport Act 1990*.

consequences of bus incidents

Fatalities

There were six reported fatalities involving the bus industry in the period 2005-06. This included fatalities that occurred in vehicles other than the bus.

Injuries

In 2005-06, there were 212 injuries recorded, down from 346 in 2004-05.

The cause of injuries related primarily to slipping whilst boarding or alighting from the bus and injuries sustained whilst on board a bus involved in an incident/accident.

Incidents

In 2005-06 there were 550 incidents reported from OTSI to the Ministry of Transport, down from the 876 reported incidents in 2004-05. The definition of reportable incidents was narrowed by OTSI which account in part for the decrease.

The contributing factors to these incidents include collision with other vehicles, stationary objects including vehicles or infrastructure, and pedestrians.

compliance enforcement activities

In 2005-06, the Ministry of Transport conducted 350 bus operator accreditation audits and 1800 random inspections. As a result of these audits and inspections, 26 drivers and 44 operators had their authorisation to operate cancelled. Sixty two drivers and seven operators had their authorisation suspended pending further review. Some of these led to cancellation of authorisation, others were permitted to operate based on rectification of the issue. The Ministry issued 64 infringement notices to bus drivers and 74 to operators for breaches of required standards.

When a bus operator's accreditation is cancelled and the service is required to continue (such as for a regular route or dedicated school bus service), the Ministry of Transport arranges for another operator to provide the service.

Further detail on compliance enforcement activities is outlined in the Ministry of Transport's Annual Report 2005-06.

context for reporting

The following report is based on information provided by NSW Maritime.

The indicators below on ferry safety performance were established in 2005-06 by NSW Maritime. Prior to 2005-06, indicators relating to ferries were aggregated into reporting on commercial vessels.

In 2005-06 the focus on ferry safety by both operators and NSW Maritime intensified with increased awareness of reporting requirements. An ageing Sydney Ferries Corporation fleet and issues with maintenance and vessel operations were contributing factors to overall safety performance.

consequences of ferry incidents

Fatalities

In 2005-06 there were no reported fatalities on ferries.

Injuries

In 2005-06 there were no serious injuries on ferries however ten minor injuries were reported.

Incidents

In 2005-06 there were 39 reported ferry incidents as defined in agreement with the Office of Transport Safety Investigation and the Sydney Ferries Corporation (SFC). This number is less than SFC's total reported incidents because SFC includes incidents not traditionally categorised as marine incidents (such as passenger medical events, work place and health and safety issues).

comment on trends

While the number of incidents remained steady, ferry fatalities and serious injuries continued to be zero. The number of minor injuries (10) was also stable compared to past years. The year proceeded again without any suspensions to Certificates of Competency. However, one Survey Certificate was suspended due to the vessel being classed as unsafe.

The discipline of the new Safety Management System, along with crew training in resource management and random alcohol and drug testing of vessel masters, should soon see a decrease in these numbers.

With NSW Maritime's increased responsibilities for wharf safety and ownership, new performance indicators have been established relating to wharf safety compliance and financial investment. Investment in wharves in 2005-06 was just under \$5 million, and a capital budget of \$12 million and maintenance budget of \$10 million has been provided over the next four years. In addition, it is expected that another \$12 million will be spent on the upgrade of Manly Wharf in 2006-07.

Because of this commitment, focus and financial investment, it is envisaged that there should be a positive trend in wharf safety results over the next 12 – 18 months.

compliance enforcement activities

The following indicators were established in 2005-06 by NSW Maritime for reporting on compliance enforcement activities for ferry safety. Prior to 2005-06, indicators relating to ferries was aggregated into reporting on vessels.

No. of Survey Certificates suspended:	1
No. of Certificates of Competency suspended:	0
Safety of wharves –	
. % of wharves inspected with significant defects:	22%
. % of wharves inspected with minor defects:	54%
. % of wharves inspected which are compliant:	24%
No. of Wharf Improvement Notices issued:	2
No. of Prohibition Notices issued:	1
Total capital and maintenance expenditure by NSW Maritime on commuter ferry and charter vessel wharves	\$4.91M

Further detail on compliance enforcement activities is outlined in NSW Maritime's Annual Report 2005-06.

transport safety reform process

A major function of the Transport Regulators Executive Committee (TREC) is to share information about safety reforms impacting on NSW rail, bus and ferry services. This includes respective State and national reforms that are occurring in each transport mode.

As a result of these discussions, NSW transport safety regulators can:

- appreciate and consider the impact of national reforms on public transport safety regulation in NSW and how state reforms can feed into national reform processes.

For example, the current national rail safety legislative reform process will result in amendments to NSW rail safety legislation which may have further relevance to other transport modes (more details on rail safety reforms are provided in Part I of this report);

- identify areas where regulators and/or operators can apply improvements to safety.

For example, during 2005-06, the TREC reviewed drug and alcohol regulations and guidelines for rail, bus and ferry sectors from a consistency perspective across transport modes. It also conducted a co-ordinated review of penalties associated with the mis-use or tampering of emergency release equipment (to be completed in 2006-07);

- ensure knowledge of current developments in safety issues can be shared, further explored and applied where relevant, including technological improvements and developments in management practices on transport safety overseas;
- share information on how operators are implementing relevant reforms in their respective sectors;

For example, each agency is implementing a new accreditation scheme for operators that has a focus on safety requirements; and

- gain a collective understanding of current and future government priorities for each transport mode and the impact on safety.

For more information on TREC and its activities, see ITSRR's corporate report on page 45.

external investigation reports

Another focus for TREC's information sharing role is monitoring the implementation of external investigation reports by regulators and for the relevant transport sector.

Major accidents in the rail, bus and ferry sectors are investigated by external review bodies such as the NSW Office of Transport Safety Investigations and, for specific accidents with major fatalities such as the Waterfall rail accident in January 2003, by commissioned inquiries.

A key external report for the rail sector and ITSRR has been the "Special Commission of Inquiry into the Waterfall Rail Accident" (Waterfall Inquiry Report). This report is referred to in this report as the "Waterfall Inquiry". The report made 177 wide-ranging recommended actions (comprising 127 recommendations with 50 sub-actions) on rail safety.

Many of these recommendations were specific to rail safety; however, given the wide-ranging scope of the recommendations, many are also valuable checking points for each transport mode, for example, medical standards and communication operability.

Through the TREC forum, each transport safety regulator has reviewed the Waterfall Inquiry recommendations that may have relevance to their sector; noting that in many cases the issues referred to were already being implemented by the regulator or within its relevant reform processes. Each agency, through TREC, shares the details of specific modal reforms. Given ITSRR's carriage to verify and report on the implementation of the Waterfall Inquiry Report, details for the rail sector are included in its corporate report (see pages 35-37).

The Office of Transport Safety Investigations (OTSI) is an independent authority that investigates major transport accidents across rail, bus and ferry modes. (It should be noted that each transport safety regulator also conducts investigations that relate to compliance with safety regulation.) OTSI prepares public reports that outline recommendations for improvement by the relevant transport sector. TREC also discuss the implementation of these recommendations at its regular meetings.

conclusion

This report provides a basis for reporting across transport modes that will be further developed in 2006-07.

As noted in the Introduction, whilst it is not a platform to compare performance across modes, the report does provide high level information on safety performance and the implementation of safety reforms across modes.

In 2006-07 implementation of safety reforms will continue in all NSW public transport modes to ensure continuing improvement to safety.