

FATAL AND SEVERE RISK PROGRAM

LEADER SESSION

STRUCK BY RAIL TRAFFIC

ARTC

**STOP
& THINK**

Only do the task if it can be done safely



STRUCK BY RAIL TRAFFIC

OUR COMMITMENT

LIFE SAVING BEHAVIOUR:

**I WILL ALWAYS USE OR
AUTHORISE THE SAFEST
WORK ON TRACK AUTHORITY
TO SUIT THE TASK BEING
PERFORMED TO PROTECT
THE WORK GROUP USING
CLEAR AND CONCISE
COMMUNICATION**

NO HARM – LINE IN THE SAND



INTRODUCTION

Working in the rail corridor presents significant risks to work teams which needs to be controlled using safe work on track authorities or methods.

This booklet provides clear information about the risks and controls required to work in the rail corridor.

It is part of a series of booklets about the fatal and severe risks present when working for ARTC.



PASSING TRAIN



WORKERS ON TRACK

KEY FACTS AND STATISTICS

Track work competency and communication was identified as a national priority for the Office of the National Rail Safety Regulator (ONRSR).

During 2014-2015, there were over 400 occurrence reports relating to track work safeworking breaches notified to ONRSR with rail safety worker competence and safety critical communication both recurring themes.

COMMON SAFETY FACTORS ASSOCIATED WITH TRACK WORK SAFE WORKING INCIDENTS

- Protection types being insufficient or incorrect
- Protection location being incorrectly positioned (worksite being incorrectly defined)
- Protection being incorrectly removed
- Worksite location being incorrectly defined

* RAIL SAFETY REPORT 2014-2015, OFFICE OF THE NATIONAL RAIL SAFETY REGULATOR



There were 84 fatalities in the 2015-2016 financial year on railways regulated under the Rail Safety National Law (RSNL).

84  **FATALITIES**

- 72** Suspected suicides
- 6** Trespassers
- 2** Passenger falls
- 1** Rail industry worker
- 3** Members of public

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

RAIL SAFETY INVESTIGATIONS AND REPORTS



- RO-2017-003 Collision between track worker and passenger train at Petrie, Queensland on 29 May 2017
- RO-2015-019 Track worker struck by train near Laverton Station, Victoria on 02 October 2015
- RO-2016-006 Track worker fatality at Clyde, New South Wales on 18 June 2016
- RO-2014-005 Fatality at Heyington Railway Station at Toorak, Victoria on 22 February 2014
- RO-2015-002 Collision between track worker and passenger train at Guildford, Western Australia on 10 February 2015

* AUSTRALIAN TRANSPORT SAFETY BUREAU (ATSB)
PUBLICATION/SAFETY-INVESTIGATION REPORTS
JUNE 2010 – MAY 2017

CASE STUDY RAIL CORRIDOR



TRACK WORKER STRUCK

On the morning of Friday 2 October 2015, track workers were assembling track-side in Laverton, Victoria. They planned to undertake dogspike removal works in preparation for re-sleepering of a section of track on the Altona Loop Line.

At around 0910, the supervisor of the works commenced marking the track to identify those dogspikes to be removed. He was working in a track crossover about 400m on the Melbourne side of Laverton Railway Station. A lookout had been stationed for his protection.

At about 0916, a Metro Trains Melbourne suburban commuter train arrived at Laverton station, bound for Flinders Street Station in central Melbourne. After its scheduled stop, the train departed Laverton and approached the worksite. The lookout observed the train, warned workers of its approach and signalled to the driver that the track was clear.



However, as the train took the crossover, the supervisor was foul of the track, and was struck by the train that was travelling at about 59 km/h. The supervisor suffered serious injuries.

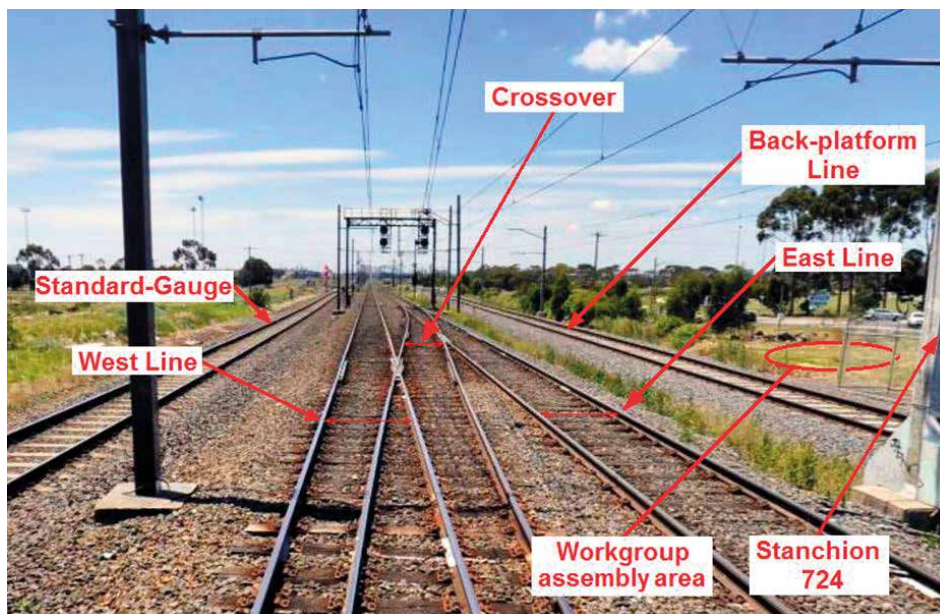
The ATSB found that the track was accessed by the work group without an assessment of all the risks and without the establishment of appropriate risk controls. This meant that not all in the group had a clear understanding of train movements that morning, nor was there a defined position of safety known to all the workers.

It was also concluded that on the train's approach, the train was given the all clear to proceed prior to the supervisor moving to a position of safety, clear of all tracks.

The supervisor was foul of the track when the train reached his location. It is probable that he expected the train to continue along an adjacent track, and not take the crossover towards his location.

The ATSB also found that there were several other breaches of safeworking procedures that, while not directly contributing to this accident, increased the risks associated with the workgroup's activities.

Reference:
ATSB Transport Safety Report
Rail Occurrence Investigation
RO-2015-019
Final – 24 August 2016



CASE STUDY RAIL CORRIDOR LESSONS

1

Assess the risks relevant to the task and location.

2

Use the safest work on track authority or method.

3

Sighting distance calculations must satisfy the Minimum Warning Time (MWT).

4

Consult and clearly communicate the Worksite Protection Plan with the work group.

5

Consult and clearly communicate the Pre Work Brief with the work group.

6

Communicate clearly with Network Control. Understand train movements.



TRACK AUTHORITIES AND METHODS

WHAT IS 'WORK ON TRACK AUTHORITY OR METHOD'?

A work on track authority is an authority granted by network control in order for a workgroup to perform work on track.

ARTC works across 3 different rule books, across 5 states.

- Network Rules and Procedures – NSW
- Code of Practice and ARTC Addendum – SA/WA and Western Victoria (From Dimboola Loop (exclusive) to Kalgoorlie, and Broken Hill (exclusive))
- TA20 Rule Book – VIC (inclusive of Dimboola Loop)

Each has slight variations in terminology when referring to the rules for gaining access for working on track.

ARTC Track Occupancy Authority (TOA)

1 TOA Number []

2 Protection Officer details []

3 Request to occupy the [] track between [] and []

4 Type of work to be done []

5 Track Vehicle Journey From [] To []

6 Fixed Worksite From [] To []

7 Another Track Occupancy Authority / Track Work Authority is current for this portion of line. []

8 Protection Officers have agreed arrangements. []

9 Agreed arrangements details []

10 There are no Trains in the TOA limits. []

11 Train Number [] is still within the limits of the TOA proceeding towards [] and the Protection Officer has observed the identification number of the lead unit of the train [] which has passed beyond the starting point of the track vehicle journey or fixed worksite boundary. If following the proposed stop

NOTE: The Network Control Officer must confirm the correct identification number of the lead unit of the train.

12 A track vehicle journey is to commence within the yard limits at []

Train Number [] is still within the limits of the TOA proceeding towards []

This train departed the starting point of the track vehicle movement at [] and is prepared to stop.

13 Authority Duration Commencing at [] Date [] / [] / [] To be fulfilled by [] Date [] / [] / []

14 Security code (Train Order territory only) []

15 Trains standing on [] at []

16 Staffs, or Half Pilot Staffs – Section details []

17 Blocking facilities have been applied at []

18 The details of this form have been read back by the Protection Officer []

19 Authorised by [] at []

20 Authorised by [] at []

Use this section only if the time of a TOA is extended

21 Extension of time until [] Date [] / [] / []

22 Authorised by [] at []

Also: Releasing Protection Officers must sign and date the back of this form to acknowledge handover

Fulfilling the TOA – Protection Officer must tell the Network Control Officer:

23 The correct TOA number [] Yes [] No []

24 All worksites have been cleared of workgroups, track vehicles and equipment [] Yes [] No []

25 Worksite protection has been removed (including detonators, flags, point clips) [] Yes [] No []

26 The track is certified as available for use [] Yes [] No []

27 Details of any operating restrictions to apply after fullment [] Yes [] No []

28 Staffs, or Half Pilot Staffs, have been replaced (where used) [] Yes [] No []

29 The correct security code (Train Order territory only) [] Yes [] No []

When all of the conditions have been met, fulfil the TOA form.

RECEIVED
VALIDATION
AUTHORISATION
EXTENSION
FULFILLMENT

FORM 002-6 This document is uncontrolled when printed V 2.0 Effective from 11 October 2015

'LOCAL POSSESSION AUTHORITIES AND TRACK
OCCUPANCY AUTHORITIES ARE THE PREFERRED METHOD
OF WORKING ON TRACK'

TRACK AUTHORITIES AND METHODS

NSW – has 5 methods for working on track:

3 are authorities:

- Local Possession Authority
- Track Work Authority
- Track Occupancy Authority.

2 are methods:

- Controlled Signal Blocking
- Lookout Working.

Shunting yards also have their own requirements, with agreed arrangements.

Code of Practice – SA/WA/VIC – 4 strategies for managing work on track:

- Local Possession
- Track Occupancy

- Track Work Authority
- Train Running Information

TA20 – VIC – has 7 means for working on track:

- Absolute Occupation
- Track Warrant
- Track Force Protection – Country Regions
- Booking Out Procedures for Track
- Hi–Rail Permission
- Blocking to Repair or Maintain Points and Signals
- Lookout.

**‘ALWAYS USE THE SAFEST MEANS FOR WORKING
ON TRACK TO SUIT THE TASK’**



STOP & THINK

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

HOW ARE 'WORK ON TRACK AUTHORITIES IMPLEMENTED'?

The safest means for working on track is to suit the task identified by the Competent Rail Safety Worker.

That is:

- Protection Officer in NSW and QLD
- Track Force Protection Coordinator in VIC
- Track Worker in Charge of Protection in SA and WA
- Competent Rail Safety Worker to speak to the NCO and obtain rail traffic movement information. That is, they must advise the Network Controller of the nature of their work, seek train running information relative to the location where they are and seek the Network Controller's permission prior to taking control of safeworking, signalling or communication infrastructure.
- All workers are consulted and briefed on the worksite protection arrangements and any changes identified and incorporated.
- Workers sign on the pre-work briefing form.

'ACTIVELY PARTICIPATE IN THE WORKSITE PROTECTION PLAN BRIEFING'

STOP & THINK

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

WHAT NEEDS TO BE COMMUNICATED TO NETWORK CONTROL?

Be clear and concise with the information:

- Know the specific information you need to communicate to Network Control.
- Conversation needs to be brief, to the point and unambiguous.
- Check that the Network Controller is the correct controller to communicate with.
- Have the correct name of track, especially if a multi track.
- The KM of the track, KM of the worksite, Point numbers, Signal Numbers.
- Details of other structures, stations, junctions.
- The reason why you are requesting a work on track authority or method.
- Type of authority or method required.
- The Network Controller must check and confirm all of the above with the CRSW prior to authorising any work on track authority or method.





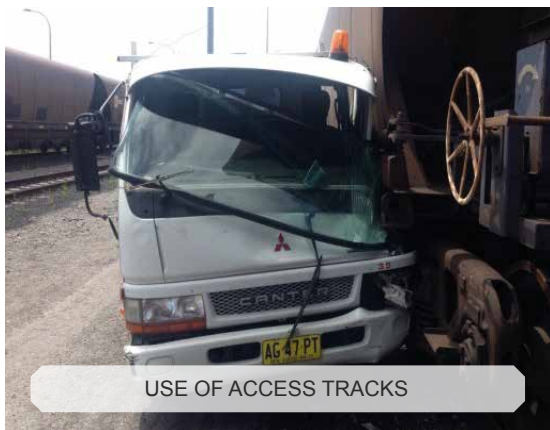
STOP & THINK

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

HAZARDOUS SITUATIONS



MOBILE PHONE USE ON TRACK



USE OF ACCESS TRACKS



WORKING IN THE CORRIDOR WITHOUT CORRECT
WORK ON TRACK AUTHORITY OR METHOD



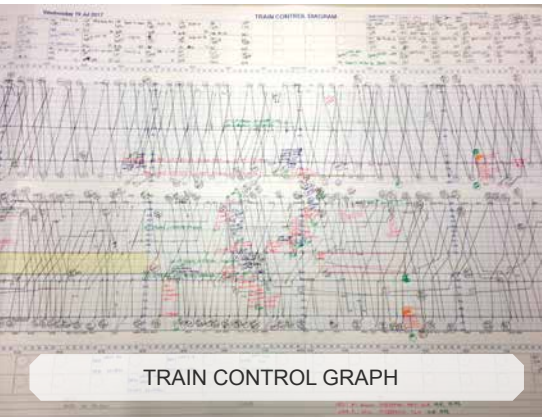
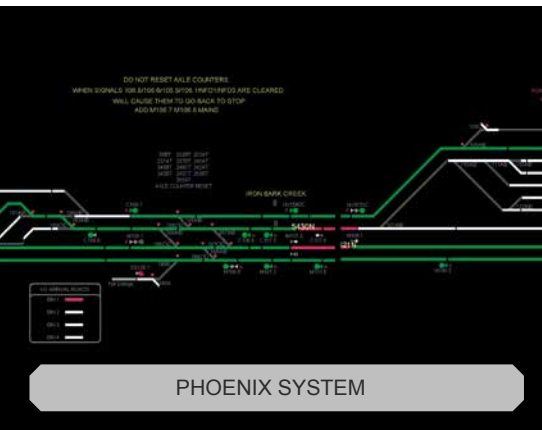
TRACK WORK NEAR LEVEL CROSSINGS

STRUCK BY RAIL TRAFFIC

STOP & THINK

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

EFFECTIVE CONTROLS



NO HARM – LINE IN THE SAND



KEY ACTIONS

WORK METHOD AND PROCEDURES

Work Method Statement – **Work in the Rail Corridor.**

Ensure **clear and concise communications** are maintained.

When using plant and machinery consider the **risk to foul the adjacent line.**

Ensure you **actively participate** in the **pre-work brief.**

Always ensure the **worksite kilometres are provided for all work on track authorities and is clear and understood.**

Where necessary **appropriate blocking facilities and protection equipment** to protect the workgroup are in place.

Wear **correct PPE.**

WELLNESS

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

TRAINING

Current competency and **RIW card.**

Competent Rail Safety Worker has the **right qualification and is familiar with the area of work.**

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.)

ARTC		PRE-WORK BRIEF		Rev 093051	
WORK DETAILS					
Project Name		Contract No.		Plant and Equipment	
Type of Work		Location		Plant Name & Number	
Responsible Person		Time of Working		Emergency Response Point	
Location of Work		Location of Working		Emergency Meeting Point, Name or Address (Station/Signalling)	
How the Supervisor has Safety Briefed the crew team and the project manager or the members of the crew					
How the Supervisor has Safety Briefed the crew team and the project manager or the members of the crew					
STOP AND THINK - WHAT MAY GO WRONG? WHAT CAN BE DONE TO PREVENT IT? WHAT CAN BE DONE TO MITIGATE IT?					
1. What is the main purpose of the work?					
2. What are the risks to the crew and the public?					
3. What are the risks to the plant and equipment?					
4. What are the risks to the environment?					
5. What are the risks to the public?					
6. What are the risks to the project?					
7. What are the risks to the work?					
8. What are the risks to the safety?					
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100. What are the risks to the environment?					

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

RLS-FM-010 Flashbutt Welding Pre Work

SA-WI-02-010 Pre Work Brief

ANGE 204 Network Communication

ANGE 200 Walking in the Danger Zone

ANWT 300 Planning Work in the Rail Corridor

ANWT 302 Local Possession Authority

ANWT 304 Track Occupancy Authority

ANWT 306 Track Work Authority

ANWT 308 Controlled Signal Blocking

ANWT 310 Lookout Working

ANPR 709 Using Detonators

AUSTRALIAN STANDARDS, CODES OF PRACTICE AND INDUSTRY REQUIREMENTS

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

TA20 area

Section 1 General Rules

Section 7 Audible Track Warning Signals

Section 15 Infrastructure Works

Section 30 Operating Procedures Infrastructure Works

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



NOTES

STRUCK BY RAIL TRAFFIC

NOTES

NO HARM – LINE IN THE SAND



ARTC



FURTHER INFORMATION

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

Information sources:

- Australian Transport Safety Bureau – Rail Safety Investigations and Reports
- Rail Safety Report 2014-2015, Office of the National Rail Safety Regulator
- Rail Safety Report 2015-2016, Office of the National Rail Safety Regulator
- ATSB Transport Safety Report, Rail Occurrence Investigation, RO-2015-019 Final – 24 August 2016
- Rail Industry Worker – railindustryworker.com.au

ARTC