

Network Safeworking Rules and Procedures

Protecting Disabled Rail Traffic

Rule Number: 4001



Brookfield
Rail

Protecting Disabled Rail Traffic

Rule Number: 4001

Document Control Identification

Document title	Number	Version	Date
4001 – Protecting Disabled Rail Traffic		1.0	31 March 2016

Document History

Publication version	Effective date	Page(s) affected	Reasons for and extent of change(s)
4001 – Protecting Disabled Rail Traffic	4 May 2016		

Authorisation



Adam Sidebottom
Rail Safety Manager
Brookfield Rail
31 March 2016



DISTRIBUTION AND CHANGE: Brookfield Rail maintains the master for this document and publishes the current version of the Brookfield Rail website. Any changes to the content of this publication require the version number to be updated. Changes to this publication must be approved according to the procedure for developing Brookfield Rail products.

To view the latest version of this document visit www.brookfieldrail.com

Table of Contents

Glossary for this Rule.....	4
1. Purpose	6
2. General	6
3. Rail Traffic Protection.....	6
3.1 Disabled Rail Traffic.....	7
3.2 Adjacent Lines.....	8
3.2.1 Track-Circuit Shorting Out Device.....	9
3.2.2 Using the Rail Traffic's Motive Power Unit to Assist in Placing Protection.	9
3.3 Removing RTS.....	9
4. Protecting Rail Traffic That Needs Assistance	10
4.1 Assistance from the Rear	10
4.2 Assistance from the Front	11
5. Restraint Authority.....	11
6. References	12
7. Effective Date.....	12
8. Attachments	13

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:

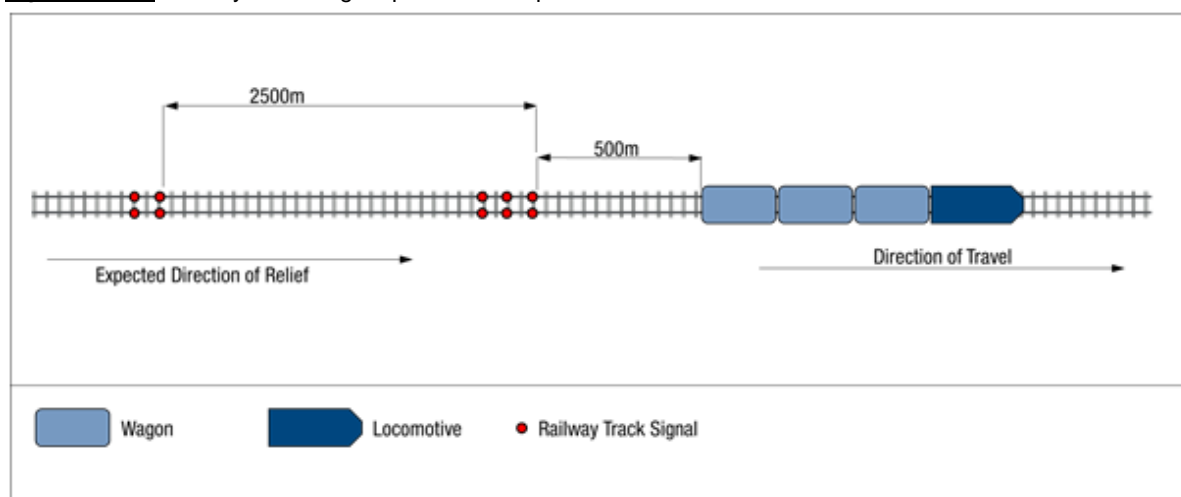
- ensure their own safety;
- tell the *Network Controller*:
 - there is a failure;
 - the *Location* of the *Disabled Rail Traffic*; and
 - the nature of the failure, when this has been determined;
- if necessary, protect the *Disabled Rail Traffic*; and
- ensure that the *Rail Traffic Consist* is *Secured*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



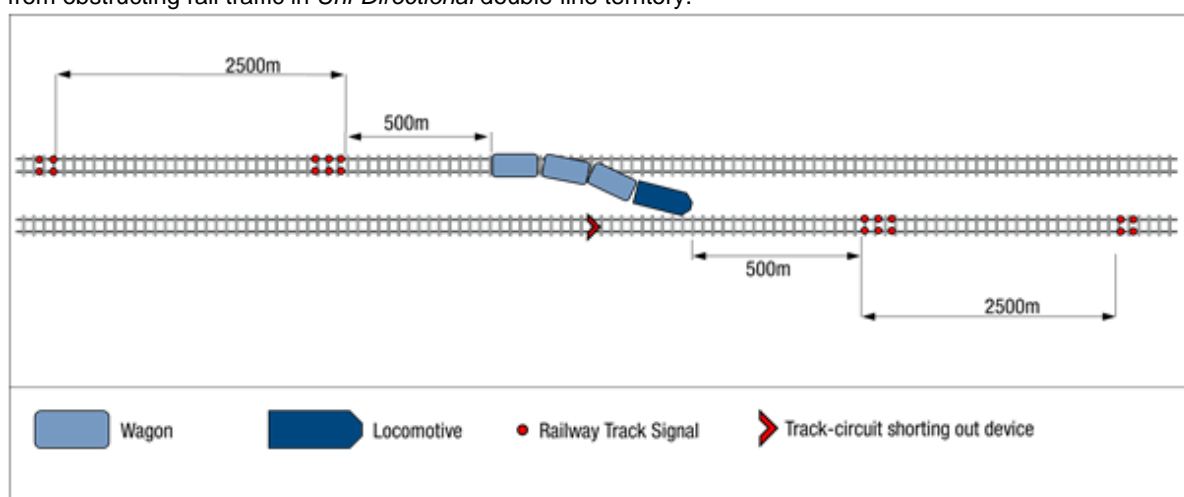
WARNING: Where the *Rail Traffic Crew* are unable to confirm that the *Adjacent* line is not *Obstructed*, they must assume that it is *Obstructed* and *Protect* that line first.

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.

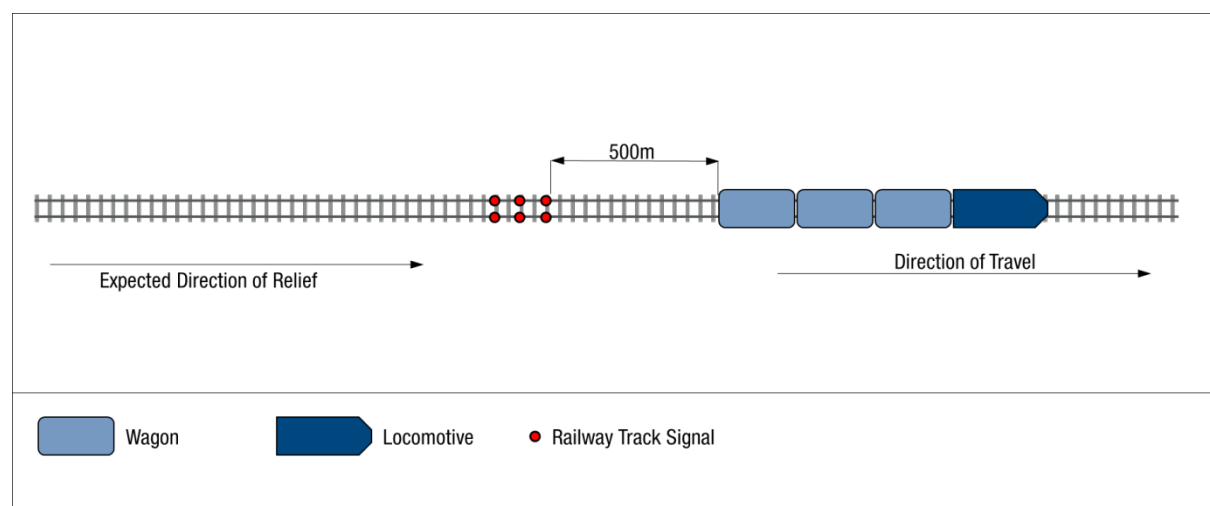
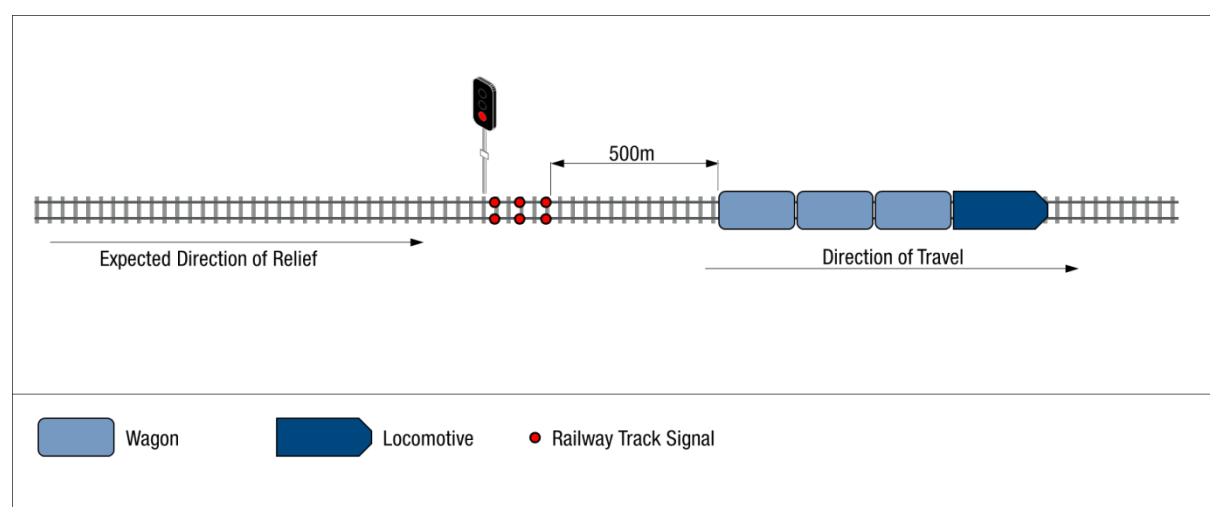


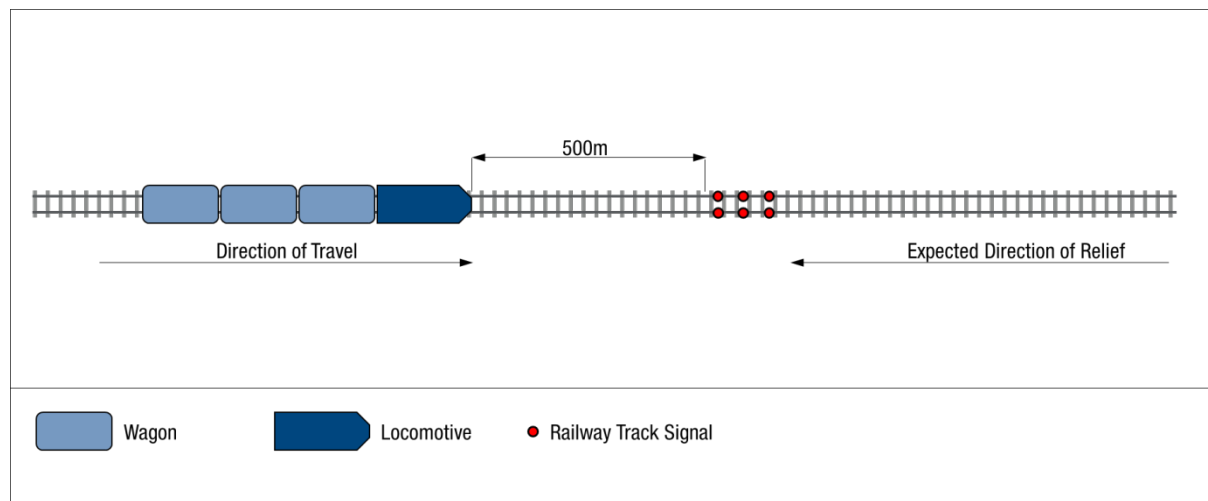
Figure 4001-4 Railway Track Signals placed at the first signal at STOP behind rail traffic to protect it.



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.