

FATAL AND SEVERE RISK PROGRAM

LEADER SESSION

RAIL TRAFFIC COLLISION

ARTC

**STOP
& THINK**

Only do the task if it can be done safely



**OUR
COMMITMENT**

**LIFE
SAVING
BEHAVIOUR:**

**I WILL ALWAYS ENSURE
THE CORRECT ROUTE IS
PLANNED AND PRIORITISED
CLEAR OF CONFLICTION
USING CLEAR AND CONCISE
COMMUNICATION**



INTRODUCTION

Working in the rail corridor presents significant risks of Rail Traffic Collisions between:

- trains and rolling stock
- trains to trains
- trains to rail vehicles
- rail vehicles to rail vehicles.

This booklet provides clear information about the risks and controls associated with rail traffic collisions.

It is part of a series of booklets about the fatal and severe risks of working on the railway.

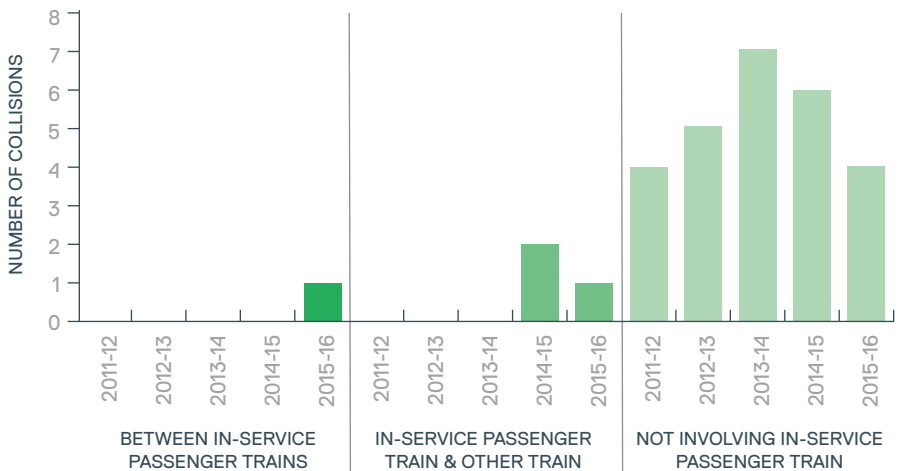


KEY FACTS AND STATISTICS

Rail traffic collisions are one of the more potentially severe rail safety events.

The likelihood and consequences of collisions vary according to factors such as the systems and processes used to manage train movement and the types of trains involved.

MAIN LINE COLLISIONS JULY 2011 TO JUNE 2016



* RAIL SAFETY REPORT 2015-2016, OFFICE OF THE NATIONAL RAIL SAFETY REGULATOR



There were six (6) main line collisions involving rolling stock in the 2015–2016 financial year, on railways under the Rail Safety National Law (RSNL).

* RAIL SAFETY REPORT 2015-2016, OFFICE OF THE NATIONAL RAIL SAFETY REGULATOR

COLLISIONS INVOLVING IN-SERVICE PASSENGER TRAINS JULY 2015 TO JUNE 2016

Railway operations within SA, NSW, TAS, NT, VIC, ACT and WA from 2 November 2015 regulated under the RSNL.


| DATE | DESCRIPTION | LOCATION |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 15/05/2016 | An unmanned tram rolled away for approximately 300 metres from a museum and struck another tram that was in service on a heritage tramway. No injuries were reported. | Loftus, NSW |
| 16/06/2016 | The mirrors of passing passenger trains struck. One train was stationary, the other moving out of the station. | Williamstown Station, VIC |

COLLISIONS NOT INVOLVING IN-SERVICE PASSENGER TRAINS JULY 2015 TO JUNE 2016

Railway operations within SA, NSW, TAS, NT, VIC, ACT and WA from 2 November 2015 regulated under the RSNL.

| DATE | DESCRIPTION | LOCATION |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| 14/07/2015 | A ballast regulator track maintenance vehicle waiting at a signal was struck in the rear by a tamper track maintenance vehicle. The tamper was travelling at 15 km/h at time of collision. Minor damage to the vehicles was reported. | Greta, NSW |
| 13/09/2015 | A freight train stopped suddenly due to a signal change on approach resulting in assisting banker engines colliding with the rear of the train. | Ardglen, NSW |
| 18/11/2015 | A locomotive travelling from the mainline into a siding struck a wagon standing on the main line, resulting in minor damage to the locomotive. | Combara, NSW |
| 10/02/2016 | A Road Rail Vehicle ran into the rear of a freight train. No injuries were reported. | Grass Valley, Midland-Kalgoorlie Line, WA |

CASE STUDY SAFEWORKING IRREGULARITY

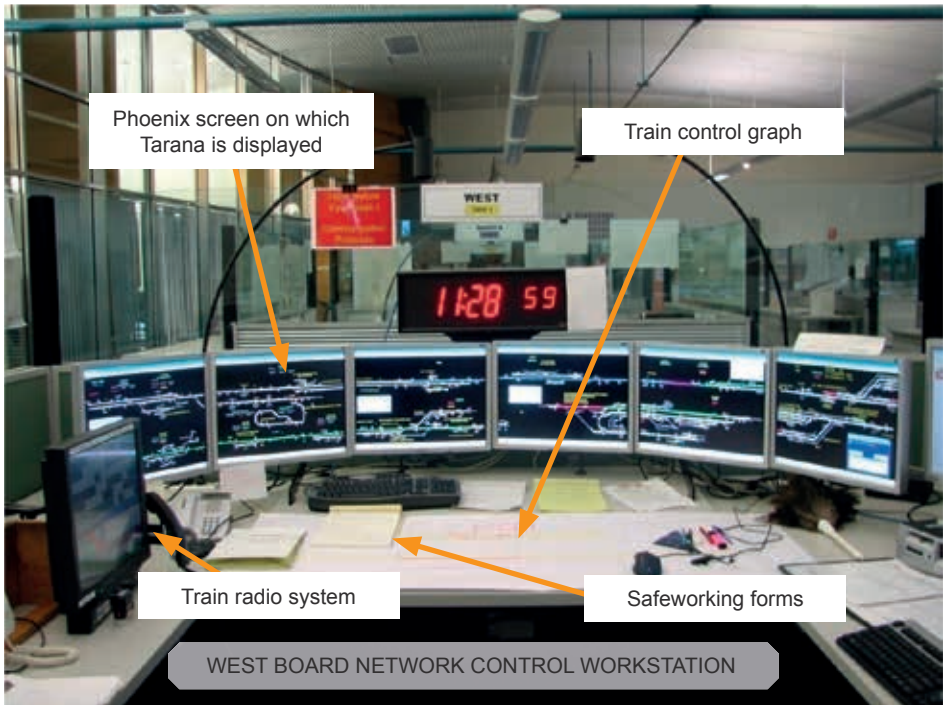


INDIAN PACIFIC (4SA8) AND XPT (WT28)

At about 1858 on 14 January 2009, a safeworking irregularity occurred involving two passenger trains, 4SA8, the Indian Pacific, and WT28, an XPT, at Tarana in NSW. Both trains had been authorised to occupy the single line within the Tarana interlocked area at the same time. Fortunately, each driver saw the opposing movement and brought their trains to a stand about 524 m apart. After a short wait, the trains were authorised to continue their respective journeys.

The investigation determined that the West Board network controller located at Broadmeadow train control centre, did not adequately plan the intended train movements through the sections Wallerawang to Tarana and Bathurst to Tarana or determine a specific limit of authority on the Special Proceed Authority (SPA) number 37 issued to the driver of the XPT, WT28. The West Board network controller also issued SPA number 38 to the driver of train 4SA8, even though it overlapped the authority of SPA number 37.

The investigation report identified three safety issues relating to the risks of using a manual train management system, inadequate auditing of safeworking systems, and ambiguous authority limits.



CASE STUDY COLLISION

LESSONS

1

Ensure Proceed Authorities are planned and prioritised.

2

Ensure relevant procedures are adhered to.

3

Provide clear and concise communications to ensure all parties understand (verbal and written).

4

Always focus on the task and avoid distractions that divert your attention.

Reference:
ATSB Transport Safety Report
Rail Occurrence Investigation
RO-2009-002
Final – 11 December 2009



CLEAR AND CONCISE COMMUNICATION

HOW GOOD, CLEAR AND CONCISE COMMUNICATION IS DONE

The rail industry relies on constant, up-to-date and effective communication to ensure the safety of our workers, public and infrastructure.

- You understand and know the specific information you need to communicate.
- Conversation needs to be clear, brief, to the point and unambiguous.
- Ensure correct communication procedures are followed.
- The receiver must confirm the content of a message by repeating the message back to the sender.
- You listen and ask questions if you don't understand.
- Focus on one conversation at any time.
- After stating your name and location ensure all verbal communications are conducted in a professional manner.
- Ensure confirmation of communication received for all authorities, instructions not to proceed, work on track authority or method, train running information, special working or a condition affecting the network.

STOP & THINK

OUR LAST LINE OF DEFENCE WHEN IT COMES TO MANAGING OUR RISKS

HAZARDOUS SITUATIONS



NETWORK CONTROLLER DISTRACTIONS



COMMUNICATION – TRACK MACHINERY COLLISION



DRIVING THROUGH STOP



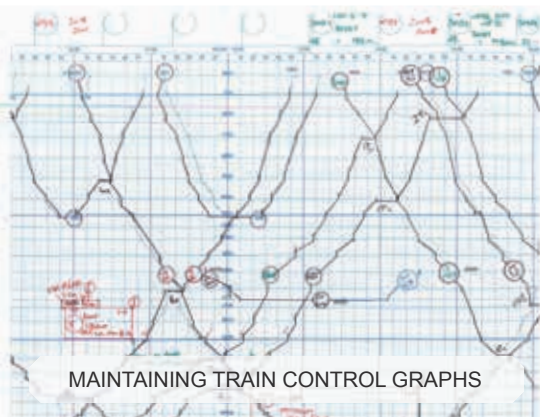
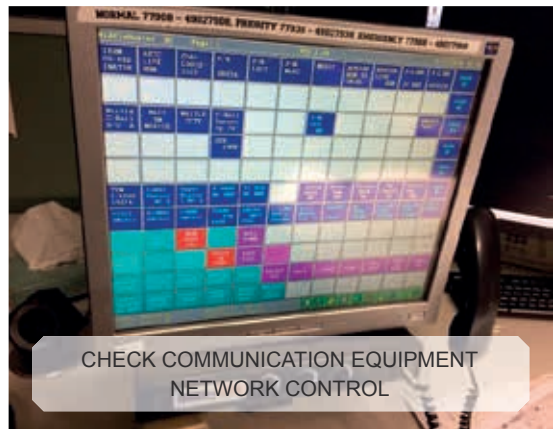
ALERTS NOT ACTIONED IN A TIMELY MANNER



STOP & THINK

OUR LAST LINE OF DEFENCE WHEN IT COMES TO MANAGING OUR RISKS

EFFECTIVE CONTROLS



KEY ACTIONS

WORK METHOD AND PROCEDURES

Ensure **relevant procedures** are **adhered to**.

Always ensure rail traffic is **identified in the right location**.

Right train. Right location.

Always ensure train **movements are planned safely**.

Always ensure **Proceed Authorities** are **planned and prioritised**.

Always **respond** to equipment **failures** and warning **alarms** and **initiate timely response** to rectify.

Always **communicate briefly** and **clearly**.

Always have the receiver **repeat your message to confirm** communications, single point lessons, safe notices, TPC waivers and any network notices.

Ensure relevant **Safe Work** breakdowns are adhered to.

WELLNESS

Ensure when undertaking your work, you are fit and healthy, not fatigued and drug and alcohol free.

TRAINING

- Correct use of communication equipment.
- Current competency and **RIW card**.
- Be licenced and competent to operate the vehicle.
- Communication procedures and operational protocols applied.

PLANT AND EQUIPMENT

- Communication equipment **checked and tested**.
- **Rail track signals** (commonly referred to as Detonators and Audible Track Warning Signals (ATWS)) are **stored correctly**.
- Appropriate **protection equipment checked** and available. (Flags and railway track signals.)
- Complete a prestart inspection on the vehicle.



REFERENCE DOCUMENTS

AVAILABLE ARTC PROCEDURES AND PROCESSES:

- WHS-WI-001 Work in the Rail Corridor General Requirements Work Method Statement
- WHS-WI-315 Personal Protective Equipment (Note: Specific requirements for certain corridors are required)
- RLS-PR-001 Management of Railway Track Signals
- RLS-PR-003 Protocol for Entering the ARTC Rail Corridor
- RLS-FM-005 Pre-Work Brief Template
- RLS-FM-006 Worksite Protection Plan
- RLS-FM-009 Individual Pre-Work Assessment
- NO-WI-02-010 Worksite Protection Plan
- SA-WI-02-010 Pre-Work Brief
- ANGE 204 Network Communication
- ANGE 200 Walking in the Danger Zone
- ANWT 302 Local Possession Authority
- ANWT 304 Track Occupancy Authority
- ANWT 306 Track Work Authority
- ANWT 308 Controlled Signal Blocking
- ANWT 310 Lookout Working
- Communications Equipment ANGE 230
- Responsibilities of Train Crews and Track Vehicle Crews ANGE 232
- Responsibilities of Signallers ANGE 234
- Responsibilities of Train Controllers ANGE 236
- RSK-WI-006 Stop & Think Work Instruction
- Spoken and Written Communication ANPR 721
- Consultation WHS-WI-41

REFERENCE DOCUMENTS

AUSTRALIAN STANDARDS, CODES OF PRACTICE AND INDUSTRY REQUIREMENTS:

- How to manage work health and safety risk code of practice December 2011
 - Managing the risks of plant in the workplace code of practice July 2014
 - Construction work code of practice July 2014
 - Work health and safety consultation, cooperation and coordination code of practice
 - Rail Industry Worker
- CoP area
- Code of Practice for the Defined Interstate Rail Network Volume 3 Operations and Safeworking Part 1: Rules (CoP)
 - ARTC Addendum to the Code of Practice for the Defined Interstate Rail Network

TA20 area

- Section 1 General Rules
- Section 7 Audible Track Warning Signals
- Section 15 Infrastructure Works
- Section 30 Operating Procedures Infrastructure



NOTES



FURTHER INFORMATION

If you require any further information, discuss with your supervisor or contact the ARTC safety co-ordinator for your location.

Information sources:

- Australian Transport Safety Bureau – Rail Safety Investigations and Reports
- Rail Safety Report 2015-2016, Office of the National Rail Safety Regulator
- ATSB Transport Safety Report, Rail Occurrence Investigation, RO-2009-002 Final – 11 December 2009
- Rail Industry Worker – railindustryworker.com.au

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