

# Network Safeworking Rules and Procedures

## Walking in the Danger Zone

Rule Number: 2001



**Brookfield**  
Rail

# Walking in the Danger Zone

Rule Number: 2001

## Document Control Identification

Document title	Number	Version	Date
2001 – Walking in the Danger Zone		1.0	31 March 2016
		1.01	01 October 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2001 – Walking in the Danger Zone	4 May 2016		Initial Issue
	01 October 2016	6, 8, 9	Review & Update

## Authorisation



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# Glossary for this Rule

<i>Access</i>	A designated safe way into, along, across or out of the Rail Corridor.
<i>Adjacent</i>	Near to, close to, parallel to.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Clear</i>	A proceed indication displayed by a signal. In reference to a track circuit, block, section or signal route, the absence of rail traffic. In reference to track workers being clear of track.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Danger Zone</i>	Everywhere within Three (3) metres horizontally from the nearest rail and any distance above or below this Three (3) metres, unless a safe place (see Safe Place) exists or has been created.
<i>Disabled</i>	Unable to travel due to a defect.
<i>Electrical Infrastructure</i>	may include: Equipment and systems for supplying and distributing electricity Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling infrastructure and telecommunications infrastructure.
<i>Interlocking</i>	Interaction of interconnected locking equipment controlling points and/or signals to prevent conflicting movements to make sure routes are set correctly.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of Rail Traffic in the Network.

<i>Platform</i>	A designated raised or level area, next to the line, that allows passengers to enter and leave trains.
<i>Points</i>	A track component consisting of paired pieces of tapered rail (blades) that can be moved and set to allow tracks to diverge or converge.
<i>Protection</i>	The means used to prevent Rail Traffic from entering a worksite or other portion of Track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Protection Officer</i>	The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).
<i>Rail Traffic</i>	Trains and Track Vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Running Line</i>	A line (other than a siding) that is used for through movement of rail traffic, not normally used for stabling rail vehicles.
<i>Safe Place</i>	<p>A Safe Place is:</p> <ul style="list-style-type: none"> <li>• where there is at least three (3) metres clearance from the nearest Running Line;</li> <li>• on a Platform behind the safety lines;</li> <li>• within a purpose-built refuge or shelter;</li> <li>• where a structure or physical barrier has been erected to provide a position of safety; or</li> <li>• immediately in front of stationary and Secured Rail Traffic.</li> </ul>
<i>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Sighting Distance</i>	The distance that someone can clearly see along the Track.
<i>Signalling and Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Vehicle</i>	A vehicle, usually self-propelled, used for inspecting and/or maintaining infrastructure.
<i>Train</i>	A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles. Rail Traffic.

# 1. Purpose

This Rule provides instructions for workers to walk safely in the *Danger Zone*.

# 2. General

Workers must not walk in the *Danger Zone* where there is a practical alternative.

Walking in the *Danger Zone* is:

- walking from place to place in the *Danger Zone*; and
- doing no work other than placing or removing *Protection* for a worksite or *Rail Traffic* or visual inspection of *Track*.

## 2.1 The Danger Zone

The *Danger Zone* is all space within three (3) metres horizontally from the nearest rail and any distance above or below this three (3) metres, unless a *Safe Place* exists or can be created.

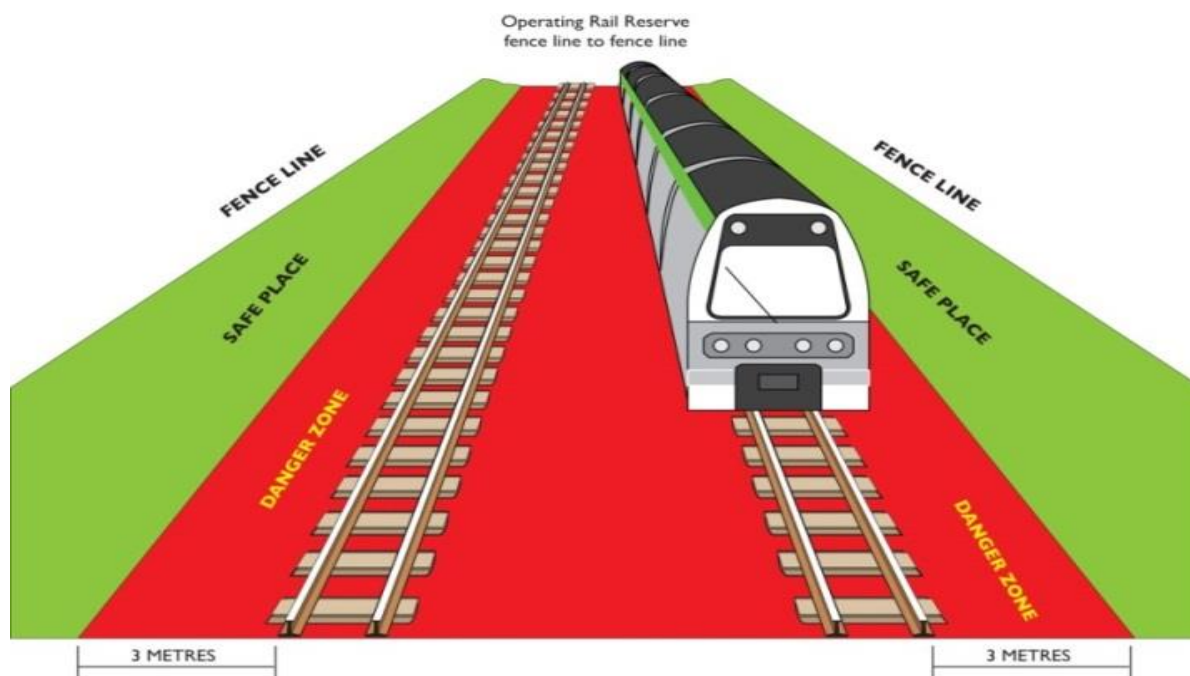
## 2.2 Safe Place

A *Safe Place* is a place where workers and equipment cannot be struck by *Rail Traffic*.

A *Safe Place* is:

- where there is at least three (3) metres clearance from the nearest *Running Line*;
- on a *Platform* behind the safety lines;
- within a purpose-built refuge or shelter;
- where a structure or physical barrier has been erected to provide a position of safety; or
- immediately in front of stationary and *Secured Rail Traffic*, in accordance with Procedure 9020 Using standing rail traffic for protection.

Figure 2001-1 Danger Zone and Safe Place



## 3. Walking in the Danger Zone



**WARNING:** *Rail Traffic* can approach from either direction at any time.

Where workers must walk in the *Danger Zone*:

- an easily-reached *Safe Place* must be available; and

visibility conditions must allow enough *Sighting Distance*, in accordance with Rule 3013 Lookout Working, for workers to reach a *Safe Place* before the arrival of *Rail Traffic*

The *Protection Officer* must also get information of *Rail Traffic* movements for the work *Location* from the *Network Controller*.

### 3.1 Before Entering the Danger Zone

Before entering the *Danger Zone*, workers must:

- get permission from the *Network Controller* responsible for the section of *Track*;
- get information from the *Network Controller* about *Rail Traffic* for that *Location*.
- make sure they can see that *Tracks* are *Clear* of approaching *Rail Traffic*,
- ensure there is an easily reached *Safe Place* available; and
- limit the equipment taken into the *Danger Zone* to hand held photographic equipment.

### 3.2 If Walking in the Danger Zone

If walking in the *Danger Zone*, workers must:

- wear approved Personal Protective Equipment (PPE);
- where possible, walk in the direction facing approaching traffic;
- look frequently in both directions to ensure the *Sighting Distances* for approaching *Rail Traffic* can be achieved;
- carry a light during hours of darkness or *Low Visibility*;
- not step on or within *Points* blades, *Interlocking* equipment or on rails; and
- carry equipment to enable communication to be maintained with Network Control.

### 3.3 Visual Inspection or photography

If walking in the *Danger Zone* for visual inspections or photography, workers must:

- wear approved Personal Protective Equipment (PPE);
- where possible, walk in the direction facing approaching traffic;
- maintain vigilance by looking every 5 seconds in both directions for approaching *Rail Traffic*; and
- ensure sighting distances are met in accordance with Rule 3013 *Lookout Working*.

Workers must add the inspection time required to the minimum warning time, to calculate the sighting distance required.

The time spent within the *Danger Zone* must not exceed the minimum warning time.

Workers must inform the network controller when they have exited the rail corridor.

### 3.4 Rail Traffic Crews

*Rail Traffic Crews* may need to *Access* and walk in the *Danger Zone* to perform tasks associated with the operation of *Rail Traffic*. This includes, but is not limited to:

- operation of *Points* and associated *Infrastructure*;
- vehicle examination, including preparation for travel;
- preparation of *Disabled Rail Traffic* for assistance; and
- minor/light repairs or other tasks, en-route.

*Rail Traffic Crews* must assess the risks associated with *Accessing* the *Danger Zone*. These may include risks associated with:

- the required tasks;
- *Rail Traffic* on *Adjacent* lines;
- the ability to communicate with the *Network Controller*;
- the ability to communicate with other workers in the vicinity; and
- operation of the *Rail Traffic*.



**NOTE:** Where required the *Rail Traffic Crew* must arrange for *Adjacent* lines to be *Protected* in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent lines.

## 4. References

3013 Lookout Working

9010 Protecting Work from Rail Traffic on Adjacent Lines

9020 Using standing rail traffic for protection

## 5. Effective date:

01 October 2016

# Network Safeworking Rules and Procedures

## Handsignals and Verbal Commands

Rule Number: 2003



**Brookfield**  
Rail

# Handsignals and Verbal Commands

Rule Number: 2003

## Document Control Identification

Document title	Number	Version	Date
2003 – Handsignals and Verbal Commands		1	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2003 – Handsignals and Verbal Commands	4 May 2016		

## Authorisation



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# Glossary for this Rule

<i>Clear</i>	<p>A proceed indication displayed by a signal.</p> <p>In reference to a track circuit, block, section or signal route, the absence of rail traffic.</p> <p>In reference to track workers being clear of track.</p>
<i>Effective Communication</i>	<p>The ability to successfully send, receive and understand information. The communication does not need to be continuous.</p>
<i>Emergency</i>	<p>Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure.</p>
<i>Fixed Signal</i>	<p>A signal that is located permanently near the line.</p>
<i>Fixed Worksite</i>	<p>A worksite with boundaries that are fixed and defined by the Authority provided for the duration of the work.</p>
<i>Handsignal</i>	<p>A signal given by hand or lights movements, hand signals may be with or without flags.</p>
<i>Handsignaller</i>	<p>A Competent Worker who gives handsignals to rail traffic crew</p>
<i>Low Visibility</i>	<p>Any condition that does not allow Competent Workers to view the distance required to work safely (e.g. fog, heavy rain, smoke, dusk, curve in the track))</p>
<i>Network</i>	<p>A combination of track and other associated infrastructure controlled by Brookfield Rail.</p>
<i>Network Controller</i>	<p>A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.</p>
<i>Normal Speed</i>	<p>A speed that does not exceed the speed limit currently in effect for the section of line and type of rail traffic.</p>
<i>Protection</i>	<p>The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.</p>
<i>Protection Officer</i>	<p>The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).</p>
<i>Rail Traffic</i>	<p>Trains and track vehicle or vehicles travelling on the Network.</p>
<i>Rail Traffic Crew</i>	<p>Competent Workers responsible for the operation of the Motive Power Unit.</p>
<i>Restricted Speed</i>	<p>Restricted speed is a speed that allows rail traffic to stop short of an obstruction within half the distance of clear track that is visible ahead.</p> <p>Restricted speed must not exceed 25 km/h.</p>

*Safe Place*

A Safe Place is:

- where there is at least three metres clearance from the nearest Running Line;
- on a Platform behind the safety lines;
- within a purpose-built refuge or shelter;
- where a structure or physical barrier has been erected to provide a position of safety; or
- immediately in front of stationary and Secured Rail Traffic.

*Shunt*

To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.

*Travel*

Planned or purposeful movement from one location to another.

*WARNING/CAUTION  
Handsignal*

A handsignal to indicate to rail traffic crews to reduce speed and travel at restricted speed.

*Whistle*

A device such as a bell, whistle, siren, horn or hooter, fitted to rail traffic to give audible warning.

# 1. Purpose

This Rule details the protocols for giving movement commands to *Rail Traffic Crews*. The purpose of these commands is to control the movement of *Rail Traffic* through a *Fixed Worksite* or during *Shunting* operations.

## 2. General

### 2.1. Giving Handsignals

*Handsignals* must be given:

- facing the *Rail Traffic*;
  - During *Shunting* operations where it is not possible to face the *Rail Traffic*, the *Handsignaller* must be satisfied that the *Rail Traffic Crew* can see all *Handsignals*.
- in such a position that there can be no misunderstanding as to the purpose of the *Handsignal*;
- in a clear and timely manner; and
- so that the *Handsignals* will be received and acted upon only by those who are being signalled.

A *Handsignaller* must:

- be in or have access to a *Safe Place*;
- be in clear view of those who are being signalled; and
- have *Effective Communication*.

At worksites and *Fixed Signals*, the *Handsignaller* must remain at the designated position, unless they are:

- replaced by another *Handsignaller*; or
- no longer required.

If conditions such as visibility change, the *Handsignaller* must tell the *Protection Officer*.

Where *Handsignalling* at *Fixed Signals* and visibility changes, the *Handsignaller* must tell the *Network Controller*.

## 2.2. Responding Handsignals and Verbal Commands

If the meaning of a *Handsignal* or verbal command is not understood, *Rail Traffic Crews* must stop to find out the meaning.

*Rail Traffic Crews* must:

- obey *Handsignals* and verbal commands; and
- acknowledge *Handsignals* and verbal commands other than those given as part of *Shunting*.

# 3. Use of Handsignals and Verbal Commands

*Rail Traffic* movements through a *Fixed Worksite* or during *Shunting* operations must be directed by continued *Handsignals* or regular verbal commands.

*Handsignals* must be given using:

- flags or hands during daylight; and
- lights during hours of darkness or *Low Visibility*.

Where verbal commands are used to direct a *Rail Traffic* movement, the *Competent Worker* directing the movement, and the *Rail Traffic Crew*, must communicate at agreed intervals.

During *Shunting* operations, if the *Rail Traffic Crew* loses sight of the *Handsignal* or after *Travelling* half the nominated distance, there is no further *Handsignal* or verbal command, the *Rail Traffic Crew* must:

- bring the movement to a stop;
- sound the *Whistle*; and
- not move again until regular *Handsignals* or verbal commands are re-established.

When verbal commands are used for *Shunting*, the *Rail Traffic Crew* must be told the direction and distance to be *Travelled*.

A *Handsignal* must be continued:

- for an ALL CLEAR *Handsignal*, until acknowledged by the *Rail Traffic Crew*;
- for *NORMAL SPEED* and *WARNING / CAUTION Handsignals*, until the cab of the leading rail vehicle has passed the *Handsignaller*;
- for a STOP *Handsignal*, until:
  - the *Rail Traffic* has stopped; or
  - the *Handsignaller* displays another *Handsignal*.

### 3.1. Handsignalling at a Fixed Signal

If *Handsignalling* at a *Fixed Signal*, a *Handsignaller* must:

- be able to see whether the *Fixed Signal* is at STOP; and
- if *Rail Traffic* is required to stop, give a STOP *Handsignal* until *Rail Traffic* has stopped.

If the *Fixed Signal* being held at STOP clears, the *Handsignaller* must:

- tell the *Network Controller* to set the *Fixed Signal* at STOP; and
- inform the *Protection Officer*, where provided.

### 3.2. Standing Clear of Fixed Signal

A *Handsignaller* must stand well away from *Fixed Signal* if:

- *Rail Traffic* is not required to stop; or
- not *Handsignalling* at a *Fixed Signal*.

## 4. Emergency or Danger Handsignals and Verbal Commands

*Rail Traffic Crews* must stop their *Rail Traffic* immediately if they receive an *EMERGENCY* or *DANGER* signal communicated by:

- vigorous and erratic waving of arms, a flag or a light; or
- a verbal command “emergency, emergency, emergency, stop, stop, stop”.

## 5. Stop Handsignals

*Rail Traffic Crews must stop their Rail Traffic if they receive a STOP Handsignal communicated by:*

- a red flag;
- a red light; or
- both hands held high.

## 6. Warning/Caution Handsignals

*A WARNING / CAUTION Handsignal tells Rail Traffic Crews to reduce to Restricted Speed, or Travel at Restricted Speed.*

*A Handsignaller waves a yellow flag or yellow light from side to side to give Rail Traffic Crews a WARNING / CAUTION Handsignal when Protecting a worksite.*

*Rail Traffic Crews must Travel at Restricted Speed until the last rail vehicle has passed the worksite.*

## 7. Proceed at Normal Handsignals

*A PROCEED AT NORMAL SPEED Handsignal tells Rail Traffic Crews to Proceed at Normal Speed.*

*A Handsignaller holds a green flag or green light steady to give Rail Traffic Crews the PROCEED AT NORMAL SPEED Handsignal.*

## 8. All Clear Handsignals













*An ALL CLEAR Handsignal tells Rail Traffic Crews that workers are aware of approaching Rail Traffic and the workers will remain Clear until that Rail Traffic passes.*

*A Handsignaller holds up a steady white light or one hand to give the ALL CLEAR Handsignal .*

## 9. General Handsignals

The following figures show the *Handsignals* that must be used in the *Network*.

Figure 2003-1 Handsignals and Verbal Commands

Signal / Use	Verbal Command	Using Flags	Using Lights	Using Hands
<b>Stop</b>	"Stop" or "Red light" during shunting operations only	 Steady red flag	 Steady red light	 Both hands held high
<b>Emergency or Danger</b>	"Emergency, Emergency, Emergency Stop, Stop, Stop"	 Vigorous and erratic waving of flag	 Wave any light in a vigorous and erratic manner	 Vigorous and erratic waving of arms
<b>Warning/ Caution</b>	"Reduce to, and travel at restricted speed"	 Wave yellow flag slowly	 Wave yellow light slowly	Nil
<b>Proceed at Normal Speed</b>	"Proceed at Normal speed"	 Steady green flag	 Steady green light	Nil
<b>All Clear</b>	"I am aware of your approach"	Nil	 Steady white light	 One hand held up

# 10. Shunting Handsignals and Verbal Commands

Figure 2003-2 Shunting Handsignals and Verbal Commands














Signal / Use	Verbal Command	Using Flags	Using Lights	Using Hands
<b>Move Away</b>	“(ID) Move away from me”	Nil	 <p>Swing white light backwards and forwards beside body</p>	 <p>Hold one hand up and outwards and wave in a vertical circle</p>
<b>Move Away Slowly</b>	“(ID) Move slowly away from me”	Nil	 <p>Swing green light backwards and forwards beside body</p>	 <p>Hold one hand up and outwards and wave in a vertical circle. Hold the other hand up and outwards.</p>
<b>Move Towards</b>	(ID) “Move towards me”	Nil	 <p>Wave white light slowly back and forth across the body</p>	 <p>Wave one hand slowly back and forth overhead</p>

Figure 2003-3 Shunting Handsignals and Verbal Commands continued.

Signal / Use	Verbal Command	Using Flags	Using Lights	Using Hands
<b>Move Towards Slowly</b>	"(ID) Move towards me slowly"	Nil	 <p>Wave green light slowly back and forth across the body</p>	 <p>Wave one hand slowly back and forth overhead, holding the other hand up and outwards</p>
<b>Close Up or Couple Up</b>	"(ID) Close Up" or "(ID) Couple Up"	Nil	 <p>Wave green light slowly back and forth across the body</p>	 <p>Hold both hands up and outwards and repeatedly bring hands together to form an arch</p>
<b>Admit</b>	"(ID) OK to enter"	 <p>Wave green flag slowly back and forth across body</p>	 <p>Wave green light slowly back and forth across the body</p>	 <p>Hold one hand up and outwards</p>

## 11. References

Nil

## 12. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Network Communications

Rule Number: 2007



**Brookfield**  
Rail

# Network Communications

Rule Number: 2007

## Document Control Identification

Document title	Number	Version	Date
2007 – Network Communication		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2007 – Lookout Network Communication	4 May 2016		

## Authorisation



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# Glossary for this Rule

<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Brookfield Rail</i>	Brookfield Rail Pty. Ltd.
<i>Centralised Traffic Control (CTC) Territory</i>	The portions of line where the Centralised Traffic Control system of Safeworking is used.
<i>Communication Device</i>	A device that supports effective communication between Network Controllers, Rail Traffic crews, Track Workers and other Competent Workers.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Condition Affecting the Network (CAN)</i>	A situation or condition that affects or has potential to affect the safety of the Network.
<i>Effective Communication</i>	The ability to successfully send, receive and understand information. The communication does not need to be continuous.
<i>Emergency</i>	Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure.
<i>Infrastructure Representative</i>	An authorised Brookfield Rail employee or an organisation contracted to Brookfield Rail, responsible for maintaining Network infrastructure.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of Rail Traffic in the Network.
<i>Occupancy Authority</i>	A formal authority that allows occupancy of a portion of line by rail traffic or for work on track.
<i>Open-Channel</i>	A system that allows all radio users to take part in all conversations.
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.

<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.
<i>Special Working</i>	Working rail traffic using an Alternative Proceed Authority or manual block working.
<i>Track Workers</i>	Competent rail safety workers whose primary duties are associated with work on or around infrastructure in the Rail Corridor.
<i>Train</i>	A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles. Rail Traffic.
<i>Train Order</i>	An authority issued by the Network Controller for the movement of rail traffic.
<i>Train Order Territory</i>	The portions of line where the Train Order system of Safeworking is used.
<i>Travel</i>	Planned or purposeful movement from one location to another.
<i>Work on Track</i>	The work performed in the Danger Zone.

# 1. Purpose

This Rule provides protocols for the effective use of spoken and written communications between *Network Controllers*, *Track Workers*, *Rail Traffic Crews* and other users for railway operations.

## 2. General

*Effective Communication* is essential for safety in the *Network*

*Brookfield Rail* provides:

- two-way radio coverage for most of the *Network*, this includes total coverage in *Centralised Traffic Control (CTC) Territory*;
- two-way radio coverage for local communications. local communications do not provide two-way radio communications with Network Control;
- wayside telephones:
  - in all Traffic Annexes in *Centralised Traffic Control (CTC) Territory*; and
  - in most *Train Order* cabins in *Train Order Territory*.

### 2.1 Communication fundamentals

Communication in the *Network* must be:

- clear, brief and unambiguous;
- relevant to the task at hand; and
- agreed as to its meaning before being acted upon.

Communications may be spoken, written or electronic transmissions.

Communications must use the 24-hour clock to give times.

*Communications Equipment* used for railway operations must be tested for correct operation:

- for *Rail Traffic* prior to entry on to the *Network*; and
- for *Work on Track* prior to starting work.

## 2.2 Confirmation of communication

The receiver must confirm the content of a spoken or written message by repeating the message back to the sender, if requested by *Network Control* or the communication is about:

- an *Occupancy Authority*;
- an instruction not to Proceed;
- *Train* running information;
- *Special Working*; or
- a *Condition Affecting The Network (CAN)*.

The receiver must not act on a spoken or written communication until the sender confirms that the message has been repeated correctly.

## 2.3 Relaying Communications

If it is not possible for a sender to communicate directly with an intended receiver, a *Competent Worker* may relay the content.

The content of a communication must be relayed exactly as it was received.

## 3. Emergency Communication

When required to communicate in an *Emergency*, workers are to use whatever communication method is available, with radio communications being the first priority.

*Emergency* communications must:

- start with “*Emergency, Emergency, Emergency*”;
- be given priority; and
- be answered immediately by the intended recipient.

If there is an *Emergency* message on an *Open-Channel* radio, other users of the channel must stop transmission immediately.

Unless they are answering or aiding the *Emergency* call, workers must not transmit unless they are certain no interference will result.

### 3.1 Emergency Radio Communications

If an *Emergency* button is fitted, the *Competent Worker* must:

- press the *Emergency* button;
- if there is no immediate answer follow the steps for ‘If an *Emergency* button is not fitted’;
- when the Receiver answers, give their *Location* and the *Emergency* message; and
- exchange necessary information and directions.

If an *Emergency* button is not fitted the *Competent Worker* must:

- transmit: “*Emergency, Emergency, Emergency. This is (their identification)*”;
- give brief details about the *Emergency* and if *Emergency Services* are required;
- if there is no immediate answer, pause;
- repeat “*Emergency, Emergency, Emergency. This is (their identification)*” and details about the *Emergency*. Keep repeating until answered;
- when a Receiver answers, give their *Location* and the *Emergency* message; and
- exchange the necessary information and directions.

## 4. Spoken Communication

*Open-Channel* communication must use the standard terms and protocols in this Rule and must be acknowledged promptly.



**WARNING: *Competent Workers* must not assume that a receiver has understood a message before the receiver confirms that the message has been understood.**

If the meaning of a spoken communication is not understood:

- the receiver must ask that it be repeated;
- if necessary, the sender and receiver must use the phonetic alphabet and spoken numbers to clarify and confirm the message; or
- arrange alternative means to communicate with the sender.

### 4.1 Spoken Numbers

When transmitting numbers, a *Competent Worker* must:

- use the spoken numbers in the following table;
- stress the syllables in capital letters;
- for a decimal point, say "Day Cee Mal".

Figure 2007-1 Spoken numbers table.

For digit	Say
0	ZEE-roh
1	WUN
2	TOO
3	thuh-REE
4	FO-wer

For digit	Say
5	FI-yiv
6	SIX
7	SEV-en
8	ATE
9	NINE-uh

## 4.2 Phonetic Alphabet (spoken letter names)

When it is necessary to spell words, the *Competent Worker* must use the spoken letter names in the following table.

**Stress the syllables in capital letters.**

Figure 2007-2 Phonetic alphabet table.

For	Letter Name	Say	For	Letter Name	Say
A	ALPHA	AL-fah	N	NOVEMBER	No-VEM-ber
B	BRAVO	BRAH-voh	O	OSCAR	OSS-cah
C	CHARLIE	CHAR-lee	P	PAPA	pah-PAH
D	DELTA	DELL-tah	Q	QUEBEC	keh-BECK
E	ECHO	ECK-oh	R	ROMEO	ROW-me-oh
F	FOXTROT	FOKS-trot	S	SIERRA	See-AIR-rah
G	GOLF	GOLF	T	TANGO	TANG-go
H	HOTEL	hoh-TEL	U	UNIFORM	YOU-nee-form
I	INDIA	IN-dee-ah	V	VICTOR	VIC-tah
J	JULIET	JEW-lee-ETT	W	WHISKY	WISS-key
K	KILO	KEY-loh	X	X-RAY	ECKS-ray
L	LIMA	LEE-mah	Y	YANKEE	YANG-key
M	MIKE	MIKE	Z	ZULU	ZOO-loo

### 4.3 Standard Terms and Phrases

A *Competent Worker* must only use these standard terms to convey these meanings:

Figure 2007-3 Standard communication terms.

Term	Meaning
Emergency, Emergency, Emergency.	This is <i>an</i> Emergency.
Correct.	Yes. You are right.
I read back.	I am going to repeat all, or part, of your statement exactly as I received it.
I say again.	I am going to repeat all, or part, of my last statement.
I spell.	I am going to use the phonetic alphabet.
Loud and clear.	Your signal is strong, and every word is understood.
Message received.	I clearly received and understood your message.
Negative.	No. Not correct.
Out.	My transmission is complete.
Over.	I have finished speaking, and I am waiting for a reply.
Read back.	Repeat all, or a specified part, of my message back to me exactly as you received it.
Receiving.	I acknowledge your call. Proceed with the message.
Say again.	Please repeat your last statement.
Speak slower.	Repeat what you said, speaking more slowly. It is hard to understand you.
Stand by.	Wait. I will be back to you soon.

### 4.4 Recording Spoken Communications

If spoken communication recording equipment is provided, it must be used to record Network Control communications.

# 5. Spoken Communication Protocols

## 5.1 Identification

Communications must begin with identification of the receiver, followed by identification of the sender.

*Rail Traffic Crews* communications must include the sender's *Rail Traffic* identification.

Communications from a worksite must include the sender's:

- name;
- safeworking designation; and
- *location*. (include Structure Numbers where appropriate).

## 5.2 Open-Channel Communications

*Competent Workers* using *Open-Channel* radios must:

- except in an *Emergency*, check that the channel is not already in use before starting a transmission;
- if a reply is expected, use the term "Over" to end each statement; and
- to end each transmission, use the term "Out".

### 5.2.1 Example of Open-Channel Communication

#### Sender

Say: "(Receiver) this is (Sender), over".

#### Receiver

Start your reply to the person calling you with your Safeworking designation, Location, and/or Rail Traffic identification number.

Identify yourself by your Safeworking designation, Location, and/or Rail Traffic identification number.

Say: "(Sender) this is (Receiver), over".

#### Sender

Make your statement, ending with "Over".

#### Receiver

Reply, ending with "Over".

#### Sender and Receiver

Use standard terms as required in the communication.

#### Sender or Receiver

At the end of the communication say "Out".

### 5.3 Short Identification

A short identification may be used, after making an initial positive identification, for *Shunting* or similar operations within a yard or terminal on a dedicated *Shunting* channel.

## 6. Written Safeworking Communication

*Competent Workers* compiling safeworking forms, *Authorities* and records must:

- complete all required items on the form;
- write clearly in permanent ink; and
- write numbers in numerals, not words, using for example “12” instead of “twelve”.

If Safeworking forms include items that have a checkbox before them, *Competent Workers* must:

- tick the box ☒ if it applies, and complete the item; or
- place a cross in the box ☐ if the item does not apply.

If forms include options, text that does not apply must have a single line drawn through it.

Unless otherwise specified, Safeworking forms and records must be kept for at least 90 days.

### 6.1 Errors on Records, Safeworking Forms and Authorities

Where an error has been made on a record or safeworking form other than an Authority draw a single line through errors, and initial the corrections; or compile a new form.

If an error is made on an Authority *Competent Workers* must act in accordance with Procedure 9016 Written Authorities and Forms.

## 6.2 Written Communication Abbreviations

Use the standard abbreviations approved by *Brookfield Rail* in written Safeworking communications.

Figure 2007-4 Written abbreviations.

Abbreviation	Meaning
<b>No</b>	Number
<b>LOCO</b>	Locomotive
<b>KM</b>	Kilometre
<b>TM</b>	On-Track Machine
<b>CBH</b>	Co-operative Bulk Handling
<b>STN</b>	Special Train Notice
<b>JCT</b>	Junction
<b>MR</b>	Midland Railway
<b>AKOL</b>	Annett's Key On Locomotive

# 7. Communications Equipment

*Communications Equipment* authorised by *Brookfield Rail*, or compatible with *Brookfield Rail* equipment, may be used to establish *Effective Communication* in the *Network*.

Before *Rail Traffic Travels* in the *Network*, equipment to communicate with the *Network Controller* must be working correctly.

Before entering the *Network*, *Rail Traffic Crews* must be aware of:

- communication protocols; and
- radio channels for each type of *Communication Equipment*.

## 7.1 Defective Equipment

If *Network Control Communications Equipment* is defective, the *Network Controller* must:

- tell *Infrastructure Representatives* about the faulty equipment; and
- establish alternative communication methods.

If *Rail Traffic Communication Equipment* becomes defective, *Rail Traffic Crews* must:

- use a third party to relay messages; or
- use wayside *Communications Equipment*.

## 8. References

9016 Written Authorities and Forms

## 9. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Reporting and Responding to a Condition Affecting the Network (CAN)

Rule Number: 2009



**Brookfield**  
Rail

# Reporting and Responding to a Condition Affecting the Network (CAN)

Rule Number: 2009

## Document Control Identification

Document title	Number	Version	Date
2009 – Reporting and Responding to a Condition Affecting the Network (CAN)		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2009 – Reporting and Responding to a Condition Affecting the Network (CAN)	4 May 2016		

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31 March 2016



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# Glossary of this Rule

<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Blocking Facility</i>	A facility used by a Network Controller to prevent either the unintended issue of an Occupancy Authority, or the operation of points or signalling equipment.
<i>Certify</i>	To classify infrastructure or rolling stock as fit for purpose.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Competent Workers</i>	A worker certified as competent to carry out a relevant task.
<i>Condition Affecting the Network (CAN)</i>	A situation or condition that affects or has potential to affect the safety of the Network.
<i>Danger Zone</i>	Everywhere within 3m horizontally from the nearest rail and any distance above or below this 3m, unless a safe place (see Safe Place) exists or has been created.
<i>Electrical Infrastructure</i>	may include: Equipment and systems for supplying and distributing electricity Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling and telecommunications infrastructure.
<i>Infrastructure Representative</i>	An authorised Brookfield Rail employee or an organisation contracted to Brookfield Rail, responsible for constructing or maintaining Network infrastructure.
<i>Level Crossing</i>	A location where the railway line and a road or pedestrian walkway cross paths on the same level (at grade).
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Network Safeworking Rules and Procedures</i>	The master set of Brookfield Rail rules and procedures that define how Access Users operate safely on the Brookfield Rail Network.

<i>Obstruct</i>	To make a line unsafe for the passage of rail traffic by the placing of tools, equipment or plant on the track.
<i>Operators' Representative</i>	A person authorised by an above rail or below rail Operator to act on their behalf.
<i>Permanent Record</i>	A record made in writing or in an electronic system, and kept for reference and audit.
<i>Possession Protection Officer</i>	The Competent Worker responsible for coordinating protection of worksites under a Local Possession Authority.
<i>Protection</i>	The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Protection Officer</i>	The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Restrain</i>	To prevent movement of rail traffic with signals, signalling equipment, blocking facilities, or the issue of a written warning.
<i>Signalling and Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.
<i>Travel</i>	Planned or purposeful movement from one location to another.
<i>Work on Track Authority</i>	An authority to perform work on track. See Local Possession Authority (LPA); Track Occupancy Authority (TOA) and Track Work Authority (TWA),

# 1. Purpose

The purpose of this Rule is to provide instructions for reporting and responding to unsafe conditions affecting or potentially affecting the *Network*.

# 2. General

Conditions that can or do affect the safety of operations in the *Network* must be reported promptly to the *Network Controller*.



**NOTE:** Examples of conditions that can affect the *Network* can be found in Rule 1003 General Responsibilities for Safety.

The *Network Controller* must make a *Permanent Record* about the report.

# 3. Responding

The *Competent Worker* reporting the *Condition Affecting the Network (CAN)* must:

- where possible, prevent *Rail Traffic* from approaching the affected portions of line; and
- where instructed by the *Network Controller*, *Protect* the *Obstructed* line in accordance with the *Network Safeworking Rules and Procedures*.

The *Network Controller* must promptly advise:

- the *Network Rail Operations Manager*;
- the *Infrastructure Representative* on call for the affected infrastructure;
- other affected *Network Controllers*; and
- affected nominated *Operators' Representatives* about the *CAN*.

## 3.1 Network Controller Assurances

*Network Controllers* must:

- arrange to warn *Rail Traffic Crews* approaching the affected portions of line;
- arrange to prevent *Rail Traffic* from approaching the affected portions of line;
- apply *Blocking Facilities* where available; and
- ask *Infrastructure Representatives* to investigate.

## 3.2 Warning Rail Traffic Crews

The *Network Controller* must give written warning of the *CAN* to *Rail Traffic Crews* if:

- Faulty or potentially faulty *Level Crossings* have been reported.
- *Level Crossing* warning equipment has been deactivated.
- *Rail Traffic* must be *Restrained due to the CAN*.
- *Rail Traffic Crews* are to be advised of the requirement to reduce speed.

Where possible, the *Network Controller* must arrange for *Rail Traffic Crews* to be given warning before *Rail Traffic* enters the affected portion of line.

If it is not possible for *Rail Traffic Crews* to be given written warning, the *Network Controller* must tell affected *Rail Traffic Crews* about the *CAN* by whatever means available.

*Rail Traffic Crews* must acknowledge and comply with *CAN* warnings.

The *Network Controller* must continue to warn *Rail Traffic Crews* entering the affected portion of line until:

- the *CAN* no longer exists; or
- *Rail Traffic Crews* are warned by other means.

## 3.3 Declaring the CAN to be a Major Incident

The *Brookfield Rail Manager Network Operations* may declare the *CAN* to be a major incident in accordance with W100-100-004 Emergency Management Procedures Manual.

## 3.4 Infrastructure Restoration



**WARNING:** Work in the *Danger Zone* must not commence until appropriate *Protection* is in place.

*Infrastructure* restoration work in the *Danger Zone* arising from a *CAN* must be undertaken only after the *Protection Officer* or *Possession Protection Officer* has obtained the appropriate *Work on Track Authority*.

# 4. Evidence Retention

Evidence relevant to the incident must be protected and preserved as directed by the *Competent Worker* managing the rail response to the incident.

## 5. Return to Normal Working

*Rail Traffic* may resume *Travel* in the affected area only if:

- the *Competent Worker* managing the rail response to the incident tells the *Network Controller* that it is safe to do so; and
- the *Network Controller* authorises *Travel*.



**NOTE:** If *Infrastructure Representatives* have been asked to investigate a *CAN*, they must *Certify* the line as safe for *Rail Traffic* before the *Network Controller* may authorise return to normal working.

## 6. References

1003 General Responsibilities for Safety

W100-100-004 Emergency Management Procedures Manual

## 7. Effective Date

4 May 2016

## 8. Attachments

Condition Affecting the Network form (front).

Brookfield Rail		DRAFT		Ref: CAN-13	
<b>Condition Affecting the Network (CAN)</b> (In accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network.)					
	Date:	<input type="text" value="dd/mm/yyyy"/>	Time:	<input type="text" value="00.00"/>	Form No. <input type="text" value="Serial No."/>
REPORT	1. Reported by;				
	1.1	<input checked="" type="checkbox"/>	Competent Worker	<input type="text" value="Competent Workers name"/>	at <input type="text" value="Station / Km location"/>
	1.2	<input checked="" type="checkbox"/>	Rail Traffic No.	<input type="text" value="Service No"/> ID No. <input type="text" value="Loco ID"/>	at <input type="text" value="Station / Km location"/>
			by crew member	<input type="text" value="Crew member's name"/>	
	1.3		Received by;	<input type="text" value="Train Controllers Name"/>	at <input type="text" value="Train Control Area"/> control.
LOCATION	2. CAN found at;				
	2.1	<input checked="" type="checkbox"/>	At	<input type="text" value="Station / Km location"/>	<sup>1</sup> station/location
	2.2	<input checked="" type="checkbox"/>	From	<input type="text" value="Station / Km location"/>	to <input type="text" value="Station/Km location"/> <sup>1</sup> station/location
	2.3	<input checked="" type="checkbox"/>	In the	<input type="text" value="Location/KM Identifier"/>	to <input type="text" value="Location/KM Identifier"/> section.
CONDITION DETAILS	3. CAN details;				
	<p>Type of obstruction, Location of worksites, Weather conditions Speed restrictions, Heat Speed restrictions, Faulty crossing equipment, Signal Faults, Broken rail, Trespass</p>				
	3.1	<input checked="" type="checkbox"/>	Blocking facilities have been applied to signal No.s <input type="text" value="Signal No's"/>		
WARNING ISSUE	4. Issued to;				
	4.1	Rail traffic No.	<input type="text" value="Service No."/>	at <input type="text" value="00.00"/> hrs	Issuers / Receivers form No. <input type="text" value="Form No."/>
	4.2	Issued by	<input type="text" value="Train Controllers Name"/> at <input type="text" value="Train Control Area"/> control.		
	4.3	Repeat back confirmed at	<input type="text" value="00.00"/> hrs	Restraint Authority No. <input type="text" value="Authority No."/>	

**NOTE:** <sup>1</sup> Delete non applicable.

See reverse of this form

Condition Affecting the Network form (back).

Brookfield Rail		DRAFT		
ADDITIONAL WARNINGS ISSUED	5. Additional Rail Traffic warnings issued to;			
	5.1	Rail Traffic No. <input type="text" value="Service No."/>	at <input type="text" value="00:00"/> hours	Receivers form No. <input type="text" value="Form No"/>
		Issued by <input type="text" value="Train Controllers Name"/>	at <input type="text" value="Train Control Area"/>	control.
		Repeat back confirmed at <input type="text" value="00:00"/> hours	Restraint Authority No. <input type="text" value="Authority No."/>	
	5.2	Rail Traffic No. <input type="text" value="Service/Tra"/>	at <input type="text" value="00:00"/> hours	Receivers form No. <input type="text" value="Form No"/>
		Issued by <input type="text" value="Train Controllers Name"/>	at <input type="text" value="Train Control Area"/>	control.
		Repeat back confirmed at <input type="text" value="00:00"/> hours	Restraint Authority No. <input type="text" value="Authority No."/>	
	5.3	Rail Traffic No. <input type="text" value="Service/Tra"/>	at <input type="text" value="00:00"/> hours	Receivers form No. <input type="text" value="Form No"/>
		Issued by <input type="text" value="Train Controllers Name"/>	at <input type="text" value="Train Control Area"/>	control.
		Repeat back confirmed at <input type="text" value="00:00"/> hours	Restraint Authority No. <input type="text" value="Authority No."/>	
	5.4	Rail Traffic No. <input type="text" value="Service/Tra"/>	at <input type="text" value="00:00"/> hours	Receivers form No. <input type="text" value="Form No"/>
		Issued by <input type="text"/>	at <input type="text" value="Train Control Area"/>	control.
	Repeat back confirmed at <input type="text" value="00:00"/> hours	Restraint Authority No. <input type="text" value="Authority No."/>		
RESPONDING	6. Maintenance report forms;			
	6.1	<input checked="" type="checkbox"/> RAMS report completed?	Report No. <input type="text" value="Report No."/>	
	6.2	<input checked="" type="checkbox"/> FARF form completed?	Form No. <input type="text" value="Form No."/>	
	7. Affected personnel;			
	7.1	<input checked="" type="checkbox"/> Adjoining Train Controller's advised.	<input type="text" value="Yes/No"/>	
	7.2	<input checked="" type="checkbox"/> Maintenance representative/s advised.	<input type="text" value="Yes/No"/>	
	7.3	<input checked="" type="checkbox"/> Network Rail Operations Manager (NROM) advised.	<input type="text" value="Yes/No"/>	
	7.4	<input checked="" type="checkbox"/> 3rd Party operators advised.	<input type="text" value="Yes/No"/>	
RESOLUTION	8. The Condition Affecting the Network has been resolved and normal working has resumed;			
	as of <input type="text" value="00:00"/> hours	Date; <input type="text" value="dd/mm/yyyy"/>	<input type="text" value="Train Controllers Name"/>	at <input type="text" value="Train Control Area"/> control.

**NOTE:** <sup>1</sup> Delete non applicable.

# Network Safeworking Rules and Procedures

## Speed Restrictions during Hot Weather

Rule Number: 2013



**Brookfield**  
Rail

# Speed Restrictions during Hot Weather

Rule Number: 2013

## Document Control Identification

Document title	Number	Version	Date
2013 – Speed Restrictions during Hot Weather		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2013 – Speed Restrictions during Hot Weather	4 May 2016		

## Authorisation



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# Glossary of this Rule

<i>Advertised</i>	To give written or electronic notice, usually in advance, of planned activities.
<i>Cancel</i>	To withdraw permission for or to end previously authorised activities, such as Occupancy Authorities, without completing them.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Electrical Infrastructure</i>	may include: Equipment and systems for supplying and distributing electricity Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling infrastructure and telecommunications infrastructure.
<i>Infrastructure Representative</i>	An authorised Brookfield Rail employee or an organisation contracted to Brookfield Rail, responsible for maintaining network infrastructure.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Permanent Record</i>	A record made in writing or in an electronic system, and kept for reference and audit.
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Signalling And Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Travel</i>	Planned or purposeful movement from one location to another.

# 1. Purpose

The purpose of this Rule is to describe the process for imposing speed restrictions in the *Network* during hot weather.

# 2. General

At times it may be necessary to reduce the speed of *Rail Traffic* to protect the *Infrastructure* and to ensure the safety of *Rail Traffic* during periods of high temperatures.

# 3. Imposing Speed Restrictions

## 3.1 Advice to Network Control

The *Network Controller* must be notified of hot weather conditions that require speed restrictions to be imposed by the *Infrastructure Representative*.

## 3.2 Advice from Network Control

The *Network Controller* must arrange for advice about speed restrictions to be given to affected *Rail Traffic Crews* and other affected parties.

Unless different advice is given, hot weather speed restrictions apply only on the day they are imposed.

# 4. Notifying Rail Traffic Crews

Until *Rail Traffic Crews* are warned by other means, the *Network Controller* must issue Condition Affecting the Network (CAN) Warning forms to advise them about:

- the speed restrictions; and
- the hours during which the restrictions apply.

## 5. Altering and Cancelling Speed Restrictions

*Infrastructure Representatives* must notify the *Network Controller* if hot weather speed restrictions are:

- altered; or
- no longer required.

If hot weather speed restrictions are altered or no longer required, the *Network Controller* must arrange to tell affected *Rail Traffic Crews* and other affected parties.

## 6. Speed Limits

During hot weather speed restrictions, *Rail Traffic* must not *Travel* faster than the *Advertised* speeds.



**NOTE:** As hot weather speed restrictions may cover extended and remote areas of *Track*, speed restriction signage is not necessary.

## 7. Recording Speed Restrictions

The *Network Controller* and *Infrastructure Representatives* must make a *Permanent Record* of the hot weather speed restrictions imposed, altered or *Cancelled*.

## 8. References

Nil

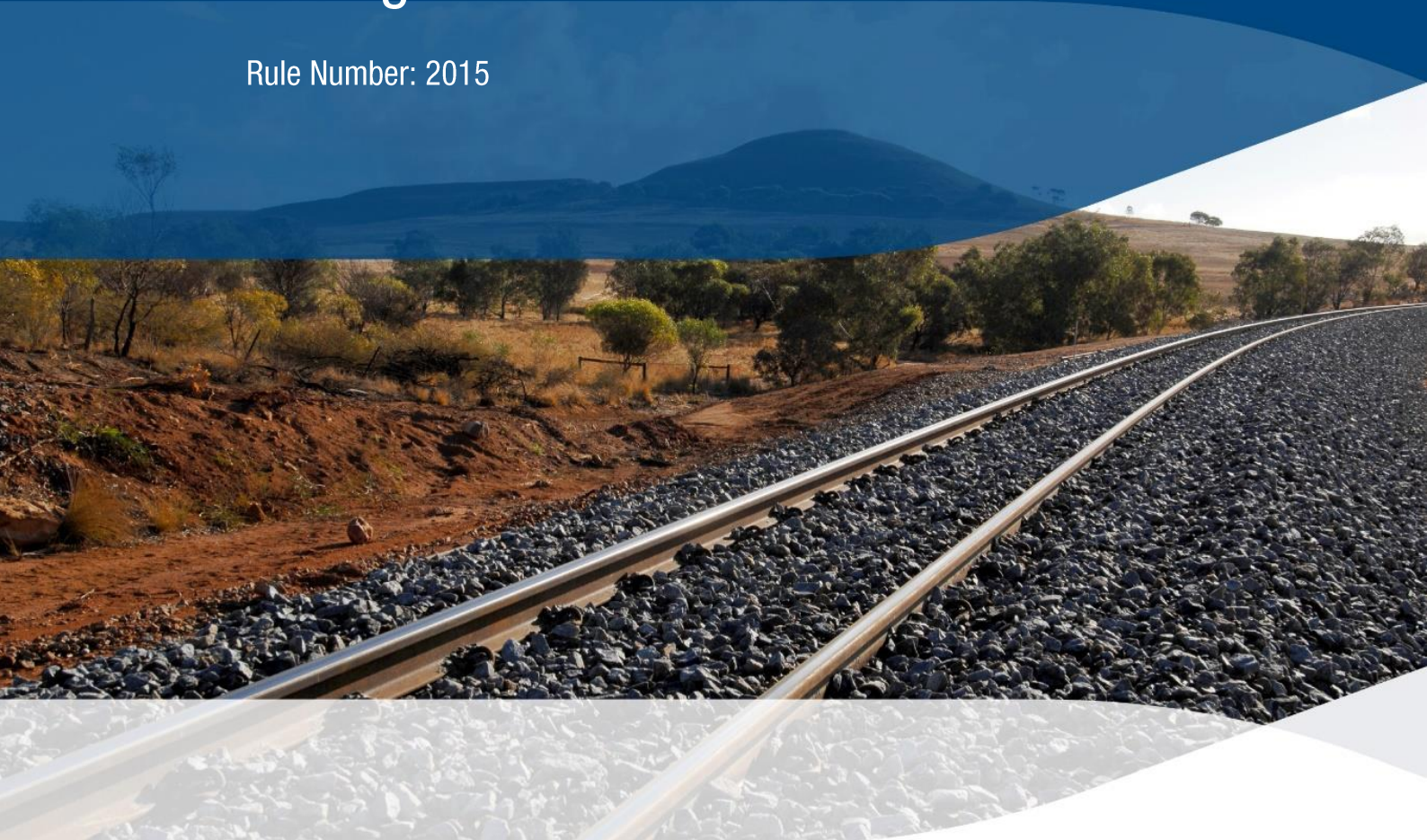
## 9. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Active Control Level Crossing Management

Rule Number: 2015



**Brookfield**  
Rail

# Active Control Level Crossing Management

Rule Number: 2015

## Document Control Identification

Document title	Number	Version	Date
2015 – Active Control Level Crossing Management		1.0	31 March 2016
		1.01	01 October 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2015 – Active Control Level Crossing Management	4 May 2016		Initial Issue
	01 Oct 2016	4, 7-9, 12-13	Review & Update

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# Glossary of this Rule

<i>Active Control Level Crossings</i>	A road or pedestrian level crossing where warning equipment warns road users and pedestrians about approaching rail traffic by devices such as flashing lights or barriers.
<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Bi-Directional</i>	Normal movement of rail traffic in either direction according to the infrastructure and system of Safeworking in use.
<i>Brookfield Rail</i>	Brookfield Rail Pty. Ltd.
<i>Certified</i>	Infrastructure or rolling stock that is fit for purpose.
<i>Clear</i>	A proceed indication displayed by a signal. In reference to a track circuit, block, section or signal route, the absence of rail traffic. In reference to track workers being clear of track.
<i>Closely Approaching</i>	Going towards a location at a speed such that the rail traffic crew could not be expected to react in sufficient time to stop safely.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Delegate</i>	A Competent Worker authorised and designated to act in place of another.
<i>Level Crossing</i>	A location where the railway line and a road or pedestrian walkway cross paths on the same level (at grade).
<i>Manager Engineering Representative</i>	A qualified and authorised signals maintenance worker.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Permanent Record</i>	A record made in writing or in an electronic system, and kept for reference and audit.
<i>Protection</i>	The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.

<i>Track-Circuit</i>	An electric circuit where current is carried through the rails and used to detect the presence of trains. Track-circuits are used in the operation and control of points, signalling and level crossing equipment.
<i>Track-Circuit Shorting Device</i>	A cable that can be clamped to a line's rails to activate track-circuits.
<i>Track Speed</i>	The allowed maximum speed for a portion of track.
<i>Wrong Running Direction</i>	The direction opposite to the normal direction of travel on unidirectional lines.

# 1. Purpose

This Rule prescribes the requirements and protocols for managing and testing *Active Control Level Crossings* in the *Network*.

# 2. General

*Active Control Level Crossing Protection* equipment will commence to operate when detected *Rail Traffic* reaches a predetermined warning distance from the *Level Crossing*. This varies to provide an adequate warning period appropriate to the maximum *Track Speed*. The activation point may be a fixed position determined by design calculations or may be determined dynamically by the *Level Crossing* prediction system if installed.

Where half boom gates are provided in conjunction with flashing light warning signals, the operation is as follows;

- Where Advance Warning Lights are installed, when the detected *Rail Traffic* reaches the predetermined warning distance they will activate for approximately 8 to 10 seconds prior to the *Level Crossing* lights activating.
- The flashing light warning signals will operate and bells will ring, a white flashing side light will be exhibited to the *Rail Traffic Crew*.
- Approximately six to ten seconds later the boom will commence to descend to form a barrier across the roadway approach lane.
- When the boom is fully lowered, the bells may cease to ring but the warning lights will continue to flash.
- When the *Rail Traffic Clears* the *Level Crossing*, the boom will automatically rise to the vertical position.
- Flashing lights will continue to flash until the boom returns to a vertical position.

Where flashing light warning signals are the only *Level Crossing Protection* installed, the operation is as follows:-

- Where Advance Warning Lights are installed, when the detected *Rail Traffic* reaches the predetermined warning distance they will activate for approximately 8 to 10 seconds prior to the *Level Crossing* lights activating.
- The flashing light warning signals will operate and bells will ring, a white flashing side light will be exhibited to the *Rail Traffic Crew*.
- When the *Rail Traffic Clears* the *Level Crossing*, the *Level Crossing* lights will cease flashing.

Where Pedestrian warning devices are installed, the operation is as follows:-

- Where Warning Lights are installed, when the detected *Rail Traffic* reaches the predetermined warning distance they will activate for approximately 25 seconds prior to the *Rail Traffic* reaching the *Level Crossing*.
- The flashing light warning signals will operate and bells will ring, until the *Rail Traffic Clears* the *Level Crossing*.
- When the *Rail Traffic Clears* the *Level Crossing*, the *Level Crossing* lights will cease flashing and the bells will cease ringing.
- The Pedestrian *Level Crossing* may also have automatic barrier gates installed. These shut and open in conjunction with the Lights and Bells operating.

## 3. Testing Warning Equipment

*Active Control Level Crossing* roadside and pedestrian warning equipment must be tested by authorised on-site testers.

The warning equipment must be tested at a time when all equipment will operate.

A *Permanent Record* must be made of the test results.

### 3.1 On-site Testing Intervals

Warning equipment that is tested on-site must be tested in accordance with *Brookfield Rail's* specified test intervals.

Scheduled Testing may be suspended only on the authority of the Manager Engineering Representative.

A minimum level of scheduled testing must be performed within the maintenance cycle. The uncompleted higher level scheduled testing must be completed in the next maintenance cycle.

If there are concerns in regards to the functionality of the equipment, the *Network Controller* must be advised and the *Level Crossing* treated as potentially faulty. *Rail Traffic Crews* must be warned by the *Network Controller*.

### 3.2 Authorising Testing

The *Network Controller* must be notified before each test is done.

Before authorising a test, the Signalling Maintenance team must consult with the *Network Controller* to make sure no *Rail Traffic* is *Closely Approaching* the *Active Control Level Crossing*.

### 3.3 Remote Monitoring

*Competent Workers* required to monitor equipment must regularly check and act on warning alarms and display indications.

### 3.4 Testing Due to an Incident

Where an incident occurs at *Level Crossings* provided with half boom gates and/ or flashing light warning signals, a *Manager Engineering Representative* is to attend the *Level Crossing* as soon as practicable to report on the condition of equipment and to remedy any damage resulting from the incident.

## 4. Manually-Operated Warning Equipment

*Competent Workers* in charge of *Level Crossings* with manually operated roadside and pedestrian warning equipment must make sure that the warning equipment is:

- activated before *Rail Traffic* is authorised to use the *Level Crossing*; and
- deactivated only after *Rail Traffic* has fully *Cleared* the *Level Crossing*.

## 5. Rail Traffic That May Not Activate Track-Circuits

If *Rail Traffic* needs to use an *Active Control Level Crossing* operated automatically by *Track-Circuits*, but the *Rail Traffic* cannot be relied upon to activate the *Track-Circuits*, *Rail Traffic Crews* must:

- Ensure the *Level Crossing* is clear of all road and pedestrian traffic; and
- manually operate the *Level Crossing protection*; or
- wait for or arrange to stop all approaching road and pedestrian traffic.

*Rail Traffic* may Proceed over the *Level Crossing* only if it is safe to do so.

## 6. Level Crossings with Infrequent Rail Traffic

If *Rail Traffic* is to use an *Active Control Level Crossing* operated automatically by *Track-Circuits*, and it is more than 28 days since the last *Rail Traffic* transit, the *Network Controller* must, unless advised otherwise by a *Manager Engineering Representative*, treat the *Level Crossing* as potentially faulty and warn *Rail Traffic*.

Advice of the *Rail Traffic* movement shall also be given to the Regional Lead for the area so that appropriate checks can be made with regard to the operation of the *Track-Circuits*.

## 7. Extended Operation of Warning Equipment

Crews of *Rail Traffic* stopped in the controlling *Track-Circuit* of an *Active Control Level Crossing* must promptly tell the *Network Controller* if the *Rail Traffic*:

- is delayed; or
- cannot be moved.

The *Network Controller* must arrange for *Competent Workers* to *Protect* the *Level Crossing*.

## 8. Potentially Faulty Active Control Level Crossings

If an *Active Control Level Crossing* is potentially faulty, the *Network Controller* must warn *Rail Traffic Crews*, in accordance with Rule 2009 Reporting and Responding to Condition Affecting the Network (CAN).

*Rail Traffic Crews* warned about a potentially faulty *Level Crossing* must approach the crossing at a speed that allows *Rail Traffic* to stop short of the crossing.

If it cannot be determined that the *Level Crossing* equipment is working correctly, *Rail Traffic* must stop short of the *Level Crossing* to check whether the warning equipment is operating correctly and:

- if warning equipment is operating correctly, proceed; or
- if warning equipment is not operating correctly, treat the *Level Crossing* as faulty; and
- as soon as possible, report the condition of the warning equipment to the *Network Controller*.

## 9. Faulty Active Control Level Crossings

If an *Active Control Level Crossing* is faulty, the *Network Controller* must:

- warn *Rail Traffic Crews* that the warning equipment is faulty, in accordance with Rule 2009 Reporting and Responding to Condition Affecting the Network (CAN);
- as necessary, arrange for a *Competent Worker* to *Protect* the *Level Crossing*, or arrange to close the crossing to road and pedestrian traffic;
- arrange for a *Signals Maintenance Representative* to attend; and
- make a *Permanent Record* of the details.

## 9.1 Faulty Active Control Level Crossing not Protected by a Competent Worker

If a faulty *Active Control Level Crossing* is not *Protected* by a *Competent Worker*, *Rail Traffic Crews* must:

- stop short of the *Active Control Level Crossing*; and
- manually operate the *Level Crossing*; or
- arrange to stop approaching road and pedestrian traffic; and
- proceed over the *Level Crossing* only if it is safe to do so.



**NOTE:** *Rail Traffic Crews* must be aware that an *Active Control Level Crossing* failure where the *Level Crossing Protection* is continually activated increases the risk that road users may not be observing the warning equipment. *Rail Traffic Crews* must be prepared to Stop to prevent a collision. They may only proceed when satisfied it is safe to do so.

# 10. Protection by Competent Workers

*Competent Workers* must contact the *Network Controller* and obtain *Rail Traffic* information.

*Competent Workers* must not do other work when *Protecting* an *Active Control Level Crossing*.

If one *Competent Worker* cannot safely protect an *Active Control Level Crossing*, additional *Competent Workers* must be used.

*Competent Workers* must make sure that all road and pedestrian traffic has been stopped prior to the arrival of *Rail Traffic*.

## 10.1 Active Control Level Crossing with Flashing Light Protection Only

*Competent Workers* must:

- advise any road user and pedestrians waiting at the crossing to only move across the *Level Crossing* when directed to do so;
- if there is no approaching rail *Traffic*, direct any road or pedestrian traffic to move over the crossing; and
- make sure that all road and pedestrian traffic has been stopped prior to the arrival of *Rail Traffic*.

## 10.2 Active Control Level Crossing with Half Boomgates and Flashing Light Protection

*Competent Workers* must:

- confirm if the boom barrier is in contact with or if there is a risk of contact with any Overhead Traction System or live overhead electricity, if so await directions from the *Manager Engineering Representative* before raising or lowering any half boomgate;
- if there is no approaching *Rail Traffic* raise and latch the boom barriers and then direct road and pedestrian traffic to move over the crossing:
  - if the mast has a red sign attached (WARNING – BOOMS DRIVE DOWN) then the manual activation switch must be set to 'manual' before attempting to lift the boomgates.
- make sure that all road and pedestrian traffic has been stopped prior to the arrival of *Rail Traffic*; and
- if there is approaching *Rail Traffic*, wait until the *Rail Traffic* has cleared the crossing and then re-assess the time available.

When the *Handsignaller* is relieved, the *Network Controller* must be advised.

Figure 2015-1 Warning – Booms Drive Down sign.



### 10.3 Active Control Level Crossing interfaced with the Main Roads Department traffic lights

If the crossing control is interfaced with the Main Roads Department traffic lights, the *Competent Worker* must not raise and latch the boom barrier until a *Signals Maintenance Representative* has given permission to do so.

### 10.4 Returning Active Control Level Crossing to Normal

When the *Signals Maintenance Representative* has made the necessary repairs they will give permission for the Level Crossing to return to normal use.

The Competent Worker must:

- lower fully a boom barrier to restore normal functionality, then lower the remaining boom barrier(s) and secure all latches; and
- confirm with the *Signals Maintenance Representative* that the Level Crossing is operational and advise the *Network Controller*.

## 11. Resuming Normal Operation

If told that *Active Control Level Crossing* warning equipment has been tested and *Certified* as working correctly, the *Network Controller* must:

- tell *Competent Workers* that normal working will be resumed;
- tell affected *Rail Traffic Crews*; and
- make a *Permanent Record* of the details.

## 12. Wrong Running-Direction Movements

If there is no *Competent Worker* to protect a *Wrong Running Direction* movement over an *Active Control Level Crossing* operated automatically by *Track-Circuits*, *Rail Traffic Crews* must:

- stop short of the *Active Control Level Crossing*; and
- manually operate the *Level Crossing*; or
- arrange to stop approaching road and pedestrian traffic.

*Rail Traffic* may proceed over the *Level Crossing* only if it is safe to do so.

In *Brookfield Rail* Double line areas where the *Active Control Level Crossing* can be operated automatically for *Bi-Directional* movements manual *Protection* of the *Active Control Level Crossing* is not required.

## 13. References

2009 Reporting and Responding to Condition Affecting the Network (CAN)

## 14. Effective Date

01 October 2016

# Network Safeworking Rules and Procedures

## Working around Electrical Infrastructure

Rule Number: 2017



**Brookfield**  
Rail

# Working around Electrical Infrastructure

Rule Number: 2017

## Document Control Identification

Document title	Number	Version	Date
2017 – Working around Electrical Infrastructure		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2017 – Working around Electrical Infrastructure	4 May 2016		

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**31 March 2016**



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# Glossary of this Rule

<i>Brookfield Rail</i>	Brookfield Rail Pty. Ltd.
<i>Electric Control Officer (ECO)</i>	A Public Transport Authority (PTA) employee responsible for managing the PTA's Overhead Traction Wiring system and the authorising the removal and restoration of the overhead supply.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Electrical Infrastructure</i>	may include: Equipment and systems for supplying and distributing electricity Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.
<i>Emergency</i>	Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling infrastructure and telecommunications infrastructure.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Rail Corridor</i>	The land on which a railway is built; comprising all property between property fences, or from the nearest rail in each direction for the distance defined under the Brookfield Rail lease.
<i>Signalling And Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.

# 1. Purpose

The purpose of this Rule is to prescribe the rules for workers working around *Electrical Infrastructure* in the *Network*.

# 2. General



**WARNING: Workers must keep themselves, tools, equipment and materials at a safe distance from exposed electrical equipment and wires.**

There are *Locations* within the *Brookfield Rail Network* where the Public Transport Authority's Overhead Traction Wiring Equipment Network runs parallel and workers must be aware of this hazard and plan their work accordingly.

Workers in the vicinity of exposed electrical equipment and wires in the *Rail Corridor* must keep or be kept at safe distance and must treat all the following as live:

- electrical equipment.
- cables and fallen electrical wires.
- vehicles, equipment or objects in contact with overhead wires or fallen wires.
- water or fires in contact with *Electrical Infrastructure*.

## 2.1 Public Transport Authority's (PTA) Electric Control Officer (ECO)

The *ECO*'s responsibilities, within the PTA, include:

- controlling power for the Traction Distribution System.
- determining safe distances for workers and equipment: and
- co-ordinating planned and *Emergency* de-energisation/isolation procedures.

# 3. Electrical Infrastructure

*Electrical Infrastructure* includes:

- high-voltage and low-voltage wires and cables, and electrical equipment on structures.
- overhead wiring and associated equipment.
- electrical conductors carried in above ground troughs or buried.
- low-voltage and high voltage electrical switchrooms.
- substations.

## 4. Working Near Electrical Equipment

### 4.1 Working within the Brookfield Rail Network

Workers undertaking works around or under overhead wiring must be vigilant. Machinery and equipment must not be allowed to make contact with the overhead structures or wiring. Observers must be used when using machinery in close proximity to the overhead structures and wiring.

Any contact or damage to the overhead structures and wiring must be immediately reported to the *Network Controller*.

Any contact or damage to the on-ground or below ground wiring must be immediately reported to the *Network Controller*.

The *Network Controller* must advise the Regional Signal Superintendent for the area immediately a report is received and, if necessary, apply Rule 2009 Reporting and Responding to a Condition Affecting the Network.



**NOTE:** Workers must take extra care when handling long objects near overhead equipment.

When carrying long pipes or long objects in the Electrified Area they should be carried horizontally at or below shoulder height by at least two people.

### 4.2 Working within the PTA Electrified Area

Unless authorised in accordance with the requirements specified in the Public Transport Authority's (PTA) Procedure 9030 Safety Instructions for the Electrified Area, workers must not climb on top of *Rail Traffic* in the electrified area.

#### 4.2.1 Work above overhead line

Workers must not cause water or debris to fall onto overhead line equipment.

#### 4.2.2 Work tools and equipment

Workers must not use metal or metal-reinforced ladders within the safe distance of overhead line equipment or associated equipment.

Steel tapes, metal-reinforced linen tapes and long steel rules may only be used in accordance with the PTA's Procedure 9030 Safety Instructions for the Electrified Area.

## 5. Underground Services

Workers must not dig, break the ground or drive anything into the ground before the whereabouts of buried services and underground cables are located.

## 6. Faults in Electrical Infrastructure



**WARNING:** Untrained workers must not try to extinguish fires near *Electrical Infrastructure* and signalling *Locations*.

Workers who see or suspect faults, fallen wires or fires in the *Electrical Infrastructure* must immediately tell the *Network Controller*.

The *Network Controller* must advise the Regional Signal Superintendent for the area immediately a report is received and, if necessary, apply Rule 2009 Reporting and Responding to a Condition Affecting the Network.

The *Network Controller* must tell the PTA's *ECO* if the report is for Overhead traction wiring equipment within the PTA Electrified Area.

## 7. Illustrations of Typical Overhead Structures within the PTA

If possible, refer to these diagrams to report faults, fallen overhead line equipment or fires in overhead line equipment.

Figure 2017-1 Typical Single Track Cantilever Arrangement in PTA Electrified Area.

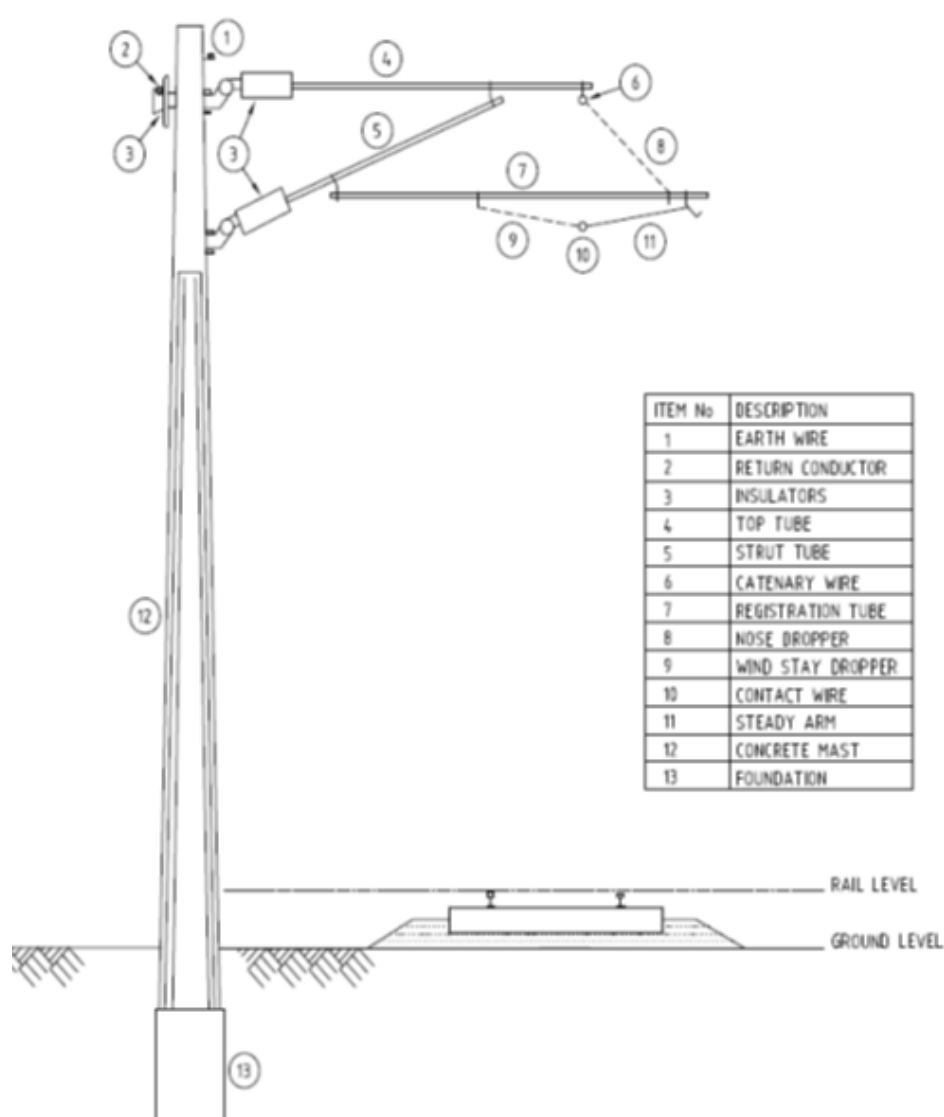
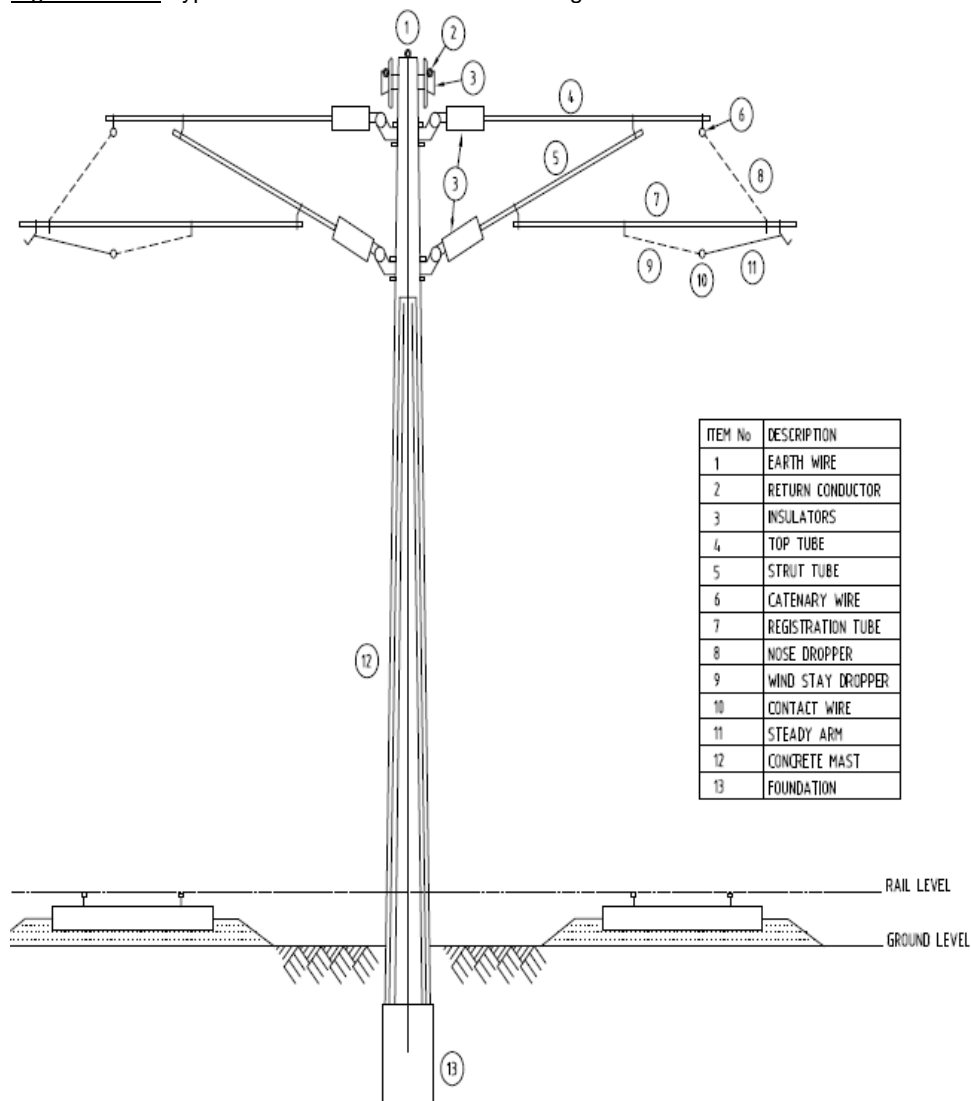


Figure 2017-2 Typical Back to Back Cantilever Arrangement in PTA Electrified Area.

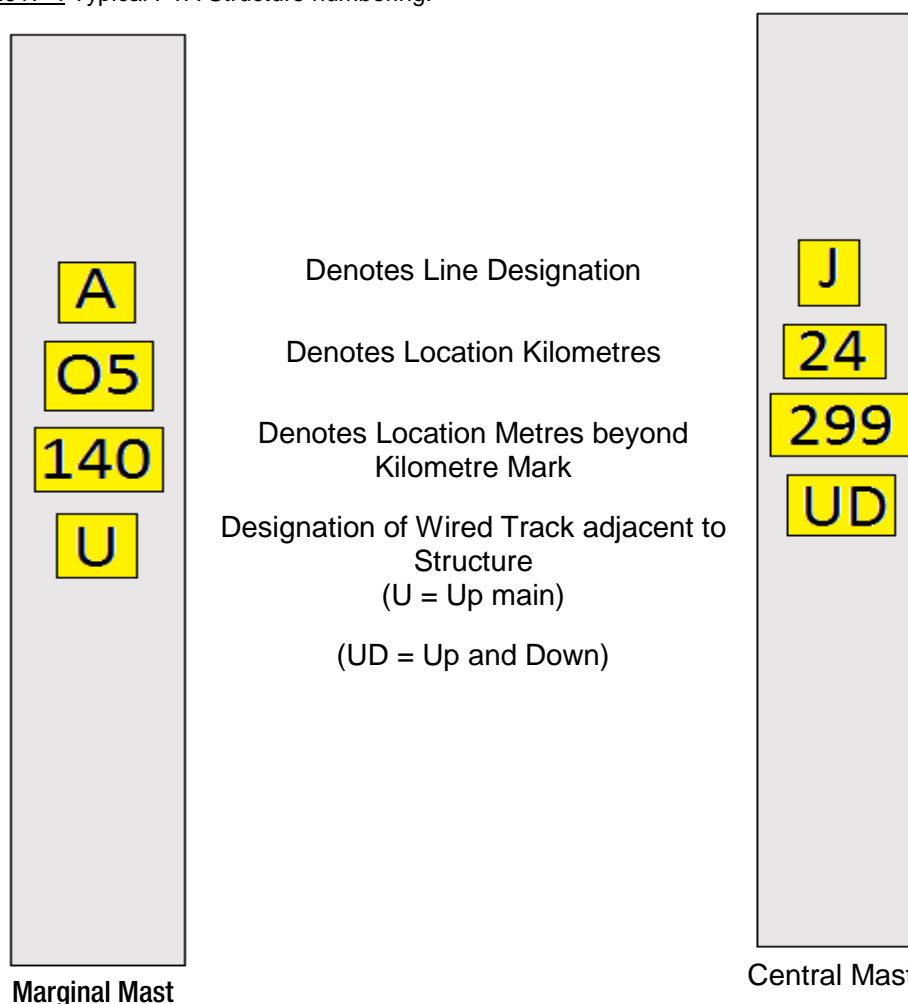


PTA Structure numbers are placed on every mast in line with a specific numbering format.

Figure 2017-3 Line names and directions .

Line Name		Direction/Location	
A	Armadale line	D	Down
F	Fremantle line	P	Platform
J	Joondalup line	S	Siding
M	Midland line	U	Up
R	Rockingham line	UD	Up/Down
T	Thornlie line		

Figure 2017-4 Typical PTA Structure numbering.



## 8. Reference

2009 Reporting and Responding to a Condition Affecting the Network

9030 Safety Instruction for the Electrified Area. (PTA document)

## 9. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Responsibilities of Rail Traffic Crews

Rule Number: 2027



**Brookfield**  
Rail

# Responsibilities of Rail Traffic Crews

Rule Number: 2027

## Document Control Identification

Document title	Number	Version	Date
2027 – Responsibilities of Rail Traffic Crews		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2027 – Responsibilities of Rail Traffic Crews	4 May 2016		

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# Glossary of this Rule

<i>Access Provider</i>	An organisation that provides and manages a Rail Network and safe method of entry to that network for Access Users.
<i>Adjacent</i>	Near to, close to, parallel to.
<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Block Station</i>	A station at either end of a block section at which equipment is provided to control the movement of rail traffic.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Complete</i>	Rail traffic where the consist has not parted.
<i>Crossing Location/Station</i>	May consist of single or double ended portion of track, to hold rail traffic, connected to a main line that is used to permit other rail traffic to cross or pass.
<i>Disabled</i>	Unable to travel due to a defect.
<i>Drivers Information System (DIS)</i>	<ul style="list-style-type: none"> <li>• A system that can provide Rail Traffic Crews with:</li> <li>• Train Consist</li> <li>• Temporary Speed Restrictions</li> <li>• Permanent Speed Restrictions</li> <li>• Standard Timetable</li> <li>• Train Notices</li> <li>• Instructions</li> <li>• Track Warnings</li> <li>• • Vehicle Restrictions</li> </ul>
<i>Electrical Infrastructure</i>	<p>may include:</p> <p>Equipment and systems for supplying and distributing electricity</p> <p>Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.</p>
<i>End-of-Train Marker</i>	A device, including tail lights, fitted to the trailing end of the last vehicle of a rail traffic consist to indicate the end of the consist.
<i>End-of-Train Monitor</i>	A device secured to the coupler of the last vehicle which communicates via radio link to the locomotive and provides real time end-of-train air pressure and other related information (e.g. rail traffic separation alarm).

<i>In-Effect</i>	Activate, become current, in force.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling infrastructure and telecommunications infrastructure.
<i>Level Crossings</i>	A location where the railway line and a road or pedestrian walkway cross paths on the same level (at grade).
<i>Limit Of Authority</i>	The limit may be defined by a sign, a signal capable of displaying a STOP indication, or a specific kilometrage point on a line. It defines the location to which rail traffic may travel under a Proceed Authority or the limits of a work on track authority.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Network Safeworking Rules and Procedures</i>	The master set of Brookfield Rail rules and procedures that define how Access Users operate safely on the Brookfield Rail Network.
<i>Normal Speed</i>	A speed that does not exceed the speed limit currently in effect for the section of line and type of rail traffic.
<i>Operator's Representative</i>	A person authorised by an above rail or below rail Operator to act on their behalf.
<i>Permanent Speed Restriction</i>	A speed restriction (not temporary) imposed on the Network due to characteristics of the infrastructure.
<i>Points</i>	A track component consisting of paired pieces of tapered rail (blades) that can be moved and set to allow tracks to diverge or converge.
<i>Protection</i>	The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Road Rail Vehicle</i>	A road vehicle fitted with additional rail gear that enables the vehicle to be driven on rail.
<i>Roll-by Inspection</i>	A visual inspection of passing rail traffic to identify equipment, loading security or other defects or failure.
<i>Route</i>	The rail traffic path from one limit of authority to the next in the direction of travel.

<i>Safe Place</i>	<p>A Safe Place is:</p> <ul style="list-style-type: none"> <li>• where there is at least three metres clearance from the nearest Running Line;</li> <li>• on a Platform behind the safety lines;</li> <li>• within a purpose-built refuge or shelter;</li> <li>• where a structure or physical barrier has been erected to provide a position of safety; or</li> <li>• immediately in front of stationary and Secured Rail Traffic.</li> </ul>
<i>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Signalling and Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.
<i>Systems of Safeworking</i>	An integrated system of operating procedures and engineered systems used in the Network, for safe operation of rail traffic, and protection of people and property.
<i>Temporary Speed Restriction (TSR)</i>	An imposed reduction of the normal speed for a portion of track.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Workers</i>	Competent rail safety workers whose primary duties are associated with work on or around infrastructure in the Rail Corridor.
<i>Train</i>	A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles. Rail Traffic.
<i>Travel</i>	Planned or purposeful movement from one location to another.

# 1. Purpose

The purpose of this Rule is to provide instruction detailing the responsibilities of *Rail Traffic Crews* on the *Network*.

# 2. General

*Rail Traffic Crews* must be competent:

- for the *Rail Traffic* they operate in the *Network*;
- in the *Systems of Safeworking* relevant to their area of operation; and
- for the *Route* over which they *Travel*.

# 3. Responsibilities

*Rail Traffic Crews* must:

- ensure that the *Drivers Information System (DIS)* documentation is obtained prior to departing the originating Depot and is retained for the duration of the journey;
- make sure their *Rail Traffic* can be operated safely before they enter and during *Travel* in the *Network*;
- ensure their *Rail Traffic* carries sufficient *Safeworking* and *Authority* forms applicable to the line being *Travelled*, before entering the *Network*;
- tell the *Network Controller* if a defect is detected on their *Rail Traffic*;
- tell the *Network Controller* if an *Infrastructure* defect is detected;
- co-operate with *Competent Workers* in the performance of their duties;
- tell the *Network Controller* about breaches to the *Network Safeworking Rules and Procedures*; and
- promptly report delays to the *Network Controller*.

### 3.1 Vigilance

*Rail Traffic Crews* must:

- observe the *Track* in the direction of *Travel*;
- observe other *Rail Traffic*;
- frequently observe to the rear to ensure that the *Rail Traffic* is following in a safe and proper manner;
- not engage in any activity that distracts their attention, or the attention of others;
- be prepared to stop or reduce *Rail Traffic* speed if required;
- advise the operator of any *Road Rail Vehicle* known to be following when it is necessary to stop or reduce speed;
- not exceed speed limits;
- reduce *Rail Traffic* speed if it is considered that the conditions prevent safe operation at *Normal Speed*;
- stop, if braking equipment is not considered to be operating as expected;
- pay particular attention when:
  - *Authorities* are being received;
  - reporting their position;
  - visibility is impaired for any reason; and
  - approaching:
    - a *Block Station*;
    - a *Crossing Location*;
    - signals, indicators and signs;
    - *Track Workers*; and
    - *Level Crossings*.

## 3.2 Cross Checks

Each *Rail Traffic Crew* member must be aware of and agree to the current *Limit of Authority*.

The *Rail Traffic Crew* must confirm with each other the meaning of:

- signals;
- *Points* settings;
- *Permanent Speed Restriction* signs; and
- *Temporary Speed Restriction (TSR)* signs.

## 3.3 Display of Authority

Where the *Authority* is carried on the *Rail Traffic*, it must be displayed in conspicuous view of the crew member at the controls of the *Rail Traffic*.

# 4. Rail Traffic Crew Changeover

*Rail Traffic Crews* must tell a relieving *Rail Traffic Crew* about any conditions that could affect the operation of the *Rail Traffic*.

## 4.1 Relieving Rail Traffic Crew

The relieving *Rail Traffic Crew* must check the status of the *Authority In-Effect* and, if the *Authority* is a token or written *Authority*, make sure that it is:

- understood;
- correctly recorded, if written; and
- clearly displayed.

The relieving *Rail Traffic Crew* must tell the *Network Controller* about:

- the change of *Rail Traffic Crew*;
- any change to communications arrangements;
- the *Limits of the Authority* currently *In-Effect*, and
- any special instructions.

If the *Limits of Authority* or special instructions reported by the *Rail Traffic Crew* are incorrect, the *Network Controller* must issue a new *Authority* or provide updated instructions as required.

## 4.2 Rail Traffic Crew Being Relieved

The *Rail Traffic Crew* being relieved must not depart until they have made sure that the relieving *Rail Traffic Crew* understands:

- the status of the *Authority In-Effect*;
- the status of signals and *Points*;
- the speed limits applicable for the *Rail Traffic*;
- the status of *Track* and *TSRs* in place; and
- any factors that could affect the safety of *Rail Traffic*.

# 5. Examination of Other Rail Traffic

*Rail Traffic Crews* must check other *Rail Traffic*, as effectively as the circumstances allow, for:

- loading irregularities;
- *Rail Traffic* defects;
- dragging equipment;
- the presence and operation of an *End-of-Train Marker*; and
- any other irregularities.

## 5.1 Roll-by Inspection

One member of the *Rail Traffic Crew* must be in a *Safe Place*, at ground level if possible, to conduct a *Roll-by Inspection* of other *Rail Traffic*.

The relieved *Rail Traffic Crew* must carry out a *Roll-by Inspection* of the *Rail Traffic* as it departs the change-over *Location*, unless there will be a delay due to ongoing loading etc.

## 5.2 Advising of the Examination

*Rail Traffic Crews* must inform each other after the examination and advise that the other *Rail Traffic* is *Complete* and whether or not there were any irregularities.

Where an *End-of-Train Marker* is missing *Rail Traffic Crews* must act in accordance with Rule 4005 Rail Traffic Lights and Markers.

## 6. Reporting and Managing of Faults and Unsafe Conditions

If a defect or unsafe condition is detected, *Rail Traffic Crews* must tell:

- the affected *Rail Traffic Crew*, and
- the *Network Controller*.

If a fault or failure requires attention by the *Rail Traffic Crew*, they must, if necessary, arrange for *Protection* from other *Rail Traffic* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

## 7. Overdue Occupancies

### 7.1 Stopped Rail Traffic

If a *Rail Traffic* stoppage is or will become extended, the *Rail Traffic Crew* must:

- tell the *Network Controller* the *Location* and the reason why the *Rail Traffic* is overdue;
- if necessary, *Secure* the *Rail Traffic*; and
- if necessary, provide *Protection* for the *Rail Traffic* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

### 7.2 Inspecting Stopped Rail Traffic



**WARNING:** Where there is a risk of being struck by *Rail Traffic* on *Adjacent* lines, the *Rail Traffic Crew* must arrange to implement safety measures in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines.



**WARNING:** *Adjacent* lines may be under the control of a different *Network Controller* or *Access Provider*.

If it is necessary to inspect their *Rail Traffic* the *Rail Traffic Crew* must:

- make sure that they and the *Rail Traffic* are *Protected* against *Rail Traffic* on *Adjacent* lines; and
- tell the *Network Controller* the result of the inspection.

### 7.3 Disabled Rail Traffic

If the *Rail Traffic Crew* reports overdue *Rail Traffic* as *Disabled*, the *Network Controller* must act in accordance with Rule 4009 Removing Disabled Rail Traffic.

## 8. Confirming Rail Traffic Complete

When it is necessary to determine that *Rail Traffic* is *Complete*, the following methods must be used by *Rail Traffic Crews* or other *Competent Workers*:

- a visual inspection has verified the presence of the *End-of-Train Marker*;
- where information is provided by an *End of Train Monitoring* system;
- no unaccounted brake reduction has occurred and no other sign on the brake gauge is evident which indicates the *Train* is not *Complete*; or
- it is determined that the correct vehicle is at the rear of the *Rail Traffic*.

## 9. References

4001 Protecting Disabled Rail Traffic

4005 Rail Traffic Lights and Markers

4009 Removing Disabled Rail Traffic

9010 Protecting Work from Rail Traffic on Adjacent Lines

## 10. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Responsibilities of Network Controllers

Rule Number: 2029



**Brookfield**  
Rail

# Responsibilities of Network Controllers

Rule Number: 2029

## Document Control Identification

Document title	Number	Version	Date
2029 – Responsibilities of Network Controllers		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2029 – Responsibilities of Network Controllers	4 May 2016		

## Authorisation



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# Glossary for this Rule

<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Blocking Facilities</i>	A facility used by a Network Controller to prevent either the unintended issue of an Occupancy Authority, or the operation of points or signalling equipment.
<i>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Disabled</i>	Unable to travel due to a defect.
<i>Emergency</i>	Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure.
<i>Infrastructure Representatives</i>	An authorised Brookfield Rail employee or an organisation contracted to Brookfield Rail, responsible for maintaining Network infrastructure.
<i>Issue</i>	To provide or send copies of authorities, warnings, notices and Network publications to affected Competent Workers by voice, hand delivery or electronic means.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Control Diagram</i>	A diagram used by Network Controllers showing operational information for a Rail Traffic control area, also known as a Network Control graph to create a permanent record.
<i>Network Controllers</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Network Safeworking Rules and Procedures</i>	The master set of Brookfield Rail rules and procedures that define how Access Users operate safely on the Brookfield Rail Network.
<i>Obstruct</i>	To make a line unsafe for the passage of rail traffic by the placing of tools, equipment or plant on the track.
<i>Operators Representatives</i>	A person authorised by an above rail or below rail Operator to act on their behalf.
<i>Permanent Record</i>	A record made in writing or in an electronic system, and kept for reference and audit.
<i>Proceed Authorities</i>	An Authority (e.g. a PROCEED aspect on a signal, Train Order) that allows rail traffic to enter and occupy a portion of line and proceed in the forward direction.

<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Section</i>	The line between the departure end station limit of one location and the arrival end station limit of another location. A section consists of one or more blocks.
<i>Special Working</i>	Working rail traffic using an Alternative Proceed Authority or manual block working.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Workers</i>	Competent rail safety workers whose primary duties are associated with work on or around infrastructure in the Rail Corridor.
<i>Work on Track</i>	The work performed in the Danger Zone.
<i>Work on Track Authorities</i>	An authority to perform work on track. See Local Possession Authority (LPA); Track Occupancy Authority (TOA) and Track Work Authority (TWA),

# 1. Purpose

The purpose of this Rule is to provide instructions detailing the responsibilities of *Network Controllers*.

# 2. General

*Network Controllers* safely manage the transit of *Rail Traffic* through the *Network*.

*Network Controllers* must plan, set priorities for, and manage:

- *Rail Traffic* services;
- *Work on Track Authorities* and methods;
- *Proceed Authorities*;
- liaison with relevant *Operators Representatives* and *Infrastructure Representatives* and external services during incident management; and
- the restoration of *Rail Traffic* services, safely and promptly.

## 3. Responsibilities

*Network Controllers must:*

- make sure control systems are operated correctly;
- respond to equipment failures and warning alarms promptly;
  - reporting all equipment failures and faults to the relevant *Infrastructure Representative*;
- make sure accurate time is maintained and used;
- maintain accurate and timely information on the *Network Control Diagram* on actual and anticipated *Rail Traffic* movements in accordance with W110-200-006 Procedure for General Responsibilities of a Train Controller, Work on Track Authorities and methods;
- not engage in any activity that distracts their attention from their safeworking duties, or that may distract others in the *Network Control* centre;
- authorise and *Issue Proceed Authorities* and *Work on Track Authorities*;
- as necessary, introduce methods of *Special Working*;
- as necessary, provide *Rail Traffic* details to affected *Network Controllers* and other workers; and
- promptly report incidents and breaches of the *Network Safeworking Rules and Procedures* to their Supervisor and affected *Operator's Representatives*.

Where *Authorities* are being *Issued* manually, the *Network Controller* must cross-check the *Authority* with the *Network Control Diagram* and other *Authorities Issued*.

*Network Controllers* must complete the transmission, verification and recording of each *Authority*, *Work on Track Authority* and method before commencing any other activity.

### 3.1 Area of Control

Control boundaries define the geographic areas of responsibility for each *Network Controller*.

*Network Controllers* may only authorise or manage authorities or activities within their area of control.

## 4. Network Control Handover

A *Network Controller* must tell the relieving *Network Controller* about any conditions that could affect the operation of the *Network*.

## 5. Interface between Control Boundaries

*Network Controllers* must share up to date information concerning:

- anticipated *Rail Traffic* arrival and departure times;
- the planning of *Rail Traffic* paths;
- *Rail Traffic* identification details; and
- *Crossing* and passing requirements as appropriate.

Before authorising *Rail Traffic* to proceed to a *Location* that is managed by another *Network Controller*, permission from that *Network Controller* must be obtained.

## 6. Overdue Occupation

Where the agreed or expected reporting, clearance or *Section* running times are exceeded by an unreasonable amount, the *Network Controller* must:

- contact the *Competent Worker* in charge of the *Work on Track* activities; or
- contact the *Rail Traffic Crew*.

If this contact cannot be made, the *Network Controller* must advise the *Track Workers* or *Rail Traffic Crew's* organisation and alert them to the circumstances.

The requirements of Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN) must be observed if the *Network Controller* cannot communicate with the *Rail Traffic Crew* of an overdue *Rail Traffic* movement.

If the *Track Workers* or *Rail Traffic Crew's* safety cannot be established, the *Network Controller* must initiate *Emergency* procedures.

## 7. Obstruction of Lines Other Than Disabled Rail Traffic

If an *Obstruction* other than *Disabled Rail Traffic*, such as wash away, landslides etc., is reported, the *Network Controller* responsible for the affected portions of line must act in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN), and:

- instruct *Rail Traffic Crew's* in or approaching the affected block to stop their *Rail Traffic* immediately; and
- apply *Blocking Facilities* in accordance with Rule 6003 Blocking Facilities to prevent entry of further *Rail Traffic* into affected or potentially affected portions of *Track*.

## 8. Keeping Records

*Network Controllers* must keep a *Permanent Record* of relevant conditions and movements in the *Network*.

## 9. References

2009 Reporting and Responding to a Condition Affecting the Network (CAN)

6003 Blocking Facilities

W110-200-006 Procedure for General Responsibilities of a Train Controller

## 10. Effective Date

4 May 2016

# Network Safeworking Rules and Procedures

## Responsibilities of Track Workers

Rule Number: 2031



**Brookfield**  
Rail

# Responsibilities of Track Workers

Rule Number: 2031

## Document Control Identification

Document title	Number	Version	Date
2031 – Responsibilities of Track Workers		1.0	31 March 2016

## Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
2031 – Responsibilities of Track Workers	4 May 2016		

## Authorisation



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# Glossary for this Rule

<i>Adjacent</i>	Near to, close to, parallel to.
<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>End-of-Train Marker</i>	A device, including tail lights, fitted to the trailing end of the last vehicle of a rail traffic consist to indicate the end of the consist.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<i>Network Controller</i>	A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.
<i>Network Safeworking Rules and Procedures</i>	The master set of Brookfield Rail rules and procedures that define how Access Users operate safely on the Brookfield Rail Network.
<i>Occupancy</i>	Presence of rail traffic or track workers on track.
<i>Protection</i>	The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Protection Officer</i>	The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).
<i>Rail Traffic</i>	Trains and track vehicle or vehicles travelling on the Network.
<i>Rail Traffic Crew</i>	Competent Workers responsible for the operation of the Motive Power Unit.
<i>Safe Place</i>	<p>A Safe Place is:</p> <ul style="list-style-type: none"> <li>• where there is at least three metres clearance from the nearest Running Line;</li> <li>• on a Platform behind the safety lines;</li> <li>• within a purpose-built refuge or shelter;</li> <li>• where a structure or physical barrier has been erected to provide a position of safety; or</li> <li>• immediately in front of stationary and Secured Rail Traffic.</li> </ul>
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Workers</i>	Competent rail safety workers whose primary duties are associated with work on or around infrastructure in the Rail Corridor.
<i>Train</i>	A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles. Rail Traffic.
<i>Work on Track Authorities</i>	An authority to perform work on track. See Local Possession Authority (LPA); Track Occupancy Authority (TOA) and Track Work Authority (TWA),

# 1. Purpose

The purpose of this Rule is to provide instructions detailing the responsibilities of *Track Workers* in the *Network*.

# 2. General

*Track Workers* engaged on works in the *Network* must be under the supervision of a *Protection Officer* who has access to:

- current information on the running of *Rail Traffic*;
- any relevant notices of working arrangements for that *Location*; and
- the *Network Safeworking Rules and Procedures*.



**NOTE:** *Track Workers* must expect the movement of *Rail Traffic* at any time, on any *Track* and in any direction in addition to the requirements set out in Rule 1003 General Responsibilities for Safety.

# 3. Responsibilities of Track Workers

*Track Workers* responsibilities may include:

- coordinating maintenance or construction workgroups and associated *Rail Traffic* in liaison with the *Network Controller*; and
- managing worksite *Protection* when appointed as a *Protection Officer* for the work.

*Track Workers* must report to the *Network Controller* any:

- faults or defects that could affect the operation of the *Network*; and
- breach of the *Network Safeworking Rules and Procedures*.

*Protection Officers* responsibilities include:

- determining safety measures required for *Occupation* of the *Track*;
- managing worksite *Protection*;
- obtaining *Work on Track Authorities*; and
- advising the *Network Controller* of any delay in the returning the *Track* to service.

## 4. Interface between Work on Track Authorities

An interface between *Work on Track Authorities* occurs where two or more *Work on Track Authorities* are physically *Adjacent*.

### 4.1 Information Sharing

*Protection Officers* whose *Work on Track Authorities* interface with another *Work on Track Authority*, must frequently share information concerning:

- anticipated movement of *Rail Traffic*; and
- *Rail Traffic* identification details.

Before authorising *Rail Traffic* to proceed to a *Location* managed by another *Protection Officer*, permission must be obtained from that *Protection Officer*.

## 5. Passing Rail Traffic



**WARNING: Track Workers must be in a Safe Place for the passage of Rail Traffic.**

All *Track Workers* have a responsibility to observe passing *Rail Traffic* for potential defects which may include:

- signs of alarm from passengers;
- loading irregularities;
- braking defects;
- dragging equipment;
- fire on a *Train*; and
- the absence or non-operation of an *End-of-Train Marker*.

The *Rail Traffic Crew* and the *Network Controller* must be advised of any irregularity on that *Rail Traffic*.

### 5.1 Standing clear

As rail traffic passes, track workers must:

- stand clear and remain in a safe place;
- make no movement that may be mistaken by rail traffic crews as a movement into the Danger Zone; and
- unless responsible for displaying handsignals to rail traffic crews, make no movements and gestures that may be mistaken for handsignals.

## 6. References

1003 General Responsibilities for Safety

## 7. Effective Date

4 May 2016