

Network Safeworking Rules and Procedures

Principles of Network Operations

Rule Number: 1002



Brookfield
Rail

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Glossary for this Rule

<i>Absolute Block Working</i>	A safeworking method that gives rail traffic exclusive occupancy between two adjoining block stations, i.e. Permissive working is not permitted.
<i>Absolute Signal</i>	An automatic fixed signal that is controlled by the passage of Rail Traffic (i.e. they are not operated by a Network Controller) and must not be passed at STOP without the authority of the Network Controller.
<i>Absolute Signal Blocking (ASB)</i>	A method used by Competent Workers to carry out Work on Track using Controlled Absolute Signals set and kept at STOP, without a formally Issued Work on Track Authority.
<i>Adjoining</i>	In contact with, connected to.
<i>Arrived Complete</i>	Rail traffic where the last vehicle of a consist has arrived within a location.
<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>Block</i>	A portion of line with defined limits between which only one rail traffic movement is permitted at any one time (not Permissive Block).
<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)</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>Clear and Complete</i>	Rail traffic where the last vehicle of a consist has passed beyond a location.
<i>Competent Workers</i>	A worker certified as competent to carry out the relevant task.
<i>Complete</i>	Rail Traffic where the Consist has not parted.
<i>Controlled Locations</i>	A location where a Network Controller controls the signalling and Safeworking operations remotely.
<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>Danger Zone</i>	Everywhere within three (3) metres horizontally from the nearest rail and any distance above or below this three (3) metres, unless a safe place (see Safe Place) exists or has been created.
<i>Departure Signal</i>	A Controlled Absolute Signal controlling the entrance to a Single line section in Centralised Traffic Control (CTC) territory.
<i>Double Line Automatic Signalling</i>	The portions of line where the Double Line Automatic Signalling system of Safeworking is used.
<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>Local Possession Authority (LPA)</i>	An authority that closes a defined portion of track from non-associated rail traffic for a specified period.
<i>Lookout</i>	A Competent Worker responsible for <ul style="list-style-type: none"> • keeping watch for approaching rail traffic; and • warning other workers to stand clear of the line before the rail traffic arrives.
<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>Occupancy</i>	Presence of Rail Traffic or Track Workers on Track.
<i>Permissive Working</i>	A method of safeworking in CTC territory where the line between two adjoining Block Stations is divided to permit following rail traffic to enter the same Section with safe separation.
<i>Possession Protection Officer</i>	The Competent Worker responsible for coordinating Protection of worksites under a Local Possession Authority.
<i>Protection</i>	The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.
<i>Protection Officer</i>	The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).
<i>Rail Corridor</i>	The land on which a railway is built; comprising all property between property fences or from the nearest rail in each direction for the distance defined under the Brookfield Rail lease.
<i>Rail Traffic</i>	Trains and Track Vehicle or vehicles travelling on the Network.

<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>Route</i>	The rail traffic path from one limit of authority to the next in the direction of travel.
<i>Safe Place</i>	<p>A Safe Place is:</p> <ul style="list-style-type: none"> • where there is at least three metres clearance from the nearest Running Line; • on a Platform behind the safety lines; • within a purpose-built refuge or shelter; • where a structure or physical barrier has been erected to provide a position of safety; or • immediately in front of stationary and Secured Rail Traffic.
<i>Safety Assessment</i>	An assessment process used to identify hazards for all work planned for the Rail Corridor and its potential to intrude on the Danger Zone.
<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>Single Line Automatic Signalling</i>	The portions of line where the Single Line Automatic Signalling system of Safeworking is used.
<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>Systems 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>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Occupancy Authority (TOA)</i>	An authority for Competent Workers and their equipment to occupy a defined portion of track for a specified period.
<i>Track Work Authority (TWA)</i>	An authority for non-exclusive occupancy of track by track workers and equipment within a defined portion of track for a specified period..
<i>Train Order</i>	An Authority Issued by the Network Controller for the movement of Rail Traffic.
<i>Train Order System Blocking (TOSB)</i>	A facility used by a Network Controller to protect rail traffic, track workers and prevent the unintended Issue of an Occupancy Authority on the Train Order system.
<i>Travel</i>	Planned or purposeful movement from one location to another.
<i>Work on Track</i>	The work performed in the Danger Zone.

1. Purpose

This Rule sets out:

- *Brookfield Rail Network* operating principles;
- the type of safeworking systems used; and
- the *Authorities* and conditions for managing safe *Occupancy* of the *Track*.

2. General

The following are the underlying principles for *Safeworking*.

- A *Safety Assessment* must be completed before persons enter the *Danger Zone*.
- When in the *Danger Zone*, all workers must be *Protected*.
- Workers must have identified *Safe Places* when on *Track*.
- If *Rail Traffic* cannot be separated from workers, the *Rail Traffic* must be managed to ensure the safety of workers on *Track*.
- *Work on Track* must only be carried out using a defined *Work on Track* method or *Authority*.
- The person who introduces the risk must ensure that the risk is appropriately managed.
- Workers must be provided with all applicable information.
- Workers must be warned about known hazards in the *Rail Corridor*.
- *Competent Workers* must have the ability and responsibility to carry out a *Safety Assessment* where required.
- Common protocols and methods for communication must be adopted.
- *Safe Rail Traffic* separation must be maintained.
- *Safe Route* integrity must be established for all *Rail Traffic*.
- *Rail Traffic Integrity* must be ensured before and during a journey.
- A simplified and common system for degraded operations may be formulated to apply in all *Systems of Safeworking*.

3. Safeworking System

3.1 Absolute Block System

The *Absolute Block System* provides that *Rail Traffic* is not permitted to enter a *Train Order Section* or an *Automatic Signalling Section*, between two *Adjoining Controlled Locations*, until the previous *Rail Traffic* has passed completely out of the *Section*.

3.2 Permissive Working

The object of *Permissive Working* in automatic signalling is to facilitate the regular movement of *Rail Traffic* by dividing the line between *Controlled Locations* into *Blocks* and automatically maintaining the proper space interval between following *Rail Traffic*.

This type of working prevents *Rail Traffic* from entering a *Block* until the previous *Rail Traffic* has passed completely out of the *Block*.

All signals displaying a STOP aspect must be treated as an *Absolute Signal*.

3.3 Centralised Traffic Control (CTC)

3.3.1 Double Line Automatic Signalling

The object of *Double Line Automatic Signalling* is to provide a separate line for Up and Down movements allowing for greater density of *Rail Traffic*.

3.3.2 Single Line Automatic Signalling

The object of *Single Line Automatic Signalling* is to prevent *Rail Traffic* travelling in opposite directions being between two *Controlled Locations* at the same time.

In automatic signalling systems this is accomplished by:

- in the case of following *Rail Traffic*, electrically securing the signals at STOP, unless the intermediate *Block* ahead of the signal is *Clear*, and
- in the case of opposing *Rail Traffic*, electrically monitoring that the *Block* is clear and the *Departure Signals* at the opposite end of the *Section* is controlled to Stop. Thus it would not be possible for the *Departure Signals* at opposite ends of the *Section* to exhibit a Proceed indication simultaneously.

3.4 Train Order Working

The object of *Train Order Working* is to prevent more than one *Rail Traffic* movement being between two *Adjoining Train Order Stations* at the same time.

In *Train Order Working* systems this is accomplished by the *Network Controller*.

- in the case of following *Rail Traffic* movements, ensuring that the preceding *Rail Traffic* has *Arrived Complete* at the end of a *Train Order Section* before a *Train Order* is Issued for any following *Rail Traffic*;
- in the case of opposing *Rail Traffic* movements, not Issuing a *Train Order* for *Rail Traffic* to advance into a *Train Order Section* unless the opposing *Rail Traffic* holds a *Train Order* which shows the same *Crossing Station* for both *Rail Traffic* movements.

4. Work on Track Authorities – for Work that Obstructs the Track or Affects Track Geometry

In all *Safeworking* systems, work that *Obstructs* the *Track*, affects *Track* geometry, and/or places workers and *Rail Traffic* at risk, requires an *Authority Issued* by the *Network Controller* in one of the following ways.

4.1 Local Possession Authority (LPA)

- The LPA is Issued by the *Network Controller*.
- The LPA is used for major or complex Work on Track for a specified period. This *Authority* transfers the management of a defined portion of *Track* to a *Possession Protection Officer*.
- Multiple worksites are permitted within the LPA.
- *Associated Rail Traffic* for the worksites is permitted under the LPA.
- The *Possession Protection Officer* receives the LPA in writing on a LPA Form.

4.2 Track Occupancy Authority (TOA)

- The TOA is Issued by the *Network Controller*.
- This *Authority* is to *Occupy* a defined portion of *Track* for *Work on Track* while *Rail Traffic* is diverted from, or not authorised to enter, the *Track*, for a specified period.
- This *Authority* is for a single worksite.
- *Associated Rail Traffic* is permitted to enter the worksite under the TOA.
- The *Protection Officer* receives the TOA in writing on a TOA Form.

4.3 Track Work Authority (TWA)

- The TWA is Issued by the *Network Controller*.
- The *Protection Officer* receives the TWA in writing on a TWA Form.
- A TWA does not give exclusive *Occupancy* of *Track*.
- A TWA authorises the occupation of a defined portion of *Track* between *Rail Traffic* movements.
- The *Track* may be broken or *Obstructed* but must be restored and *Cleared* for *Rail Traffic* transit as necessary.
- The *Protection Officer* must manage the passage of *Rail Traffic* through worksites.

5. Work on Track Authorities – for Work that does not Affect Track Geometry.

Work in the *Danger Zone* that does not affect *Track* geometry and involves ensuring that a *Safe Place* is available for workers, requires the *Network Controller* and *Protection Officer* to provide *Protection* in one of the following ways.

5.1 Absolute Signal Blocking (ASB)

- The ASB is Issued by the *Network Controller*.
- The ASB is used to *Protect* workers who *Occupy* a defined portion of *Track* for work in the *Danger Zone* while *Rail Traffic* is not authorised to enter that portion of *Track*.
- The *Protection Officer* and the *Network Controller* record the use of ASB.
- The *Protection Officer* receives confirmation on the placement of *Blocking Facilities* on an ASB/TOSB Blocking Request for Work on Track Form.

5.2 Train Order System Blocking (TOSB)

- The TOSB method of *Protection* can be applied to the Train Order System only.
- The TOSB is Issued by the *Network Controller*.
- The TOSB is used to *Protect* workers who *Occupy* a defined portion of *Track* for work in the *Danger Zone* while *Rail Traffic* is not authorised to enter that defined portion of *Track*.
- The *Protection Officer* and the *Network Controller* record the use of TOSB.
- The *Protection Officer* receives confirmation on the placement of *Blocking Facilities* on an ASB/TOSB Blocking Request for Work on Track Form.

5.3 Lookout Protection

- Lookout Protection is used to *Protect* workers who *Occupy* a defined portion of *Track* for work in the *Danger Zone* between *Rail Traffic* movements.
- The *Protection Officer* records the use of Lookout Protection.

6. Accessing the Danger Zone for Work

Before entering the *Rail Corridor* the *Network Controller* must be advised.

Regardless of the type of *Protection* being used, before work commences the:

- *Network Controller* must give approval; and
- *Protection* must be in place.

7. References

3001 Local Possession Authority

3005 Track Occupancy Authority

3009 Track Work Authority

3011 Absolute Signal Blocking

3013 Lookout Working

3023 Train Order System Blocking

5001 Centralised Traffic Control System

5017 Train Order Working

8. Effective Date

4 May 2016