

Network Safeworking Rules and Procedures

Protecting Disabled Rail Traffic

Rule Number: 4001



Brookfield
Rail

Protecting Disabled Rail Traffic

Rule Number: 4001

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Glossary for this Rule

<i>Adjacent</i>	Near to, close to, parallel to.
<i>Affected Signal</i>	A signal not available for normal use.
<i>Bi-Directional</i>	Normal movement of rail traffic in either direction according to the infrastructure and system of Safeworking in use.
<i>Block</i>	A portion of line with defined limits between which only one rail traffic movement is permitted at any one time (i.e. not a Permissive Block).
<i>Cancel</i>	To withdraw permission for or to end previously authorised activities, such as Occupancy Authorities, without completing them.
<i>Complete</i>	Rail traffic where the consist has not parted.
<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>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Foul</i>	In a position to obstruct rail traffic on adjacent lines.
<i>Headlights</i>	Lights fitted at the front of rail traffic to provide visibility for the rail traffic crew and to improve the visibility of rail traffic.
<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>Locomotive</i>	Self-propelled, non-passenger-carrying railway vehicles used for hauling other (typically freight or passenger) rolling stock.
<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<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>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>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>Railway Track Signal (RTS)</i>	A device attached to a rail that explodes on impact, used to attract attention of rail traffic crews.
<i>Restraint Authority</i>	The Restraint Authority directs rail traffic not to depart the location irrespective of any available Proceed Authority.
<i>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<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-Circuited Territory</i>	Portions of line where the system of safeworking relies on track circuits to detect the presence of rail traffic.
<i>Track-Circuit Shorting Device</i>	A cable that can be clamped to a line's rails to activate track-circuits.
<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 outline provisions of *Protection* to *Rail Traffic* that has failed or become an *Obstruction* in the *Network*.

2. General

If an *Obstruction* is reported, the *Network Controller* responsible for the affected portion of line must act in accordance with Rule 2009 Reporting and Responding to a Condition Affecting the Network (CAN), and:

- instruct the *Rail Traffic Crew* in or approaching the affected block *Section* to stop their *Rail Traffic* immediately; and
- apply *Blocking Facilities* to prevent entry of further *Rail Traffic* into an affected or potentially affected portion of *Track*.

3. Rail Traffic Protection



WARNING: An unexpected loss of brake pipe pressure may indicate that *Rail Traffic* has derailed, or has derailed and *Fouled Adjacent lines*.

Where *Adjacent lines* are or might be *Obstructed* those lines must be *Protected* first.

Rail Traffic requires *Protection* where:

- the *Rail Traffic* needs assistance;
- the *Rail Traffic* *Obstructs*, or might *Obstruct*, *Adjacent lines*; or
- the line is *Obstructed*.

The *Network Controller* may advise the *Rail Traffic Crew* of *Disabled Rail Traffic*, that *Protection* is not required provided:

- communications with the first approaching *Rail Traffic* has been established; and
- that *Rail Traffic Crew* is advised of the circumstances.

The *Network Controller* must make a *Permanent Record* of that advice.

3.1 Disabled Rail Traffic

The *Rail Traffic Crew of Disabled Rail Traffic* must:

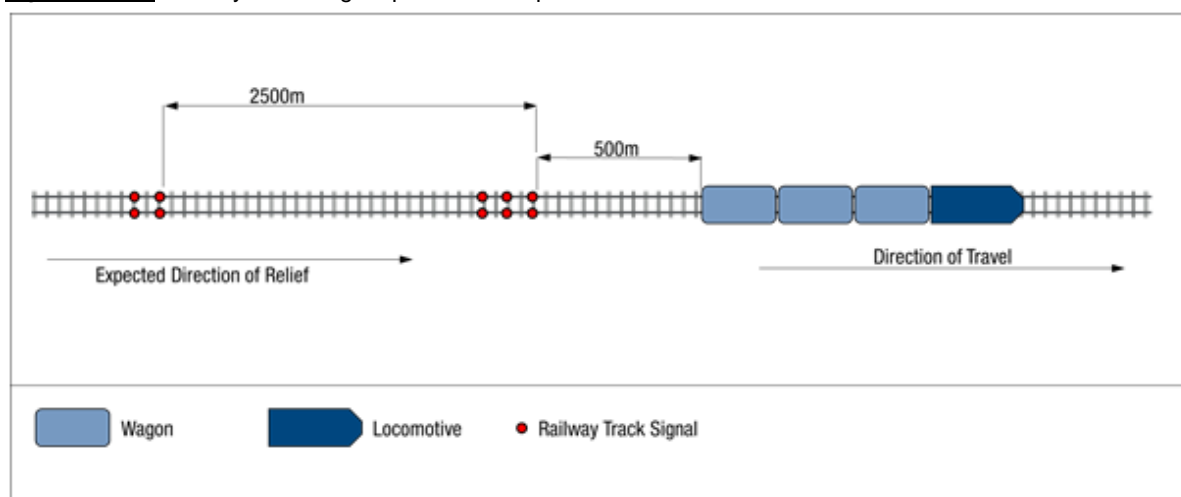
- ensure their own safety;
- tell the *Network Controller*:
 - there is a failure;
 - the *Location* of the *Disabled Rail Traffic*; and
 - the nature of the failure, when this has been determined;
- if necessary, protect the *Disabled Rail Traffic*; and
- ensure that the *Rail Traffic Consist* is *Secured* to prevent rail vehicles from running away.

Where *Rail Traffic* is to be protected by using *Railway Track Signals (RTS)* they are to be placed on all rails of the line to be protected in accordance with Procedure 9004 Using Railway Track Signals.

RTS must be placed in the following manner:

- three *RTS* on each line at least 500 metres; and
- two *RTS* on each line at 2500 metres from the three *RTS*.

Figure 4001-1 Railway Track Signal placement to protect rail traffic.



The *Network Controller* must, where necessary, prevent *Rail Traffic* from moving by:

- the *Issue* of a *Restraint Authority* to the *Rail Traffic Crew* of:
 - the *Disabled Rail Traffic*;
 - approaching *Rail Traffic*; and
- applying *Blocking Facilities*.

3.2 Adjacent Lines



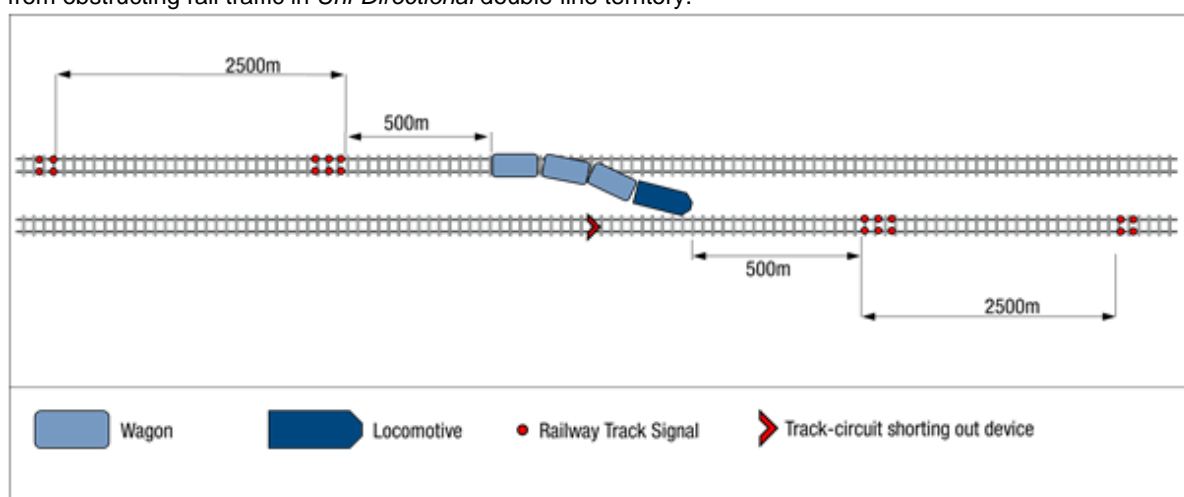
WARNING: Where the *Rail Traffic Crew* are unable to confirm that the *Adjacent* line is not *Obstructed*, they must assume that it is *Obstructed* and *Protect* that line first.

If the *Rail Traffic Crew* suspects their *Rail Traffic* has *Fouled* an *Adjacent* line, they must immediately tell the *Network Controller*.

Where the *Rail Traffic Crew* are not assured by the *Network Controller* that other *Rail Traffic* has been stopped or prevented from entering the affected *Block*, they must:

- immediately and repeatedly transmit an *Emergency* broadcast; and
- use *Rail Traffic* lights to warn any approaching *Rail Traffic* by flashing the *Headlights*.

Figure 4001-2 Railway Track Signal and track-circuit shorting out device placement to protect an adjacent line from obstructing rail traffic in *Uni-Directional* double-line territory.



On *Bi-Directional* lines where there are *Adjacent* lines, *Protection* must be applied to affected lines in both directions.

The *Rail Traffic Crew* must apply *Protection* to affected *Adjacent* lines with the priority they consider necessary.

3.2.1 Track-Circuit Shorting Out Device



WARNING: *Track-Circuit Shorting Out Devices* cannot be used unless it is determined that it is safe to do so.

The *Rail Traffic Crew* must determine that if there are any fallen overhead line wires, they are not close to or in contact with the *Rail Traffic* or rails.

In *Track-Circuited Territory* the *Rail Traffic Crew* must:

- prior to getting out of the *Rail Traffic*, determine that there are no fallen overhead line wires close to, or in contact with the *Rail Traffic*, or rails;
- once it has been determined that it is safe to do so, fasten a *Track-Circuit Shorting Out Device* to the rails of the *Adjacent Obstructed* lines; and
- if possible, confirm that *Affected Signals* show STOP.

Where the *Track Circuit Shorting Out Device* cannot be used because of the proximity of fallen overhead line wires and the *Rail Traffic Crew* cannot establish communications with Network Control, the *Rail Traffic Crew* must continue to:

- transmit an *Emergency* broadcast; and
- use *Rail Traffic* lights to warn any approaching *Rail Traffic* by flashing the *Headlights*.

3.2.2 Using the Rail Traffic's Motive Power Unit to Assist in Placing Protection.

After *Securing* the remaining portion of the *Train*, by a full service application of the brake, the *Rail Traffic Crew* may detach a *Motive Power Unit* or *Locomotive* for use during placement of *Protection*.

The *Motive Power Unit* or *Locomotive* used for placement of *Protection* must return to the remaining portion of the *Train*.

3.3 Removing RTS

Before the *Rail Traffic* is removed from the *Section*, the *Rail Traffic Crew* must:

- ensure the three *RTS* at 500 metres are cleared from the line; and
- advise the *Network Controller* the *Location* of the two *RTS* at 2500 metres, if they are still in place.

The *Network Controller* must advise the *Rail Traffic Crew* of the first *Rail Traffic* movement, of each gauge, to *Travel* through the *Section*, the *Location* of the remaining two *RTS*.

4. Protecting Rail Traffic That Needs Assistance

4.1 Assistance from the Rear

Unless the *Network Controller* advises otherwise, if there is no *Rail Traffic* standing at a signal at STOP within 500 metres behind the *Rail Traffic* that needs assistance, the *Rail Traffic Crew* must place *Protection* on the line at the nearer of:

- At least 500m behind the *Rail Traffic*, or
- the first signal at STOP behind the *Rail Traffic*.

Figure 4001-3 Railway Track Signals placed at least 500 metres behind the rail traffic to protect it.

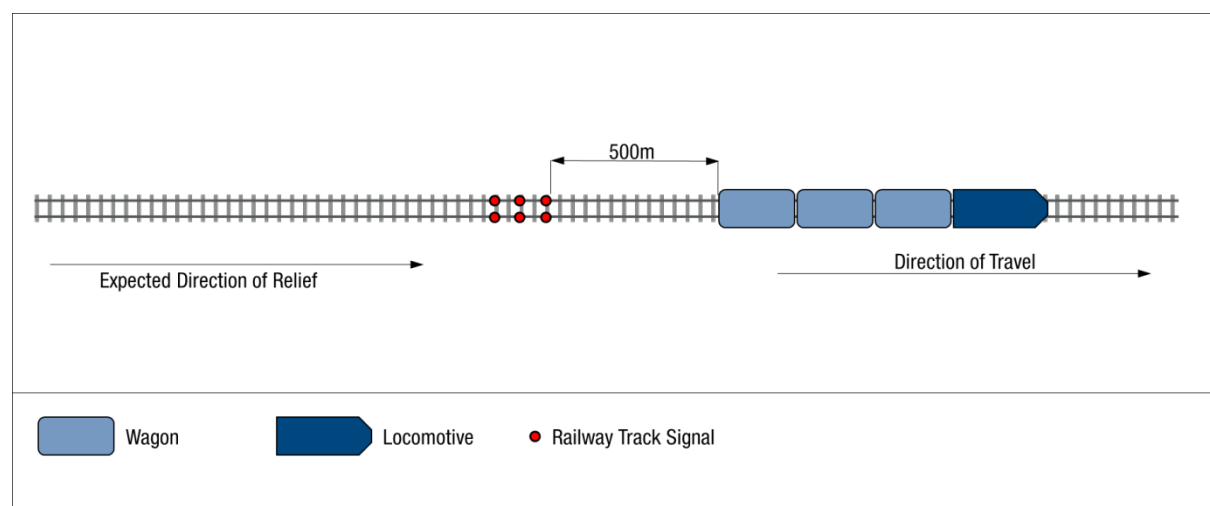
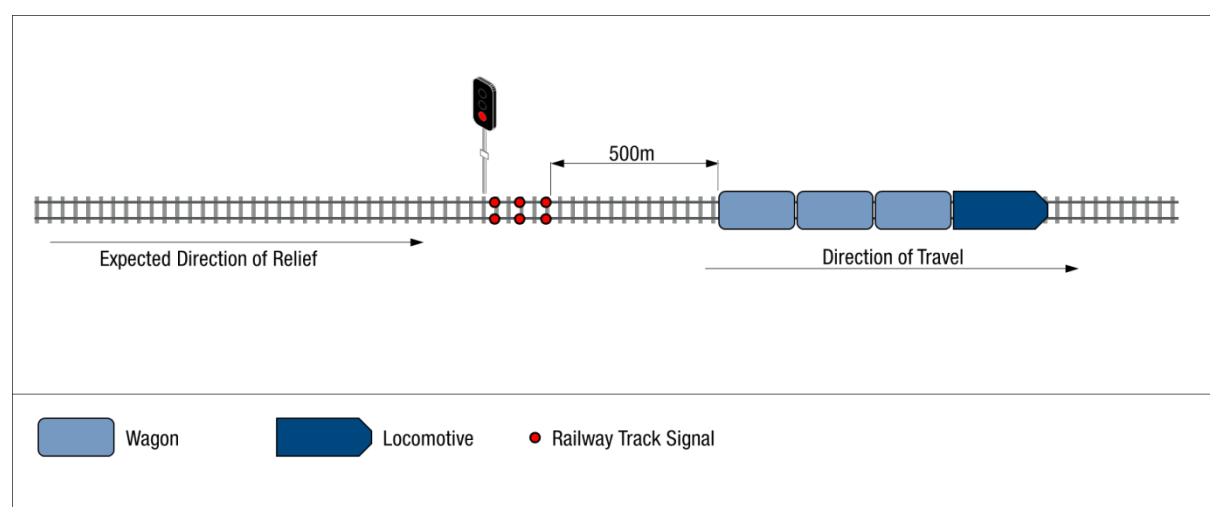


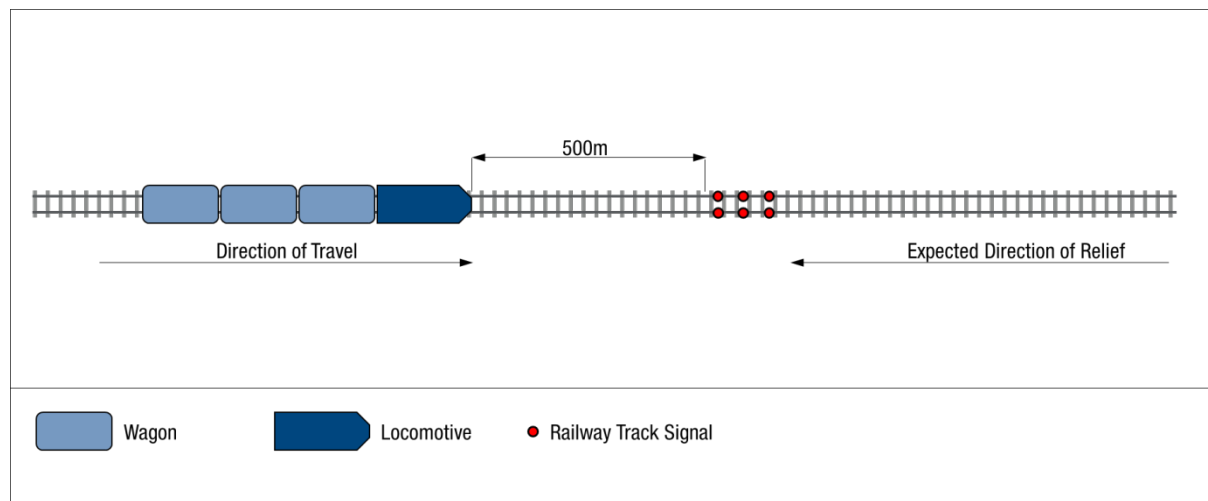
Figure 4001-4 Railway Track Signals placed at the first signal at STOP behind rail traffic to protect it.



4.2 Assistance from the Front

If assistance is expected from the front, the *Rail Traffic Crew* must place *Protection* on the line 500 metres forward of the *Rail Traffic*.

Figure 4001-5 Railway Track Signals placed to protect rail traffic from assisting rail traffic approaching from the front.



If there is a *Signal* for the opposing direction within 500 metres of the *Rail Traffic* needing assistance, the *Rail Traffic Crew* must:

- place *Protection* on the line at that signal; and
- tell the *Network Controller* the *Location* of the *Protection*.

5. Restraint Authority

Rail Traffic Crews that have been *Issued* a *Restraint Authority* must not allow the *Rail Traffic* to move unless:

- the *Network Controller* has *Cancelled* the *Restraint Authority*; or
- relief *Rail Traffic* is attached to the *Consist*.

The *Network Controller* will *Cancel* a *Restraint Authority* when:

- the *Restraint Authority* is no longer required; or
- the whole of the *Disabled Rail Traffic* has been removed from the *Section Complete*.

6. References

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

7. Effective Date

4 May 2016

8. Attachments

Restraint Authority form

Brookfield Rail		Restraint Authority	
		(In accordance with Rule 4001 Protecting Disabled rail Traffic.)	
	Authority No.	Serial No.	Enter here the Network Controllers or Competent Workers
DELEGATION	1. To the Crew of Rail Traffic No.	Service or Train No.	ID No. Locomotive/Railcar No
	at	Station/location Identifier	¹ station/location
INSTRUCTION	2. You are instructed to:		
	2.1	<input checked="" type="checkbox"/> Remain at	Station/location Identifier ¹ station/location
	2.2	<input checked="" type="checkbox"/> Not proceed past	Station/location Identifier ¹ station/location
	3. You must not allow your Rail Traffic to be moved until:		
	3.1	<input checked="" type="checkbox"/> This Authority is cancelled; or	
	3.2	<input checked="" type="checkbox"/> The relief Rail Traffic is attached to your disabled Rail Traffic.	
CONFIRMATION	4. Issue:		
	4.1 Issued by	Network Controller Name	at Network Controller Area control
	4.2 Received by	Competent Workers Name	
	4.3 Read back confirmed correct at	00:00	hours on dd/mm/yyyy
CANCELLATION	<p>This Restraint Authority can only be <u>CANCELLED</u> by the Network Controller when,</p> <p>The condition affecting the Network governing the issue of this Restraint Authority has been resolved; OR The WHOLE of the disabled Rail Traffic has been removed COMPLETE from the section.</p>		

NOTE: ¹ Delete non applicable.

Network Safeworking Rules and Procedures

Rail Traffic Integrity

Rule Number: 4003



Brookfield
Rail

Rail Traffic Integrity

Rule Number: 4003

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Glossary for this Rule

<i>Adjacent</i>	Near to, close to, parallel to.
<i>Access</i>	A designated safe way into, along, across or out of the Rail Corridor.
<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>Brookfield Rail</i>	Brookfield Rail Pty. Ltd.
<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>	<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>Communication Device</i>	A device that supports effective communication between Network Controllers, Rail Traffic crews, Track Workers and other Competent Workers.
<i>Consist</i>	A listed order of the vehicles arranged to make up a complete train.
<i>Dangerous Goods</i>	Materials defined under the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) ©
<i>Driver Supervisory Systems</i>	A system fitted to a rail vehicle that can monitor the Driver (or train) condition or performance and apply the brakes when a measured condition or performance parameter violates a required state or limit.
<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>Fit for Purpose</i>	Able to be used for the function required.
<i>Handbrake</i>	A device to secure a rail vehicle against movement.
<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>Main Line</i>	The running line (not including Loops) normally used for running rail traffic through and between locations
<i>Marshal</i>	To arrange the order of vehicles in a train's consist.

<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<i>Network</i>	A combination of track and other associated infrastructure controlled by Brookfield Rail.
<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>Operator's Representative</i>	A person authorised by an above rail or below rail Operator to act on their behalf.
<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>Restrain</i>	To prevent movement of rail traffic with signals, signalling equipment, blocking facilities, or the issue of a written warning.
<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>
<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>Rail Traffic Integrity</i>	The requirements that must be met for rail traffic to be deemed to be fit for purpose as required by Brookfield Rail and Accreditation requirements to travel in the Network.
<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>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>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>Travel</i>	Planned or purposeful movement from one location to another.
<i>Whistle</i>	A device such as a bell, whistle, siren, horn or hooter, fitted to rail traffic to give audible warning.
<i>Work Out of Service</i>	To work rail traffic to a suitable yard, service depot, siding or location where rolling stock can leave the running line for repair or replacement of vehicle equipment.

1. Purpose

The purpose of this Rule is to provide information to *Rail Traffic Crews* about requirements for ensuring *Rail Traffic* is *Fit for Purpose* before *Accessing*, and during *Travel* in the *Network*.

2. General

Rail Traffic must be identifiable and comply with *Brookfield Rail's* gauge outline in accordance with the W110-400-001 Standard Gauge Mainline Code of Practice Track & Civil Infrastructure and W110-400-002 Narrow Gauge Mainline Code of Practice Track & Civil Infrastructure.

Rail Traffic Crews must not, without authority, bypass, disconnect or turn off any device provided for the safe operation of *Rail Traffic*.

Prior to entering the *Network*, *Rail Traffic Crews* must ensure that all necessary brake tests have been performed, in accordance with *Brookfield Rail's Network Safeworking rules and Procedures* Appendix instruction Automatic Air and Vacuum Brake Instructions, and equipment is within specified limits.

Details of the *Rail Traffic Consist* must be provided to the *Network Controller*, by the *Operator's Representative*, prior to the *Rail Traffic* departure.

Where the *Rail Traffic Consist* changes en-route the details must be provided to the *Network Controller*, by the *Operator's Representative*, prior to the *Rail Traffic* departure from that location.

Rail Traffic Integrity must be re-established whenever the *Consist* changes. *Rail Traffic Integrity* must be documented and maintained.

Loading carried on *Rail Traffic* must be *Secure* and *Restrained* safely throughout the journey.

2.1 Testing Equipment

Prior to entering the *Network*, *Rail Traffic Crews* must ensure that the following equipment is fully operational:

- Speedometer, if this can be checked;
- *Motive Power Unit* lights;
- *Motive Power Unit Whistle*;
- *Communications Equipment*;
- *Driver Supervisory Systems*; and
- *End of Train Marker*.

2.2 Dangerous Goods

Before *Rail Traffic Travels* in the *Network*, the classes of *Dangerous Goods* and the identification numbers of vehicles carrying *Dangerous Goods*, must be recorded in the *Consist* documentation.



NOTE: *Dangerous Goods* must be loaded, labelled and *Marshalled* in accordance with the [Australian Code for the Transport of Dangerous Goods by Road and Rail \(ADG Code\)©](#).

3. Brakes

3.1 Holding Rail Traffic Stationary

Rail Traffic braking systems must be capable of stopping and holding the *Rail Traffic* stationary in all *Network* conditions applicable to the *Route*.

3.1.1 Security of Rail Traffic Left on Running Lines

Whenever it is necessary for *Rail Traffic*, or a portion of *Rail Traffic*, to be left unattended on a *Running Line* for longer than 30 minutes, in addition to the full application of the automatic brake, *Handbrakes* must be applied as follows:

Figure 4003-1 Rail Traffic handbrake application table

Section of line	Percentage of handbrakes to be applied
All NG Main Lines	100 per cent
Dual gauge Kwinana-Avon Yard	33 per cent
SG Avon Yard-Kalgoorlie	50 per cent
SG Kalgoorlie-Esperance	100 per cent
SG Kalgoorlie-Leonora	100 per cent
All crossing loops	33 per cent

Vehicles not provided with *Handbrakes* must, where necessary, be chocked to meet the requirements shown above.

3.2 Abnormal or Defective Brakes

If during *Travel* there is an abnormal application of brakes or the braking performance is inadequate, the *Rail Traffic Crew* must:

- bring the *Rail Traffic* to a complete Stop;
- advise the *Network Controller*;
- if necessary, apply *Protection* for the *Rail Traffic* in accordance with Rule 4001 Protecting Rail Traffic;
- if possible, determine the cause of the application or the extent of the defect;
- if possible, remedy the cause of the application or defect; and
- tell the *Network Controller* when the journey has been resumed or if the defect cannot be remedied.

3.3 Handbrakes and Securing Devices

Equipment used for *Securing* rollingstock must be tested before rollingstock is detached from a *Motive Power Unit* or a continuous brake system.

If a vehicle without working *Handbrakes* needs to be detached and *Secured* it must be coupled to a vehicle that has working *Handbrakes* and can *Secure* the combined weight of both vehicles.

4. Rail Traffic Safety Management Systems

Rail Traffic Safety Management Systems include:

- Speedometer; or
- Annett's Key System.

5. Driver Supervisory Systems

Driver Supervisory Systems include:

- Vigilance Control;
- Detonator Detector System; or
- Automatic Train *Protection* System.

6. Defective Equipment

Where any Safety Management System fails en-route, the *Rail Traffic Crew* must obtain the *Operator's Representative* approval to continue.

The *Network Controller* must be advised by the *Rail Traffic Crew* of:

- the system failure; and
- the *Operator's Representative* approval to continue.

6.1 Speedometer Failure

Where approved to continue by their *Operator's Representative*, affected *Rail Traffic Crews* must advise the *Network Controller* of the approval and ensure that permissible speeds are not exceeded and may continue to *Travel* until:

- the *Motive Power Unit* is *Remarshalled* at the first suitable *Location*;
- the equipment can be repaired or replaced; or
- the *Motive Power Unit* is *Worked Out of Service*.

6.2 Driver Supervisory Systems

If *Driver Supervisory Systems* in the leading *Motive Power Unit* is faulty and needs to be isolated during *Travel*, the *Rail Traffic Crew* and the *Network Controller* must confer to determine what actions are required to ensure safety of the *Rail Traffic* and *Workers*.



NOTE: Actions to ensure safety of the *Rail Traffic* may include:

- getting a second crew member for driver only operation;
- reduction of speed; or
- *Travel at Restricted Speed*.

If the affected *Motive Power Unit* cannot continue to *Travel* safely, it must be:

- *Remarshalled* at the first suitable *Location*; or
- *Worked Out of Service*.

7. Defective Vehicles



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



WARNING: *Adjacent lines* may be under the control of different *Network Controllers* or *Access Providers*.

If the *Rail Traffic Crew* becomes aware that one or more of their vehicles may be defective, the crew must:

- stop if necessary;
- tell the *Network Controller*,
- *Protect* the *Rail Traffic*, if required; and
- inspect *Rail Traffic* for fault or failure, or if this is not possible, arrange for inspection.

7.1 Inspecting and Managing Defects



WARNING: If the *Rail Traffic Crew* suspect that a vehicle defect may have caused damage to *Infrastructure* the *Rail Traffic Crew* must tell the *Network Controller*.

If the inspection confirms that there is a defect, the *Rail Traffic Crew* must tell the *Network Controller*.

- the nature of the defect; and
- if the defect can be remedied on site.

If the *Rail Traffic Crew* considers that the defective vehicle cannot *Travel* normally, the *Rail Traffic Crew* or *Operator's Representative* must determine:

- the vehicle's fitness for *Travel*;
- any restrictions to be placed on the vehicle for *Travel*; or
- the proposed plan for removing the vehicle from *Running Lines*.

If the defective vehicle is able to *Travel*, the *Rail Traffic Crew* must tell the *Network Controller* about operating restrictions that apply.

If the vehicle is to be detached, the *Rail Traffic Crew* must:

- advise the *Network Controller* of the details of the vehicle including any *Dangerous Goods* and their defects;
- jointly agree with the *Network Controller*, as to the *Location* of where the vehicle is to be detached;
- *Secure* the vehicle at the agreed *Location*; and
- place red NOT TO GO cards on the vehicle.

Any equipment that has been detached from a vehicle must be moved to a position where it cannot be struck by *Rail Traffic*.

The *Network Controller* must be advised of any detached equipment, and if the detached equipment cannot be moved *Clear* of the line.

8. References

4001 Protecting Rail Traffic

9010 Protecting Work from Rail Traffic on Adjacent Lines.

W190-400-001 Standard Gauge Mainline Code of Practice Track & Civil Infrastructure

W190-400-002 Narrow Gauge Mainline Code of Practice Track & Civil Infrastructure

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) ©

Automatic Air and Vacuum Brake Instructions

9. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Rail Traffic Lights and Markers

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Rail Traffic Lights and Markers

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Glossary for this Rule

<i>Active Control Level Crossing</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>Adjacent</i>	Near to, close to, parallel to.
<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>Centralised Traffic Control (CTC) Territory</i>	The portions of line where the Centralised Traffic Control system of Safeworking is used.
<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>Complete</i>	Rail traffic where the consist has not parted.
<i>Consist</i>	A listed order of the vehicles arranged to make up a complete train.
<i>Controlled Speed</i>	Controlled speed is a speed that allows rail traffic to stop short of an obstruction within half the distance of clear line that is visible ahead.
<i>Cross</i>	To cross or pass other rail traffic.
<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>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>Handsignal</i>	A signal given by hand or lights movements, hand signals may be with or without flags.
<i>Headlights</i>	Lights fitted at the front of rail traffic to provide visibility for the rail traffic crew and to improve the visibility of rail traffic.
<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>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.

<i>Locomotive</i>	Self-propelled, non-passenger-carrying railway vehicles used for hauling other (typically freight or passenger) rolling stock.
<i>Low Visibility</i>	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))
<i>Marker Lights</i>	Lights which indicate the front or rear of a train.
<i>Marshal</i>	To arrange the order of vehicles in a train's consist.
<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<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>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>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>Passive Control Level Crossing</i>	Road and pedestrian level crossing warning that relies on road users and pedestrians looking out for and giving way to rail traffic (i.e. no flashing lights, half boomgate or bells).
<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>Points Indicator</i>	An indicator showing the position of points.
<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>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>
<i>Running Line</i>	A fixed signal placed near a running line to authorise and control running movements.
<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>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.

<i>Tail Lights</i>	Red lights used as to designate the end of rail traffic. (see also end-of-train markers).
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Train</i>	A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles. 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>Visibility Lights</i>	Lights, fitted below the headlights, to improve rolling stock's ability to be seen and to assist the crew in viewing of the immediate area in front of the vehicle. Also known as ditch lights or crossing lights.
<i>Whistle</i>	A device such as a bell, whistle, siren, horn or hooter, fitted to rail traffic to give audible warning.

1. Purpose

The purpose of this Rule is to describe how *Rail Traffic* lights and markers are used to:

- indicate the normal direction of *Travel*;
- indicate *Completeness* of *Rail Traffic*; and
- enhance the visibility of *Rail Traffic*.

2. General

Rail Traffic must not enter the *Network* unless the *Rail Traffic* lights and *Markers Lights* are working correctly.

Headlights must be set on full at the front of all moving *Rail Traffic* unless required to be dimmed or turned off as prescribed within this rule.

An approved *End-of-Train Marker* or at least one approved red light must be displayed at the rear of *Rail Traffic*.

3. Headlight Use

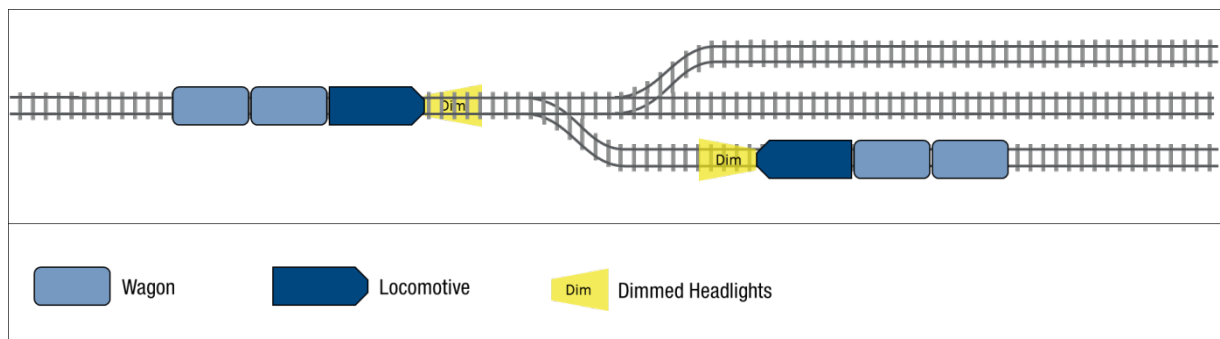


WARNING: When approaching *Level Crossings*, *Headlights* must remain on full unless opposing *Rail Traffic* is simultaneously approaching. In this case, *Rail Traffic Crew* are permitted to dim the *Headlights*.

Rail Traffic Crews are permitted to dim or turn off *Headlights* when *Visibility Lights* are operating under the following conditions:

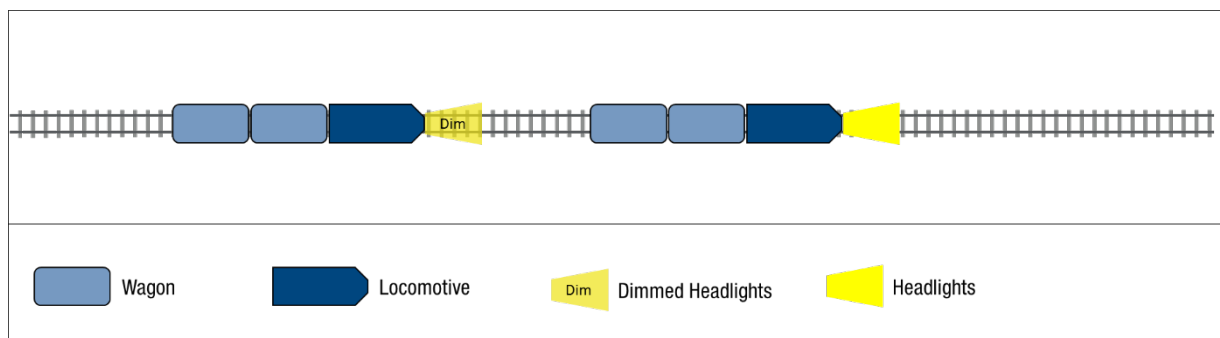
- When approaching, standing or working at *Locations* where *Shunting* is being performed.

Figure 4005-1 Approaching, standing or working at locations where shunting is being performed.



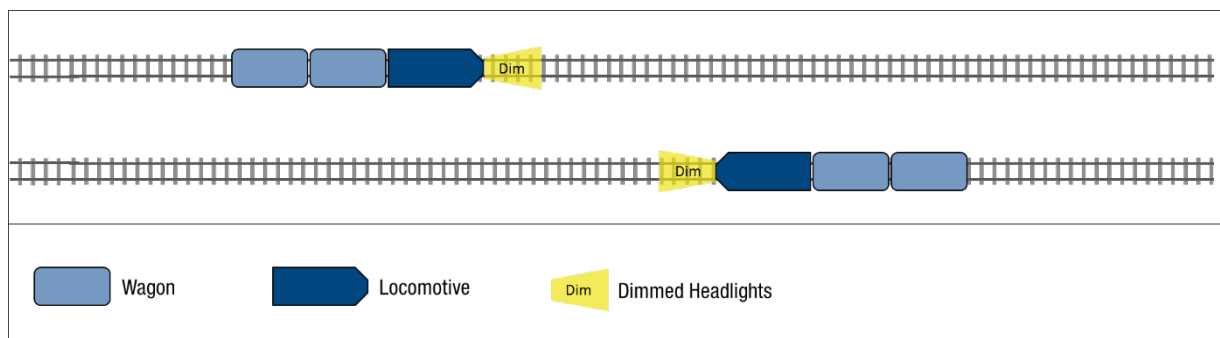
- When approaching or stopped behind other *Rail Traffic*.

Figure 4005-2 Approaching or stopped behind other rail traffic.



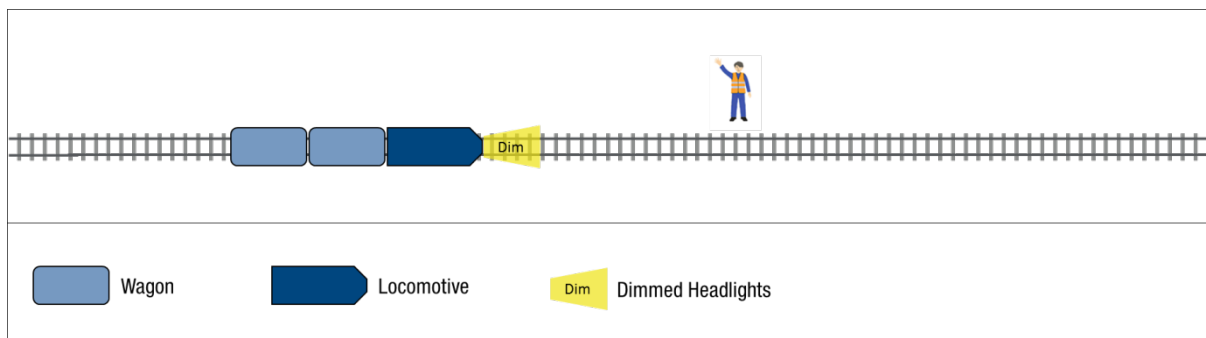
- When approaching and *Crossing* the lead end of opposing *Rail Traffic*.

Figure 4005-3 Approaching and crossing the lead end of opposing rail traffic.



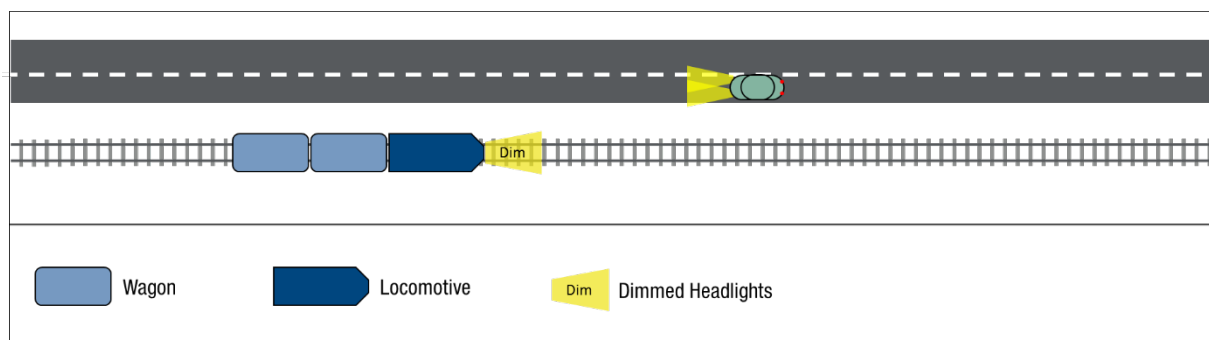
- When *Handsignals* are displayed or when approaching people or workers on or about the *Track*.

Figure 4005-4 Handsignals are displayed or when approaching people or workers on or about the track.



- When *Rail Traffic* is approaching road traffic on *Adjacent* roadways.

Figure 4005-5 Rail traffic is approaching road traffic on adjacent roadways.



- In weather conditions where *Headlights* may reflect back and affect the *Rail Traffic Crew's* vision.

3.1 Operating with Headlights Off



WARNING: *Headlights must not be turned off unless Marker Lights or Visibility Lights are turned on.*

The *Headlights* must be turned off when *Rail Traffic* has stopped *Clear* at a *Crossing Location*, waiting for opposing *Rail Traffic* to *Cross*.

The waiting *Rail Traffic* must display a white *Marker Light* on the side of the *Motive Power Unit* nearest the *Clear Running Line* and a red *Marker Light* on the side of the *Motive Power Unit* furthest from the *Clear Running Line*.

Figure 4005-6 Rail traffic standing on the Loop for a crossing.

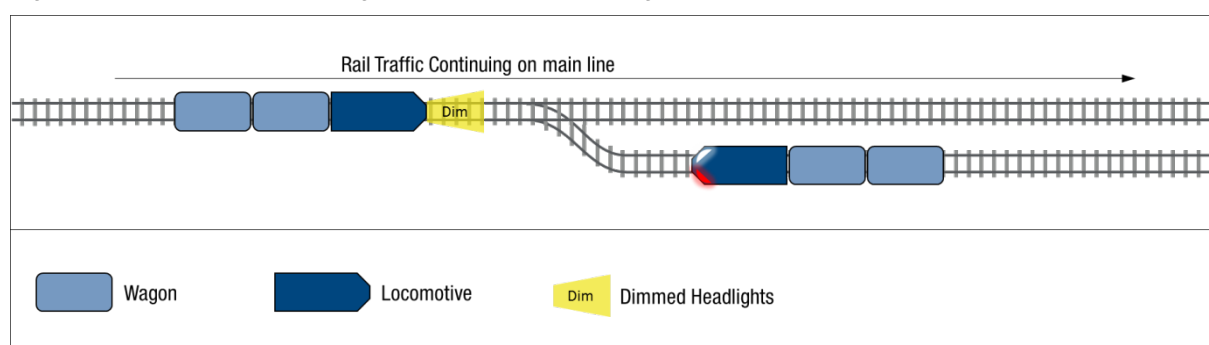
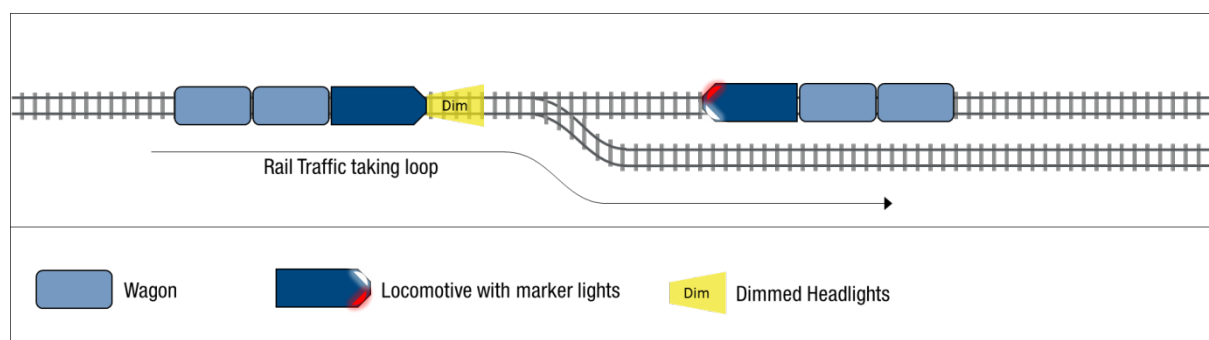


Figure 4005-7 Rail traffic standing on the Main for a crossing.



NOTE: The *Headlight* must be set on full once the lead end of the *Motive Power Unit* has past;

- the opposing *Rail Traffic*;
- road traffic on *Adjacent* road way; or
- the worker.

4. Displaying Visibility Lights

If provided, *Rail Traffic Visibility Lights* must be turned on when the *Rail Traffic* is moving on *Running Lines*.

If *Visibility Lights* fail, *Rail Traffic* may continue normally provided *Headlights* are turned on.

5. Using Lights for Warning

If necessary, *Rail Traffic Crew* may flash *Headlights* or change the colour of *Marker Lights* displayed from white to red to give a warning.

6. Failed Headlights

All cases of total *Headlight* failure must be reported to the *Network Controller*.

The *Network Controller* and the *Rail Traffic Crew* must make arrangements to:

- effect repairs;
- re-Marshall the *Motive Power Units*; or
- replace the lead *Motive Power Unit*.

If this is not possible, the *Rail Traffic* may proceed to the next repair facility.



WARNING: Where *Headlights* have failed, *Rail Traffic Crew* must make additional use of the *Whistle* to compensate for the lack of visual warning.

6.1 Total Headlight Failure and Visibility Lights Are Not Available

If visibility is good, *Rail Traffic* must *Travel* at *Controlled Speed*.

During periods of *Low Visibility*, *Rail Traffic* must;

- *Travel* at *Restricted Speed* and may only *Clear* the *Section*; and
- in *Train Order Territory*, stop before *Travelling* over *Points* where mechanical *Points Indicators* exist and ensure *Points* are correctly set before proceeding.

When approaching *Level Crossings* *Rail Traffic* must *Travel* at *Restricted Speed* prepared to stop and not proceed over the *Level Crossing*, until:

- *Active Control Level Crossing* warning equipment is operating; or
- road or pedestrian traffic is not approaching or has stopped at the crossing.

When approaching *Locations* where the *Rail Traffic Crew* is aware or can see workers or other personnel are present on the ground, *Rail Traffic* must *Travel* at *Restricted Speed*.

6.2 Total Headlight Failure and Visibility Lights Are Available

If the *Headlights* have failed and *Visibility Lights* are available, *Rail Traffic* may *Travel* at *Normal Speed*.

7. Failed Headlights and Whistle

7.1 Headlights and Whistle Failed, and Visibility Lights Not Available

If the *Headlights* and *Whistle* fail and *Visibility Lights* are not available and no other *Motive Power Unit* can be used as the lead unit, the *Rail Traffic Crew* must carry out instructions for operating with total *Headlight* failure when *Visibility Lights* not available in accordance with Section 6.1:

During periods of *Low Visibility* the *Rail Traffic* must be treated as *Disabled* in accordance with Rule 4009 Disabled Rail Traffic.

7.2 Headlights and Whistle Failed, and Visibility Lights Available

If the *Headlights* and *Whistle* fail and *Visibility Lights* are available, the *Rail Traffic Crew* must:

- continue the movement with the *Visibility Lights* turned on and *Travel* at:
 - *Controlled Speed* if visibility is good; or
 - *Restricted Speed* during periods of *Low Visibility*;
- slow to *Restricted Speed* before each *Level Crossing*, prepared to stop if road or pedestrian traffic is approaching;
- not proceed over the *Level Crossing*, unless:
 - at an *Active Control Level Crossing*, equipment is operating; or
 - at a *Passive Control Level Crossings*, it is *Clear* or road and pedestrian traffic has been stopped;
- slow to *Restricted Speed* approaching other *Rail Traffic* and where workers may be present on the ground;
- slow to *Restricted Speed* approaching people on or about the *Track*; and
- slow or stop as necessary, if the approach of the *Rail Traffic* is not attracting the appropriate attention.

8. Rail Traffic Markers

8.1 Front of Rail Traffic

The front of *Rail Traffic* must be identified by *Headlights*, *Visibility Lights*, or *Marker Lights*.

If *Marker Lights* become defective they must be repaired or replaced as soon as practical.

8.2 Rear of Rail Traffic

The rear of *Rail Traffic* must be identified by:

- an *End-of-Train Marker*,
- one or more clearly visible, steady or flashing red lights;
- an *End-of-Train Monitor*, or
- a combination of the above.

End-of-Train Markers and monitors must have at least one red light that is illuminated during the hours of darkness or when visibility is low.

8.3 Motive Power Unit is Rear Vehicle

When a *Motive Power Unit* is operating without vehicles or is at the rear of the *Rail Traffic Consist*, one of the following must be displayed:

- one or more red *Tail Lights*; or
- an *End-of-Train Marker*.

8.4 Inspection of End-of-Train Marker

The operation of an *End-of-Train Marker* must be checked before departure and where possible en-route by:

- direct observation of the marker; or
- using telemetry in the cab of the *Rail Traffic*.

8.5 Failed End-of-Train Marker

If the rear *End-of-Train Marker* fails en-route:

- the *Network Controller* must be told;
- a red reflector, red flag or red light may be used as an alternative rear marker; and
- *Rail Traffic* may *Travel* only as far as the next *Location* where the marker can be repaired or replaced.

8.6 Missing End-of-Train Markers

If *Rail Traffic* is detected with no *End-of-Train Marker* the *Network Controller* must be told.

Rail Traffic may *Travel* at the discretion of the *Network Controller* only as far as the next *Location* where the marker can be replaced.

In *Centralised Traffic Control (CTC) Territory*, *Rail Traffic* must be worked in accordance with Rule 5023 Manual Block Working until the *End-of-Train Marker* has been replaced.

The *Network Controller* must confirm that:

- the *Rail Traffic* is *Complete*; or
- the *Sections* to the rear of the *Rail Traffic* are *Clear*.

If the *Rail Traffic* is unable to be confirmed as *Complete*, affected *Sections* must be treated as *Obstructed* in accordance with Rule 2009 Reporting and Responding to Conditions Affecting the Network.

Until it can be established that the *Section* is *Clear*, the *Network Controller* must:

- apply *Blocking Facilities* to prevent other *Rail Traffic* from entering the affected *Section*;
- tell *Rail Traffic Crews* within the affected *Section* to stop their *Rail Traffic*; and
- warn *Rail Traffic* on *Adjacent* lines.

8.7 Shunting Marker Lights

Locomotives Shunting within yards must display two red *Marker Lights* at each end.



NOTE: The *Marker Lights* of *Shunting Locomotives* do not indicate direction of *Travel*.

8.8 Identifying Number

Where provided, number lights must be illuminated on the leading *Motive Power Unit*.

8.9 Other Lights

Step and other lights may be illuminated on all units to improve visibility of *Rail Traffic* at night.

9. References

2009 Reporting and Responding to Conditions Affecting the Network.

4009 Disabled Rail Traffic

5023 Manual Block Working

10. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Rail Traffic Whistles

Rule Number: 4007



Brookfield
Rail

Rail Traffic Whistles

Rule Number: 4007

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Glossary for this Rule

<i>Active Control Level Crossing</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>Adjacent</i>	Near to, close to, parallel to.
<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>Controlled Speed</i>	Controlled speed is a speed that allows rail traffic to stop short of an obstruction within half the distance of clear line that is visible ahead.
<i>Handsignal</i>	A signal given by hand or lights movements, hand signals may be with or without flags.
<i>Headlights</i>	Lights fitted at the front of rail traffic to provide visibility for the rail traffic crew and to improve the visibility of rail traffic.
<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>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<i>Low Visibility</i>	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))
<i>Marshal</i>	To arrange the order of vehicles in a train's consist.
<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<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>Operator's Representative</i>	A person authorised by an above rail or below rail Operator to act on their behalf.
<i>Passive Control Level Crossing</i>	Road and pedestrian level crossing warning that relies on road users and pedestrians looking out for and giving way to rail traffic (i.e. no flashing lights, half boomgate or bells).

<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>Railway Track Signal (RTS)</i>	A device attached to a rail that explodes on impact, used to attract attention of rail traffic crews.
<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>
<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.
<i>Sighting Distance</i>	The distance that someone can clearly see along the track.
<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.
<i>Uni-Directional</i>	Allowing for normal travel in one direction only according to the infrastructure and system of Safeworking in use.
<i>Visibility Lights</i>	Lights, fitted below the headlights, to improve rolling stock's ability to be seen and to assist the crew in viewing of the immediate area in front of the vehicle. Also known as ditch lights or crossing lights.
<i>Whistle</i>	A device such as a bell, whistle, siren, horn or hooter, fitted to rail traffic to give audible warning.
<i>Wrong Running-Direction</i>	The direction opposite to the normal direction of travel on unidirectional lines.

1. Purpose

The purpose of this Rule is to describe how *Rail Traffic Whistles* are used to give audible warning or acknowledge *Handsignals*.

2. General

Before *Rail Traffic* enters the *Network*, *Rail Traffic Whistles* must be working correctly.

Rail Traffic Whistles must not be sounded unless a valid reason exists.

Rail Traffic Whistles must be sounded with appropriate intensity, length and repetition for the circumstances.

Unless otherwise prohibited, *Rail Traffic Whistles* must be sounded:

- when approaching *Level Crossings*;
- where necessary for safety;
- before *Rail Traffic* is moved;
- if *Railway Track Signals (RTS)* are activated;
- where *WHISTLE* signs are placed;
- where people or animals are on or near the *Track*;
- when approaching *Locations* where *Shunting* is being performed on *Adjacent Tracks*;
- to acknowledge *Handsignals*; and
- as otherwise required by the Brookfield Rail Rules and Procedures.

Where *Rail Traffic* movements are likely to simultaneously approach a *Level Crossing*, the *Rail Traffic Crews* must repeatedly sound the *Whistle* until *Rail Traffic* has reached the *Level Crossing*.

The *Rail Traffic Crew* must sound the *Whistle* when approaching *Locations* where there is limited *Sighting Distance* when the *Rail Traffic* movement is:

- run at short notice;
- running in advance of timetable;
- running late; or
- *Travelling in the Wrong Running-Direction on a Uni-Directional Track.*

2.1 Whistle Codes

Rail Traffic Crews must use the following *Whistle* codes:

Figure 4007-1 Whistle code table.

Code	Meaning
One long whistle.	Warning, challenge or approaching a level crossing.
One short whistle.	Acknowledgment or moving off.
Two short whistles.	Setting back.
Three short whistles.	Danger-Stop.
Continuous whistling.	Assistance required.

2.2 Failure to Acknowledge a Rail Traffic Whistle

If an expected response or acknowledgment to the *Rail Traffic Whistle* is not received, the *Rail Traffic Crew* must continue to sound the *Whistle* and, if required, attempt to Stop the *Rail Traffic*.

3. Failed Whistle

The *Rail Traffic Crew* must report all cases of *Whistle* failure to the *Network Controller* and to the *Operator's Representative*.

3.1 Response to a Failure

The *Rail Traffic Crew* and the *Network Controller* must make arrangements to:

- effect repairs;
- re-Marshal the *Motive Power Units*; or
- replace the lead *Motive Power Unit*.

3.2 Running with a Failed Whistle

If the *Whistle* fails and cannot be repaired and no other *Motive Power Unit* can be used as the lead unit, the *Rail Traffic Crew* must:

- continue the movement and *Travel* at;
- *Controlled Speed* if visibility is good; or
- *Restricted Speed* during periods of *Low Visibility*;
- flash the *Headlights* and other *Visibility Lights* to attract attention where necessary;
- slow to *Restricted Speed* before each *Level Crossing*, prepared to stop if road or pedestrian traffic is approaching;
- not proceed over the *Level Crossing*, unless;
 - at an *Active Control Level Crossing*, equipment is operating; or
 - at a *Passive Control Level Crossing*, it is *Clear* or road and pedestrian traffic has stopped;
- slow to *Restricted Speed* approaching other *Rail Traffic* where workers may be present on the ground;
- slow to *Restricted Speed* approaching people on or about the *Track*; and
- slow or stop as necessary, if the approach of the *Rail Traffic* is not attracting the appropriate attention.

If the *Whistle* and *Headlights* fail and no other *Motive Power Unit* can be used as the lead unit act in accordance with Rule 4005 Rail Traffic Lights and Markers.

4. References

4005 Rail traffic Lights and Markers

5. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Removing Disabled Rail Traffic

Rule Number: 4009



Brookfield
Rail

Removing Disabled Rail Traffic

Rule Number: 4009

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Glossary for this Rule

<i>Adjacent</i>	Near to, close to, parallel to.
<i>Aspect</i>	The displayed pattern or position of lights used to give a signal indication.
<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Automatic Signalling Territory</i>	See Centralised Traffic Control (CTC)
<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>Cancel</i>	To withdraw permission for or to end previously authorised activities, such as Occupancy Authorities, without completing them.
<i>Centralised Traffic Control (CTC)</i>	A system where points and signals at a number of locations are remotely controlled from a centralised control room or other locations along the route.
<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>Complete</i>	Rail traffic where the consist has not parted.
<i>Controlled Location</i>	A location where a Network Controller controls the signalling and Safeworking operations remotely.
<i>Departure Signal</i>	A Controlled Absolute signal controlling the entrance to a Single line section in CTC territory.
<i>Disabled</i>	Unable to travel due to a defect.
<i>Double Line Automatic Signalling</i>	The portions of line where the Double Line Automatic Signalling system of Safeworking is used.
<i>Effective Communication</i>	The ability to successfully send, receive and understand information. The communication does not need to be continuous.
<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>Facing Points</i>	Points with the switch blades facing approaching rail traffic.
<i>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Foul</i>	In a position to obstruct rail traffic on adjacent lines.

<i>Fulfil</i>	To advise the Network Controller that the instructions on, and associated activities for, an Occupancy Authority have been completed and can be terminated.
<i>Half Pilot Key</i>	A metal key located at the end of a single line CTC section and interlocked with the Departure signals' circuits. Two half pilot keys can be joined to provide a full pilot key for Pilot Key Working through the section.
<i>Handsignal</i>	A signal given by hand or lights movements, hand signals may be with or without flags.
<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>Low Visibility</i>	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)
<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<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>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>Parting</i>	Rail traffic consist that has uncoupled en-route (i.e. portions separated).
<i>Permanent Record</i>	A record made in writing or in an electronic system, and kept for reference and audit.
<i>Pilot</i>	To direct or guide rail traffic crews and tell them about local conditions and operating restrictions on running lines and at worksites.
<i>Proceed Authority</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>Propel</i>	To push rail traffic away from the controlling locomotive or motive power unit.
<i>Protecting Signal</i>	<p>A fixed signal that is held and maintained at Stop to prevent rail traffic entry into a worksite.</p> <p>A signal that protects a train from conflicting movements and/or obstructions.</p>
<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>Railway Track Signal (RTS)</i>	A device attached to a rail that explodes on impact, used to attract attention of rail traffic crews.
<i>Relief Rail Traffic Authority</i>	A Relief Rail Traffic Authority is issued to permit relief Rail traffic to enter a section occupied by disabled Rail Traffic and provides instruction on how that disabled Rail Traffic is to be recovered.
<i>Restraint Authority</i>	The Restraint Authority directs rail traffic not to depart the location irrespective of any available Proceed Authority.
<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>
<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>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>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Set Back</i>	To move in the reverse direction to that provided in the current Proceed Authority.
<i>Single Line Automatic Signalling</i>	The portions of line where the Single Line Automatic Signalling system of Safeworking is used.
<i>System of Safeworking</i>	An integrated system of operating procedures and engineered systems used on the Network, for safe operation of rail traffic, and protection of people and property.
<i>Tail Lights</i>	Red lights used as to designate the end of rail traffic. (see also end-of-train markers).
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<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 or issue of LPA track work authorities.
<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>Wrong Running Direction</i>	The direction opposite to the normal direction of travel on unidirectional lines.

1. Purpose

The purpose of this Rule is to provide instructions to *Network Controllers* and *Rail Traffic Crew*, for the removal of *Disabled Rail Traffic* from *Running Lines* in the *Network*.

2. General

The *Network Controller* must determine the method of removing the *Disabled Rail Traffic*.

If the normal *Proceed Authority* permitted by the existing *System of Safeworking* is not available, and the *Rail Traffic* movement cannot be actioned in accordance with Rule 6013 Passing Fixed Signals at STOP, the *Rail Traffic* movement must be authorised using an appropriate *Authority*.

3. Disabled Rail Traffic

3.1 The Disabled Rail Traffic Crew

The *Rail Traffic Crew* of the *Disabled Rail Traffic* must:

- ensure their own safety;
- tell the *Network Controller*:
 - there is a failure;
 - the *Location* of the failed *Rail Traffic*;
 - the nature of the failure, when this has been determined; and
- *Protect* the *Disabled Rail Traffic* in accordance with Rule 4001 Protecting Rail Traffic.



WARNING: An unexpected loss of brake pipe pressure may indicate that *Rail Traffic* has derailed, or has derailed and *Fouled*, *Adjacent* lines.

Until otherwise confirmed, *Rail Traffic Crews* must always act on the presumption that *Adjacent* lines have been *Fouled*.

If the *Rail Traffic Crew* suspect their *Rail Traffic* has *Obstructed* an *Adjacent* line, they must protect against approaching *Rail Traffic* in accordance with Rule 4001 Protecting Rail Traffic.

3.2 Network Controller

The *Network Controller* responsible for the affected portions of line must:

- *Issue Restraint Authorities* in accordance with Rule 4001 Protecting Rail Traffic;
- be assured by the *Rail Traffic Crew* that the *Disabled Rail Traffic*, if required, has been *Protected*; and
- in *Train Order Territory*, *Cancel* the *Train Order* held by the *Rail Traffic Crew* of the *Disabled Rail Traffic* at the *Location* given by the *Rail Traffic Crew*.

4. Authorities

The *Network Controller* must:

- advise affected *Competent Workers* of the intended movement;
- tell the crew of the *Disabled Rail Traffic* about details of relief to be provided; and
- tell the crew of the relief *Rail Traffic* about the details of the *Disabled Rail Traffic* and where the *Disabled Rail Traffic* is to be taken:
 - in *Train Order Territory*, these details must be shown on the *Train Order* for the relief *Rail Traffic*.



NOTE: The *Network Controller* must tell the relief *Rail Traffic Crew* the kilometre *Location* of the end of the *Disabled Rail Traffic* in the direction that relief is being provided, and the *Protection* details.

4.1 Relief Rail Traffic to Enter the Section from the Rear

The authority for the relief *Rail Traffic* to enter the *Section* from the rear is:

- on *Double Line Automatic Signalling*, a *Relief Rail Traffic Authority (RRTA)*; and:
 - the normal *Proceed Aspect* on the signal, where available; or
 - verbal authority from the *Network Controller* when the *Proceed Aspect* is unavailable;
- on *Single Line Automatic Signalling Sections*, a *RRTA*, verbal authority from the *Network Controller*, and if returning to the rear, the *Half Pilot Key* from that *Location*; and
- in *Train Order Territory*, a *Train Order*.

4.2 Relief Rail Traffic to Enter the Section from the Advance

The authority for the relief *Rail Traffic* to enter the *Section* from the advance is:

- on *Automatic Signalling Sections*, a RRTA and verbal authority from the *Network Controller*;
- in addition, on *Single Line Automatic Signalling Sections*, if returning to the advance, the *Half Pilot Key* from that *Location*; and
- in *Train Order Territory*, a *Train Order*.

5. Removing Disabled Rail Traffic

The *Rail Traffic Crew* required to remove *Disabled Rail Traffic* must:

- establish communications with the crew of the *Disabled Rail Traffic*;
- slow to *Restricted Speed* when:
 - 3000 metres from the rear of the *Rail Traffic*; or
 - entering the block *Section* where the *Disabled Rail Traffic* is located within 2500 metres from the *Protecting Signal*;
- stop 500 metres from the *Disabled Rail Traffic*;
- be *Piloted* to the *Disabled Rail Traffic*; and
- remove the *Disabled Rail Traffic* as authorised by the *Network Controller*.

5.1 Coupling to the Disabled Rail Traffic

The *Rail Traffic Crew* of the *Disabled Rail Traffic* will *Handsignal* or verbally direct the assisting *Rail Traffic Crew* to couple to the *Disabled Rail Traffic*.

The *Rail Traffic Crew* of the relief *Rail Traffic* will, if possible, advise the *Network Controller* when ready to move the *Disabled Rail Traffic*.

5.2 Relief from the Rear and Propelling the Disabled Rail Traffic to the Advance

The *Rail Traffic Crew* of the relief *Rail Traffic* will ensure the crew of the *Disabled Rail Traffic* are able to assist in the braking and safety of the *Propelling* movement.

Prior to allowing the *Disabled Rail Traffic* to be *Propelled*, the *Rail Traffic Crew* of the *Disabled Rail Traffic* will ensure *Effective Communications* are available between *Rail Traffic Crews*, and:

- the *Rail Traffic* brake is operational from the *Motive Power Unit* of the *Disabled Rail Traffic*; or
- the *Propelling* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.

5.3 Double Line Automatic Signalling

5.3.1 Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* in the *Wrong Running Direction* the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the relief *Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at Stop and apply *Blocking Facilities*; and
- ensure a RRTA has been *Issued* for the *Wrong Running Direction* movement to the *Rail Traffic Crew* of the relief *Rail Traffic*.

The crew of the relief *Rail Traffic* must:

- before moving to the rear, be in possession of a RRTA for the *Wrong Running Direction* movement;
- return to the rear *Location* as directed by the *Network Controller*;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter the *Location*; and
- advise the *Network Controller* when the *Section* is *Clear*.

5.3.2 Where relief has been provided from the advance and is to remove the disabled rail traffic to the advance

The *Rail Traffic Crew* of the relief *Rail Traffic*;

- removes the *Disabled Rail Traffic* as authorised by the *Network Controller*; and
- advises the *Network Controller* when the *Section* is *Clear*.

5.3.3 Where relief has been provided from the advance and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* in the *Wrong Running Direction* the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the *Disabled Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at Stop and apply *Blocking Facilities*; and
- ensure a RRTA has been *Issued* for the *Wrong Running Direction* movement to the *Rail Traffic Crew* of the relief *Rail Traffic*.

The *Rail Traffic Crew* of the relief *Rail Traffic* must:

- before moving to the rear, be in possession of a RRTA for the *Wrong Running Direction* movement;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter;
- advise the *Network Controller* the *Section* is *Clear*; and
- ensure the *Propelling* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.



NOTE: The crew of the *Disabled Rail Traffic* must assist with the *Propelling* movement as required.

5.4 Single Line Automatic Signalling

5.4.1 Where relief has been provided from the rear and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* to the *Location* in the rear, the *Network Controller* must:

- place the *Fixed Signal* controlling the entry to the *Section* at *Stop* and apply *Blocking Facilities*; and
- ensure the *Rail Traffic Crew* of the relief *Rail Traffic* are in possession of a RRTA for the movement and the *Half Pilot Key* from the rear *Location*.

The relief *Rail Traffic Crew* must:

- before moving to the rear, be in possession of a RRTA for the movement and the *Half Pilot Key* from the rear *Location*;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter;
- advise the *Network Controller* when the *Section* is *Clear*; and
- replace the *Half Pilot Key*.

5.4.2 Relief from the advance and removing the disabled rail traffic to the advance

The *Rail Traffic Crew* of the relief *Rail Traffic* must:

- before removing the *Disabled Rail Traffic* to the advance, be in possession of a RRTA for the movement and the *Half Pilot Key* from the advance *Location*;
- remove the *Disabled Rail Traffic* as authorised by the *Network Controller*;
- advise the *Network Controller* when the *Section* is *Clear*; and
- replace the *Half Pilot Key*.

5.4.3 Where relief has been provided from the advance and is to remove the disabled rail traffic to the rear

Before permitting the relief *Rail Traffic* to remove the *Disabled Rail Traffic* to the *Location* in the rear, the *Network Controller* must:

- ensure no *Rail Traffic* has entered the *Section* behind the *Disabled Rail Traffic*;
- place the *Fixed Signal* controlling the entry to the *Section* at *Stop* and apply *Blocking Facilities*; and
- ensure the *Rail Traffic Crew* of the relief *Rail Traffic* are in possession of a RRTA for the movement and the *Half Pilot Key* from the rear *Location*.

The relief *Rail Traffic Crew* must:

- before moving to the rear, be in possession of a RRTA for the movement and the *Half Pilot Key* from the rear *Location*;
- on arrival at *Station Limits* for the rear *Location*, obtain permission from the *Network Controller* to enter;
- advise the *Network Controller* when the *Section* is *Clear*; and
- replace the *Half Pilot Key*.

6. Rail Traffic Can Be Divided to Clear the Section

If it is necessary to divide *Rail Traffic* into portions for removal, the *Network Controller* must determine a suitable *Location* to where any divided portion can be moved.

The *Network Controller* must tell the *Rail Traffic Crew* the determined *Location* to take any divided portion.

Before each portion is removed, the *Rail Traffic Crew* must complete continuity tests on the portion to be removed.

If the removed portion of the *Rail Traffic* will *Travel* beyond the next *Controlled Location*:

- *Tail Lights* or an *End-of-Train Marker* must be attached to the rear-most vehicle before departing that *Location*; or
- *Rail Traffic* must be block worked, in accordance with Rule 5023 Manual Block Working.

6.1 Securing and Protecting the Divided Rail Traffic

The portion of the *Rail Traffic* to remain must be:

- *Secured*, in accordance with Rule 4003 Rail Traffic Integrity, and *Protected*; in accordance with Rule 4001 Protecting Rail Traffic, and
- during darkness or in conditions of *Low Visibility*, fitted with a light on the leading vehicle:
 - in areas where there are *Adjacent* lines, a white light; or
 - on single lines, a red light.

The *Rail Traffic Crew* must:

- take a written note of the last vehicle of the front portion;
- move the front portion forward 500 metres; and
- place 3 *Railway Track Signals (RTS)* on all rails 20 metres apart, in accordance with Procedure 9004 Railway Track signals, in advance of the rear portion.

6.2 Arriving at the Controlled Location in Advance

The *Rail Traffic Crew* must:

- confirm the portion is *Complete*; and
- stow the portion as directed by the *Network Controller*.

6.2.1 Single Line Automatic Signalling

The *Rail Traffic Crew* must:

- immediately on arrival at the *Location*, remove the *Half Pilot Key* for the *Departure Signal* controlling the entrance to the *Section* where the remaining portion is located; and
- retain possession of the *Half Pilot Key* until all of the *Rail Traffic* is *Cleared* from the *Section*.

6.2.2 Train Order Territory

On arrival at the *Location*, where a *Crossing* is to take place and the other *Rail Traffic* is met, the *Rail Traffic Crew* must:

- stop at the *Facing Points*; and
- inform the *Rail Traffic Crew* of the circumstances.

6.3 Returning for the Rear Portion

The *Rail Traffic Crew* must get permission from the *Network Controller* before returning for the remaining portion.

The *Rail Traffic Crew* must advise the *Network Controller* when all of the *Rail Traffic* is *Clear* from the *Section*.

7. Parted Rail Traffic



WARNING: Before stopping the forward portion of *Parted Rail Traffic*, *Rail Traffic Crews* must consider the risk of it being struck by the detached portion of the *Rail Traffic*.

Rail Traffic Crews who become aware that their *Rail Traffic* has *Parted* must:

- stop the *Rail Traffic*; and
- tell the *Network Controller* about the *Parting* and, if possible, the *Location* of the detached portion.

The *Network Controller* must determine whether the *Proceed Authority* for the movement back to the detached portion:

- is available under the existing *System of Safeworking*; or
- must be authorised using an RRTA.

The *Rail Traffic Crew* must not *Set Back* the forward portion of the *Rail Traffic* to the *Location* of the detached portion unless:

- the detached portion is *Secured*; and
- the *Setting Back* movement is made in accordance with Rule 4015 Setting Back or Propelling on Running Lines.

8. Parted Rail Traffic and Rail Traffic Crew Unaware

The *Network Controller* must, if necessary:

- arrange to locate the detached portions of the *Rail Traffic*;
- 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*; and
- arrange for recovery of the detached portion.

Competent Workers who find detached vehicles must:

- if possible, *Secure* them, and arrange for their *Protection*; and
- tell the *Network Controller*.

9. Cancelling an RRTA

The RRTA may be *Cancelled* only if the *Network Controller* is assured that the authorised movement has not started or has not been completed.

The *Network Controller* must tell affected *Competent Workers* that the RRTA has been *Cancelled*.

10. Fulfilling an RRTA

The RRTA must be *Fulfilled* only when the *Rail Traffic Crew* assures the *Network Controller* that the authorised movements have been completed and the block *Section* is *Clear*.



NOTE: The *Restraint Authority Issued* to the *Rail Traffic Crew* of the *Disabled Rail Traffic* must be *Cancelled* when the whole of the *Disabled Rail Traffic* has been removed *Complete* from the block *Section* in accordance with Rule [4001 Protecting Rail Traffic](#).

11. Keeping Records

Network Controllers must keep a *Permanent Record* of:

- the *Issue* of the RRTA; and
- details of affected *Competent Workers* told about the authorised movements.

Rail Traffic Crews and other *Competent Workers* must keep a *Permanent Record* of the *Issue* of the RRTA.

12. References

4001 Protecting Rail Traffic

4003 Rail Traffic Integrity

4015 Setting Back or Propelling on Running Lines.

5023 Manual Block Working

6013 Passing Fixed Signals at STOP

9004 Railway Track signals

13. Effective Date

1 October 2016

Network Safeworking Rules and Procedures

Station Limits

Rule Number: 4011



Brookfield
Rail

Station Limits

Rule Number: 4011

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Glossary for this Rule

<i>Bi-Directional</i>	Normal movement of rail traffic in either direction according to the infrastructure and system of Safeworking in use.
<i>Block</i>	A portion of line with defined limits between which only one rail traffic movement is permitted at any one time (i.e. not a Permissive Block).
<i>Centralised Traffic Control (CTC)</i>	A system where points and signals at a number of locations are remotely controlled from a centralised control room or other locations along the route.
<i>Centralised Traffic Control (CTC) Territory</i>	The portions of line where the Centralised Traffic Control system of Safeworking is used.
<i>Controlled 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>Double Line Automatic Signalling</i>	The portions of line where the Double Line Automatic Signalling system of Safeworking is used.
<i>Facing Points</i>	Points with the switch blades facing approaching rail traffic where the track diverges.
<i>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.
<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>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>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>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>
<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>Set Back</i>	To move in the reverse direction to that provided in the current Proceed Authority.
<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.

*Single Line Automatic
Signalling*

The portions of line where the Single Line Automatic Signalling system of Safeworking is used.

Station

A system of tracks within station limits at the beginning or end of a section at which rail traffic may cross, pass or run around.

Station Limits

A defined operational limit of controlled locations or a running line.

Trailing Points

Points with the switch blades facing away from approaching rail traffic.

Train Order Location

A location in Train Order territory that may be used as the limit of a Proceed Authority or as a reporting location.

1. Purpose

The object of this Rule is to provide instructions on how *Station Limits* are defined, and how *Rail Traffic* movements are controlled, within *Station Limits*.

2. General

Station Limits define the limits of *Controlled Locations*.

If *Fixed Signals* are not available, *Network Controllers* must give verbal authority for movements within *Station Limits*.

Network Controllers must make sure they do not authorise conflicting movements.

3. Station Limits

Depending on their availability at a *Location*, signs or signals determine arrival end and departure end of *Station Limits*.

A *Station Limit* is defined by a:

- specified *Controlled Absolute Signal*; or
- *Station Limit* sign.



NOTE: *Controlled Absolute Signals* are identified by a white reflectorised marker plate located on the centre of the mast in accordance with Rule 6005 *Fixed Signals*, with the signal number displayed.

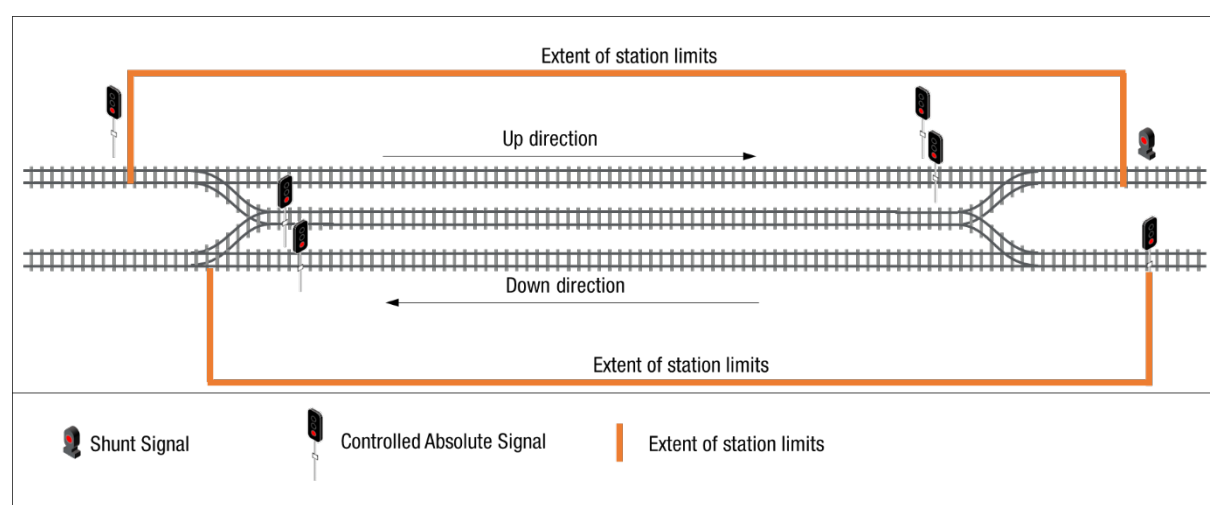
3.1 Centralised Traffic Control Territory

3.1.1 Double-line

Station Limits in *Double Line Centralised Traffic Control (CTC)* Territory are determined by:

	Limit
From	the first <i>Controlled Absolute Signal</i> at that <i>Double Line CTC Station</i> .
To	the last <i>Controlled Absolute Signal</i> at that <i>Double Line CTC Station</i> ; <i>Facing or Trailing Points</i> beyond that <i>Fixed Signal</i> ; or <i>Shunt Set Back</i> signal beyond that <i>Fixed Signal</i> .

Figure: 4011-1 Example of Station Limits in double line CTC territory.

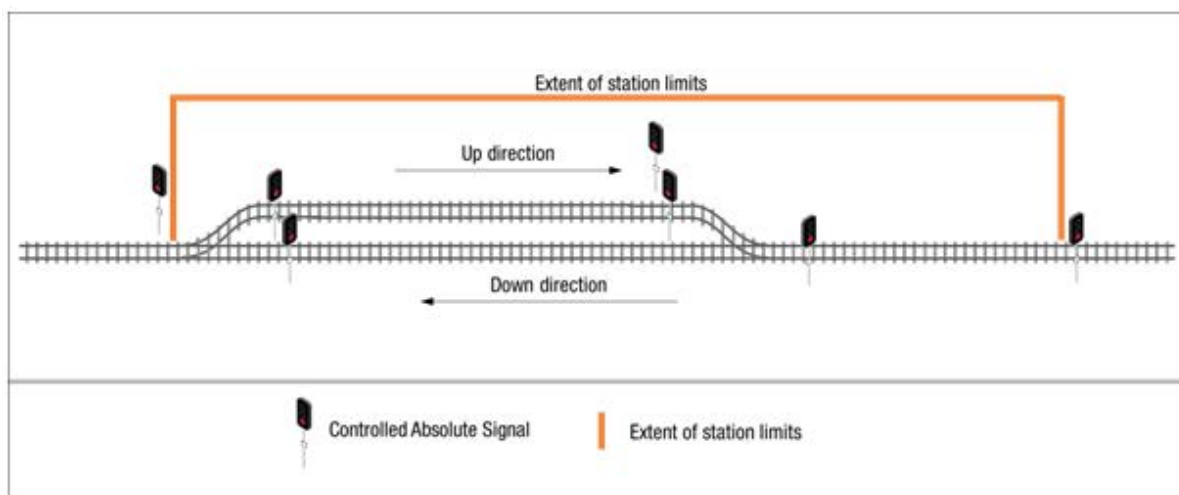


3.1.2 Bi-Directional single-line

Station Limits in Bi-Directional Single Line Centralised Traffic Control (CTC) Territory are determined by:

	Limit
From	The first <i>Controlled Absolute Signal</i> at that <i>Single Line CTC Station</i> .
To	The first <i>Controlled Absolute Signal</i> in the opposing direction, at that <i>Single Line CTC Station</i> .

Figure 4011-2 Example of Station Limits in bidirectional single-line CTC territory.



3.2 Train Order Territory

Station Limits at Train Order Locations are determined by *STATION LIMITS* signs.

FIGURE: 4011-3 Station Limits at Train Order locations.

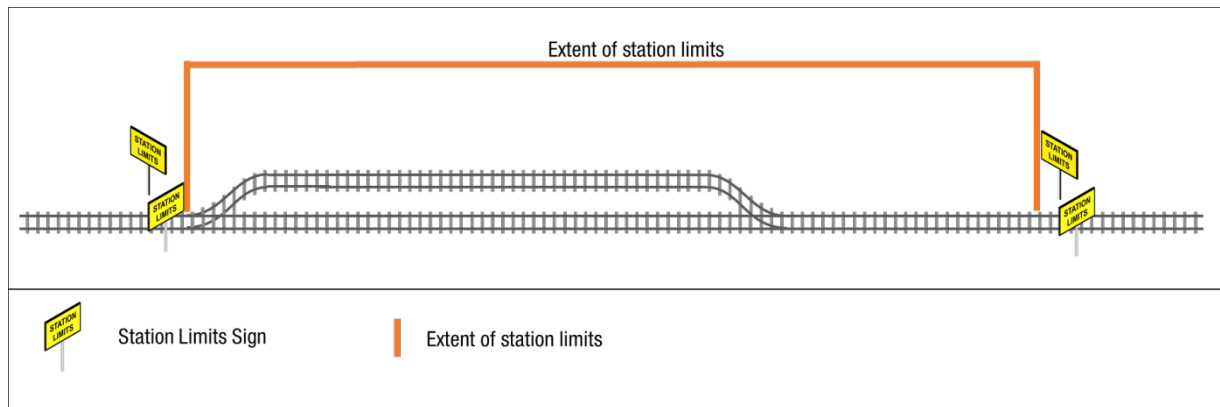
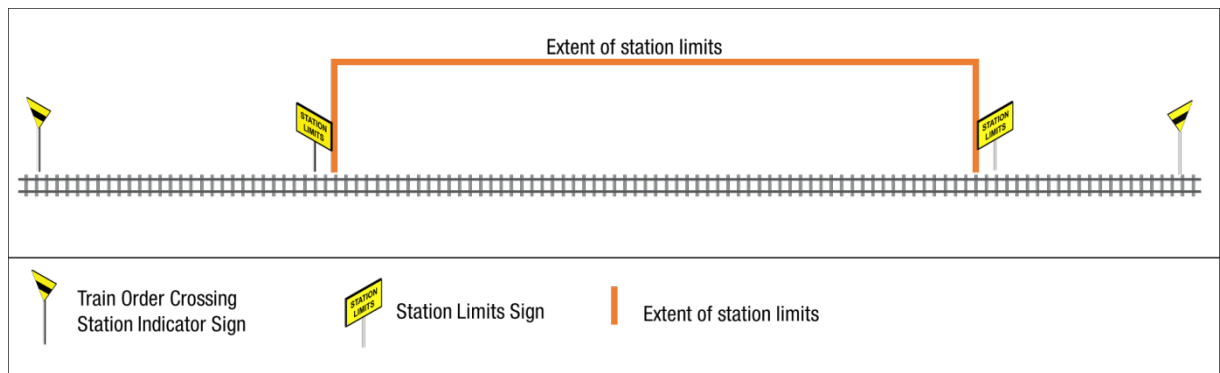


Figure: 4011-4 Station Limits at Train Order locations.



4. Station Working

4.1 Running Lines

Rail Traffic movements on *Running Lines* within *Station Limits* must be authorised by the *Network Controller*.

If available, *Fixed Signals* must be used to authorise movements.

Fixed Signals at STOP must be passed only in accordance with Rule 6013 Passing Fixed Signals at STOP.

4.2 Unsignalled Movements

Unsignalled movements within *Station Limits* must not exceed *Restricted Speed*.

Before authorising an unsignalled movement that opposes other *Rail Traffic*, the *Network Controller* must make sure that at least one unoccupied *Block* is maintained between the movements.

The *Block* between the opposing movements must remain unoccupied until one of the approaching *Rail Traffic* movements is brought to a Stop.

The *Network Controller* must tell the *Rail Traffic Crew* involved in the unsignalled movement not to Proceed beyond the relevant *Station Limits*.

5. References

6005 Fixed Signals

6013 Passing Fixed Signals at STOP

6. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Shunting and Marshalling

Rule Number: 4013



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Rail

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Glossary for this Rule

<i>Active Control Level Crossing</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>Adjacent</i>	Near to, close to, parallel to.
<i>Advertise</i>	To give written or electronic notice, usually in advance, of planned activities.
<i>Airbrake</i>	A braking system activated by change in air pressure.
<i>Brookfield Rail</i>	Brookfield Rail Pty. Ltd.
<i>Catch Points</i>	Single or double bladed points used to derail rail traffic that might enter or foul an adjacent running line.
<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>Consist</i>	A listed order of the vehicles arranged to make up a complete train.
<i>Delegate</i>	A Competent Worker authorised and designated to act in place of another.
<i>Derail Device</i>	A device intended to guide the wheels of rail traffic off the rails to protect a running line.
<i>Effective Communication</i>	The ability to successfully send, receive and understand information. The communication does not need to be continuous.
<i>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Handbrake</i>	A device to secure a rail vehicle against movement.
<i>Haul</i>	To move rail traffic using a motive power source at the leading end.
<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>Locomotive</i>	Self-propelled, non-passenger-carrying railway vehicles used for hauling other (typically freight or passenger) rolling stock.
<i>Main Line</i>	The running line (not including Loops) normally used for running rail traffic through and between locations
<i>Marshal</i>	To arrange the order of vehicles in a train's consist.
<i>Marshalling Irregularity</i>	An irregularity in marshalling of a train, for example, not in accordance with the Dangerous Goods code.

<i>Motive Power Unit</i>	A rail vehicle used to provide the power to move itself or other vehicles.
<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>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>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>Propel</i>	To push rail traffic away from the controlling locomotive or motive power unit.
<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>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>
<i>Route</i>	The rail traffic path from one limit of authority to the next in the direction of travel.
<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>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>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.
<i>Stable</i>	To leave rail traffic unattended and secured, usually in a siding.
<i>Station Limits</i>	A defined operational limit of controlled locations or a running line.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Unauthorised</i>	Not given approval, or exceeding the limit of authority.

1. Purpose

The purpose of this Rule is to prescribe the rules for safe *Shunting* and *Marshalling* in the *Network*.

2. General

Vehicles must not be *Shunted* in the *Network* without a *Motive Power Unit* attached (i.e. loose-*Shunted*).

2.1 Shunting

Shunting is moving *Rail Traffic*:

- to arrange or rearrange vehicle order in a *Consist*;
- to attach or detach vehicles from a *Consist*;
- to move vehicles in a yard or terminal; or
- to or from *Running Lines*, except for through *Rail Traffic* movements.

Shunting must be performed at a speed not exceeding restricted speed.

When performing *Shunting*, *Rail Traffic* may only be moved with the authority of the *Competent Worker* directing the *Shunting* operations.

Workers not involved in *Shunting* must stay *Clear* of moving vehicles.

2.2 Marshalling

Vehicles carrying Dangerous Goods must be *Marshalled* in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)©.

3. Planning Shunting



WARNING: If there are narrow *Track* clearances, *Competent Workers* performing *Shunting* must keep at least 2 metres between themselves and moving vehicles.

When planning *Shunting* the *Competent Worker* directing *Shunting* operations must:

- confer with the *Network Controller* and agree about planned movements;
- confer with the *Rail Traffic Crew* and other *Competent Workers* and agree about planned movements; and
- warn other *Competent Workers* of hazards presented by narrow *Track* clearances, such as:
 - gates and fences;
 - buildings;
 - *Platforms*; and
 - rail vehicles on *Adjacent* lines.

Competent Workers during *Shunting* operations must:

- if necessary, arrange for clearance of *Fixed Signals*;
- make sure that *Routes* are correctly set and safe for movements; and
- make sure that it is safe to *Shunt*.

Competent Workers must tell *Network Controller* when *Shunting* within their area of control has been completed.

3.1 Shunting Over Points

If the *Competent Worker* directing *Shunting* is not assured that the *Points* will hold their set positions, the *Points* must be *Secured* for the intended *Route*.

4. Directing Shunting

A *Competent Worker* directing *Shunting* must:

- make use of radio, hand or light signals to *Communicate Effectively* with the worker at the controls of the *Motive Power Unit*;
- be in a position where the safe progress of the movement and the line ahead can be seen; and
- closely accompany or ride in or on the leading vehicle in a position designated as safe by the operator and approved by *Brookfield Rail*.

Rail Traffic Crews and *Competent Workers* directing *Shunting* must communicate at agreed intervals.

If communication between a *Competent Worker* directing *Shunting* and the *Rail Traffic Crew* is interrupted, the *Rail Traffic Crew* must stop the movement immediately.

5. Running Lines

Shunting on *Running Lines* must be authorised by the *Network Controller*.

On *Running Lines*, vehicles being *Shunted* must be equipped with an operating continuous *Airbrake*.

Vehicles with defective brakes must be *Shunted* in accordance with *Brookfield Rail's* specific instructions (refer Rule 4003 Rail Traffic Integrity).

6. Level Crossings

A *Shunting* movement over a *Level Crossing* must:

- be directed by a *Competent Worker*;
- not be commenced unless the *Level Crossing* is *Clear*, or road and pedestrian traffic has stopped; and
- not be commenced before it is safe to do so.

Where provided, *Active Control Level Crossing* equipment must be operated.

Shunted vehicles *Hauled* or *Propelled* across a *Level Crossing* must have the continuous *Airbrake* throughout the *Consist*.



NOTE: The *Consist* of vehicles being shunted must comply with Brookfield Rail's Automatic Air and Vacuum Brake Instructions.

7. Attaching Locomotive

After attaching a *Locomotive* to stationary vehicles, the *Rail Traffic Crew* must fully pressurise the brake pipe before releasing *Handbrakes*.

8. Detached Rail Vehicles

Vehicles must not be detached from a *Motive Power Unit*, or a continuous brake system, until they are *Secured* against unintended movement by the use of sufficient effective *Handbrakes* or other devices, in accordance with Rule 4001 Rail Traffic Integrity.

Detached vehicles must be *Secured*:

- where necessary, *Clear of Adjacent* lines;
- *Clear of Level Crossings*; and
- inside *Catch Points* or *Derail Devices* provided to prevent vehicles entering *Running Lines*.

The *Rail Traffic Crew* must advise the *Network Controller* of vehicles detached en-route.

9. Vehicles Under Repair

Vehicles with warning signs, flags or lights must not be moved or *Shunted* against or have other vehicles attached to them unless:

- the warning signs, flag or lights are removed by the workers who put them there;
- no work is being done on or near the vehicles; and
- it is safe to move the vehicles.

10. Stabling Rail Traffic

10.1 On Running Lines

Rail Traffic may be *Stabled* on *Running Lines* only if:

- *Derailing Devices* are available;
- where *Derailing Devices* are not available, it has been authorised by the *Brookfield Rail Manager Network Operations* or *Delegate*;
- *Advertised*, when required;
- *Unauthorised* access to *Motive Power Unit* controls are prevented, and
- it is *Secured* against unintended movement.

10.2 In Station Limits

Where possible, when *Rail Traffic* is *Stabled* on a *Running Line* within *Station Limits*, the *Points* must be set to divert other *Rail Traffic* around the *Stabled Rail Traffic*.

10.3 In Sections

If the *Rail Traffic* is *Stabled* on the *Main Line* within a *Section*, the *Rail Traffic* must be treated as an *Obstruction* and *Protected* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

11. Marshalling Irregularity

If a *Marshalling Irregularity* is identified, the *Network Controller* and the *Rail Traffic Crew* must jointly arrange for the irregularity to be corrected.

12. Restoring Equipment

After completion of *Shunting* a *Competent Worker* must restore *Points*, signals and other equipment to their normal position.

The *Competent Worker* must report to the *Network Controller* that equipment has been restored.

13. References

4001 Protecting Disabled Rail Traffic.

4003 Rail Traffic Integrity

Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)©

Automatic Air and Vacuum Brake Instructions

14. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Setting Back or Propelling on Running Lines

Rule Number: 4015



Brookfield
Rail

Setting Back or Propelling on Running Lines

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Glossary for this Rule

<i>Active Control Level Crossing</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>Airbrake</i>	A braking system activated by change in air pressure.
<i>Authority</i>	Formal name for a written Authority (e.g. Local Possession Authority, Alternative Proceed Authority).
<i>Automatic Brake</i>	A brake which operates automatically in the event of a reduction of Brake Pipe pressure through any cause.
<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>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>Competent Worker</i>	A worker certified as competent to carry out a relevant task.
<i>Consist</i>	A listed order of the vehicles arranged to make up a complete train.
<i>Controlled Absolute Signal</i>	A signal that is controlled or operated by a Network Controller. The signal must not be passed at STOP without authority.
<i>Controlled 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>Effective Communication</i>	The ability to successfully send, receive and understand information. The communication does not need to be continuous.
<i>Fixed Signal</i>	A signal that is located permanently near the line.
<i>Fulfil</i>	To advise the Network Controller that the instructions on, and associated activities for, an Occupancy Authority have been completed and can be terminated.
<i>Half Pilot Key</i>	A metal key located at the end of a single line CTC section and interlocked with the Departure signals' circuits. Two half pilot keys can be joined to provide a full pilot key for Pilot Key Working through the section.
<i>Haul</i>	To move rail traffic using a motive power source at the leading end.
<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>Limit of Authority</i>	<p>The limit may be defined by a sign, a signal capable of displaying a STOP indication, or a specific kilometrage point on a line.</p> <p>It defines the location to which rail traffic may travel under a Proceed Authority or the limits of a work on track authority.</p>
<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>Passive Control Level Crossing</i>	Road and pedestrian level crossing warning that relies on road users and pedestrians looking out for and giving way to rail traffic (i.e. no flashing lights, half boomgate or bells).
<i>Proceed Authority</i>	An Authority that allows rail traffic to enter and occupy a portion of line and proceed in the forward direction.
<i>Propel</i>	To push rail traffic away from the controlling locomotive or motive power unit.
<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>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>
<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>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>Set Back</i>	To move in the reverse direction to that provided in the current Proceed Authority.
<i>Shunt</i>	To move rail traffic, rakes of vehicles, or vehicles on lines for purposes other than through movement.

<i>Single Line Working</i>	Rail traffic working in both directions over a single line where multiple line unidirectional operation normally applies.
<i>Station</i>	A system of tracks within station limits at the beginning or end of a section at which rail traffic may cross, pass or run around.
<i>Station Limits</i>	A defined operational limit of controlled locations or a running line.
<i>Stopping Place</i>	A designated location, next to the line, that may allow personnel to enter and leave trains.
<i>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Train Order</i>	An authority issued by the Network Controller for the movement of rail traffic or issue of LPA track work authorities.
<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

The object of this Rule is to describe how *Rail Traffic* is managed when it is required to *Set Back* or *Propel* on *Running Lines* in the *Network*.

2. General

Rail Traffic may need to *Set Back* or *Propel* if:

- the forward portion of *Rail Traffic* is *Set Back* or *Propelled* towards a stationary portion of *Rail Traffic*;
- a *Limit of Authority* is overrun;
- it cannot continue in the forward direction;
- a *Stopping Place* has been partially or completely overrun, and it is necessary to return to the *Stopping Place*;
- an unsafe condition is encountered; or
- *Shunting* operations are required on *Running Lines*.

3. Authorities

Signals, if available, must be used to give *Proceed Authorities*.

3.1 Setting back to Attach a Portion of Parted Rail Traffic



WARNING: An appropriate *Authority* is required if the rear portion is beyond a *Controlled Location*.

The verbal authority of the *Network Controller* is required before *Setting Back* on a *Running Line* if the forward portion of *Rail Traffic* is to *Set Back* towards a stationary portion of the *Rail Traffic*.

3.2 Setting Back – Unable to Proceed in the Normal Direction

Rail Traffic may need to be *Set Back* if it cannot continue in the forward direction.

3.2.1 Double Line Centralised Traffic Control (CTC) Territory

In Double line areas the movement back is authorised by the *Network Controller* on a Relief Rail Traffic Authority (RRTA) and where possible signal indication.

3.2.2 Single Line CTC Territory

In *Single Line* areas the movement back is authorised by the *Network Controller* where:

- the *Rail Traffic Crew* is in possession of the *Half Pilot Key* from the *Station* to which the *Rail Traffic* is moving; or
- the *Rail Traffic Crew* is in sight of a *Controlled Absolute Signal* which controls entry to the *Controlled Location* and that signal is at PROCEED.

3.2.3 Train Order Territory

In *Train Order Territory* the movement back is permitted where the *Rail Traffic Crew* are in possession of a *Train Order*, and verbal permission from the *Network Controller* is obtained.

3.3 Setting Back at Stopping Places

Rail Traffic may need to be *Set Back* if an overrun of a *Stopping Place* occurs.

The verbal authority of the *Network Controller* must be obtained to *Set Back* and a *Competent Worker* must be in attendance to ensure the move is safe.

3.4 Propelling During Shunting

Propelling during Shunting on Running Lines requires an appropriate authority from the *Network Controller*.



NOTE: In *Train Order Territory* the *Rail Traffic Crew* must be in possession of a *Train Order* for movements outside *Station Limits* or beyond the Limit of *Shunt* signs.

4. Assurances

Before authorising the movement, the *Network Controller* must:

- ensure the portion of *Track* into which the movement is to Proceed is *Clear of Rail Traffic*;
- where available, apply *Blocking Facilities*; and
- ensure current *Work on Track Authorities* or methods in affected *Sections* are *Fulfilled* or worksites are *Protected*.

4.1 Authority Details

An *Authority Issued to Rail Traffic* for a *Set Back* or *Propelling* movement must specify the *Location* to which *Travel* is authorised.

5. Conditions for Setting Back or Propelling

Rail Traffic must *Set Back* or *Propel* only:

- if it is not practicable to *Haul* the *Rail Traffic*; and
- as far as the *Authority* to *Propel* allows.

Where practicable the *Rail Traffic Crew* must drive from the leading end of *Rail Traffic*.

The *Competent Worker* directing the *Set Back* or *Propelling* movement must:

- closely accompany or precede the leading vehicle; or
- ride in the leading vehicle in a position designated as safe by the operator and approved by *Brookfield Rail*.

Effective Communication must be in place between the *Competent Worker* and the *Rail Traffic Crew*.

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

If communication between the *Rail Traffic Crew* and the *Competent Worker* directing the movement is interrupted, the crew must stop the *Rail Traffic* immediately.

5.1 Rail Traffic Crew

The *Rail Traffic Crew* must:

- ensure that the movement is authorised;
- if available, ensure the *Automatic Brake* connection is continuous throughout the *Rail Traffic Consist*, and that the brakes on the leading vehicle are operating;
- make sure that the movement does not exceed its *Limit of Authority*; and
- not exceed *Restricted Speed*.

5.2 Level Crossings

At *Active Control Level Crossings*, a *Setting Back* or *Propelling* movement must not proceed unless the warning equipment is operating or *Level Crossing Protection* is in place.

At *Passive Control Level Crossings*, a *Setting Back* or *Propelling* movement must not proceed unless the crossing is *Clear*, or road and pedestrian traffic has stopped.

A movement over the crossing must:

- be directed by a *Competent Worker*;
- not Proceed before it is safe to do so; and
- not exceed 10 km/h before the leading vehicle has *Cleared* the crossing.

6. References

Nil

7. Effective Date

4 May 2016

Network Safeworking Rules and Procedures

Overdue Occupancies

Rule Number: 4017



Brookfield
Rail

Overdue Occupancies

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Glossary for 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>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>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</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>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>Secure</i>	To safeguard against accidental or unauthorised access or movement.
<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.

1. Purpose

The purpose of this Rule is to provide instructions for dealing with overdue *Occupancies* in the *Network*.

2. General

Where the agreed or expected reporting, clearance or *Section* running times are exceeded by 15 minutes, the *Network Controller* must act in accordance with Rule 2027 Responsibilities of Network Controller; and

- 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 Crews' 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 crew of an overdue *Rail Traffic* movement.

The crew of overdue *Rail Traffic* must act in accordance with Rule 2027 Responsibilities of Rail Traffic Crews.

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

3. Stopped Rail Traffic

If *Rail Traffic* is delayed due to an unscheduled stop the *Rail Traffic Crew* must immediately advise the *Network Controller*,

- the *Location* of the stopped *Rail Traffic*;
- the reason why the *Rail Traffic* has stopped; and
- the expected duration of the stoppage.

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

- tell the *Network Controller* the reason why the *Rail Traffic* stoppage is extended;
- Secure the *Rail Traffic* in accordance with Rule 4003 Rail Traffic Integrity; and
- provide *Protection* for the *Rail Traffic* in accordance with Rule 4001 Protecting Rail Traffic.

4. 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 different *Network Controllers* or *Access Providers*.

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

- make sure that they are *Protected* against *Rail Traffic* on *Adjacent* lines in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines; and
- tell the *Network Controller* the result of the inspection.

5. Disabled Rail Traffic

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

6. Overdue Track Occupancy

If a *Work on Track Authority* is overdue, the *Protection Officer* must tell the *Network Controller*:

- the reason why the *Authority* is overdue; and
- the *Location*, if assistance is required.

7. References

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

2027 Responsibilities of Network Controllers

2029 Responsibilities of Rail Traffic Crews

4001 Protecting Rail Traffic

4003 Rail Traffic Integrity

4009 Disabled Rail Traffic

9010 Protecting Work from Rail Traffic on Adjacent Lines

8. Effective Date

4 May 2016