

Network Safeworking Rules and Procedures

Lookout Working

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Rail

Lookout Working

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Glossary for this Rule

<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>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>Audible Warning Device</i>	A device, such as a whistle, siren, horn or hooter, used to give warning.
<i>Civil Infrastructure</i>	The track, track formation and drainage, and fixed structures beside, over or under the track. The term includes supports for overhead electric traction equipment and supports for signalling and telecommunications equipment, but not the equipment itself.
<i>Clear</i>	A proceed indication displayed by a signal. In reference to a track circuit, block, section or signal route, the absence of rail traffic. In reference to track workers being clear of track.
<i>Competent</i>	Having the ability, skill and certification to carry out a relevant task.
<i>Danger Zone</i>	Everywhere within 3m horizontally from the nearest rail and any distance above or below this 3m, unless a safe place (see Safe Place) exists or has been created.
<i>Effective Communication</i>	The ability to successfully send, receive and understand information. The communication does not need to be continuous.
<i>Electrical Infrastructure</i>	may include: Equipment and systems for supplying and distributing electricity Wires, cables, electrical equipment, electrical switch rooms, signalling and substations.
<i>Handsignal</i>	A signal given by hand or lights movements, hand signals may be with or without flags.
<i>Infrastructure</i>	See civil infrastructure; electrical infrastructure; signalling infrastructure and telecommunications infrastructure.
<i>Light Tool or Device</i>	A tool that can be carried and easily removed by one person and is not powered by cord or hose (e.g. compressed air, gas, electricity).
<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>Location</i>	A place in the Network with a designated name, identification number, or signalling reference.

<i>Lookout</i>	<p>A Competent Worker responsible for</p> <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>Lookout Working</i>	<p>A safety measure used by Competent Workers to carry out work on track without a formally issued work on track authority.</p>
<i>Network Controller</i>	<p>A Competent Worker who authorises and issues Occupancy Authorities, and works points, signals and other signalling equipment to manage routes for safe and efficient transit of rail traffic in the Network.</p>
<i>Permanent Record</i>	<p>A record made in writing or in an electronic system, and kept for reference and audit.</p>
<i>Points</i>	<p>A track component consisting of paired pieces of tapered rail (blades) that can be moved and set to allow tracks to diverge or converge.</p>
<i>Possession Protection Officer</i>	<p>The Competent Worker responsible for coordinating protection of worksites under a Local Possession Authority.</p>
<i>Protection</i>	<p>The means used to prevent rail traffic from entering a worksite or other portion of track, or to prevent road or pedestrian traffic entering a level crossing.</p>
<i>Protection Officer</i>	<p>The Competent Worker responsible for managing the rail safety component of worksite protection (i.e. compliance with Network Safeworking Rules and procedures).</p>
<i>Rail Corridor</i>	<p>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.</p>
<i>Rail Traffic</i>	<p>Trains and track vehicle or vehicles travelling on the network.</p>
<i>Rail Traffic Crew</i>	<p>Competent Workers responsible for the operation of the Motive Power Unit.</p>
<i>Safety Assessment</i>	<p>An assessment process used to identify hazards for all work planned for the Rail Corridor and its potential to intrude on the Danger Zone.</p>
<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>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>Sighting Distance</i>	The distance that someone can clearly see along the track.
<i>Signalling and Communications Infrastructure</i>	Signalling equipment and telecommunications equipment used as part of the safeworking and operating systems of the Network.
<i>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>Track</i>	The combination of rails, rail connectors, sleepers, ballast, points and crossings.
<i>Track Speed</i>	The allowed maximum speed for a portion of track.
<i>Work on Track</i>	The work performed in the Danger Zone.
<i>Wrong Running Direction</i>	The direction opposite to the normal direction of travel on unidirectional lines.

1. Purpose

The object of this Rule is to detail how *Lookout Working* is to be used to give warning of approaching *Rail Traffic* to workers in or near the *Danger Zone*.

2. General

If the *Absolute Signal Blocking (ASB)* method is practical, this is the preferred method and must be applied in accordance with Rule 3011 Absolute Signal Blocking.

Only *Network Controllers* may authorise *Lookout Working* for *Track* under their control.

Lookouts are the only safety measure used in this method of *Work On Track*.

The *Lookout Working* method must not be used for moving worksites, work that breaks the *Track* or alters *Track* geometry or structure.

Work in the *Danger Zone* using the *Lookout Working* method must be done in daylight hours only, where visibility allows.

The *Protection Officer* applying this Rule must have a minimum *Protection Officer Level 1 (PO1) Competency* in accordance with Rule 1004 Track Access Accreditation.

The *Protection Officer* must also obtain information concerning *Rail Traffic* movements for the work *Location*, from the *Network Controller*.



NOTE: Information on the running of *Rail Traffic* is a planning tool only and workers should expect *Rail Traffic* to approach from any direction at any time.

Lookout Working may be used, during daylight hours, for:

- work requiring the use of *Light Tools or Devices* which can be easily and immediately removed from the *Track* by **one worker** without mechanical assistance;
- inspections in the *Danger Zone*; or
- work conducted in the *Rail Corridor*, but outside of the *Danger Zone*, that may intrude into the *Danger Zone*.



NOTE: A Lookout provided for work outside the *Danger Zone* that may intrude into the *Danger Zone* is in place to warn workers before they intrude into the *Danger Zone* even if there is not rail traffic approaching.

2.1 Tools

Workers using the *Lookout Working* method must ensure any *Light Tools or Devices* used do not interfere with the ability of the worker to respond to a *Lookout's* warning.

3. Authorisation

Before authorising Lookout Working, the Network Controller must make sure that:

- another Work on Track method is not in use at that Location; and
- the Protection Officer knows about any existing obstructions.

The *Network Controller* must confirm with the *Protection Officer* the:

- name, Track Access Permit number and contact details of the *Protection Officer*;
- type of work;
- intended start and finish times; and
- *Location* using two or more of the following identifiers:
 - a kilometre sign and *Section*;
 - *Station* name;
 - a *Points* number;
 - a signal number;
 - an observance of *Points* or signal *Aspect* change;
 - permanent structures, such as a bridge, roadway or overpass used only in conjunction with one of the above identifiers; or
 - another identifier.

Where an existing *Work on Track* method is in place, the *Network Controller* may authorise *Lookout Working* only if the *Protection Officers* have consulted and agree that *Lookout Working* can be done within the existing method.



NOTE: If the existing *Work on Track* method is a *Local Possession Authority (LPA)* the *Possession Protection Officer* must approve the work.

4. Protection Officer

There must be a *Protection Officer* present at the worksite for the period of the work.

A *Protection Officer* must:

- conduct a pre-work *Safety Assessment*;
- make sure that work in the *Danger Zone* does not begin before the required safety measures are in place;
- be responsible for the *Protection* of workers from *Rail Traffic*;
- tell workers about the *Locations of Safe Places*;
- determine the number of *Lookouts* needed to *Protect* the work;
- make sure *Lookouts* do not perform their function continuously at the same *Location* for more than 60 minutes;
- rotate the *Lookouts*, and provide a break equivalent to the period the lookout duty was last performed, before resuming as a *Lookout*; and
- ensure that workers do not perform as a *Lookout* more than 4 hours combined in a 24 hour period.



NOTE: A *Protection Officer* must be satisfied that other work will not interfere with *Protection* duties.

5. Obtaining Approval for Lookout Working

The *Network Controller* and the *Protection Officer* must confirm:

- the *Location* of the work;
- the type of work to be done;
- the duration of the work;
- the *Protection Officer's* name and contact details; and
- the name of the authorising *Network Controller*.

When *Lookout Working* is authorised, the *Protection Officer* must put the required safety measures in place and commence work.

6. Protection



WARNING: Work must not start in the *Danger Zone* until the required safety measures are in place.

6.1 Safe Places

An easily-reached *Safe Place* must be available if the *Lookout Working* method is used.

Workers must immediately be able to remove themselves, tools and materials to a *Safe Place* when told to do so by a *Lookout*.



WARNING: A *Protection Officer* must take into account the extra time for the minimum *Sighting Distance* required when providing touch warnings.

6.2 Noisy Machinery

Where the work involves noisy machinery and the workers are wearing hearing protection, the *Protection Officer* must ensure other workers are positioned to provide a physical warning, by touch, to those workers.



NOTE: The worker providing touch warning must do no work other than providing warning.

The *Lookout* must be visible to the worker at all times.

6.3 Placing Lookouts

The *Protection Officer* must make sure:

- that the *Locations of Lookouts* and the visibility conditions give *Lookouts* enough *Sighting Distance* of approaching *Rail Traffic*;
- that *Lookouts* have *Effective Communication* with workers and an *Audible Warning Device*;
- that the *Lookout* has a backup *Audible Warning Device*; and
- that when *Rail Traffic* approaches, *Lookouts* can warn workers in time to allow them to:
 - react to the warning of the approach of *Rail Traffic*; and
 - move themselves and their equipment to a *Safe Place* before the *Rail Traffic* arrives.

Only one *Lookout* in each direction is permitted, distant *Lookouts* are not permitted.

Where the *Protection Officer* determines that it is safe to use a single *Lookout* to provide warning for both directions the minimum reaction time must be increased from 5 seconds to 15 seconds when calculating the *Sighting Distance*.

6.4 Lookouts



WARNING: Lookouts must not use radios or telephones to warn workers.

Lookouts must be alert for Rail Traffic which is unexpected or comes from the Wrong Running Direction.

Lookouts must wear a high visibility Yellow vest to ensure they are readily identifiable.

Lookouts must:

- agree with the *Protection Officer* about how workers will be warned about the approach of *Rail Traffic*;
- stand or walk in a *Safe Place* where they can see approaching *Rail Traffic*;
- keep a continuous watch for the approach of *Rail Traffic* from any direction;
- remain within sight and hearing or in physical touch of the workers. If you cannot do this safely tell the *Protection Officer*;
- tell the *Protection Officer* if the *Lookout* needs to move from the designated position and only move if all workers and their equipment are in a *Safe Place* or a new *Lookout* is in position; and
- tell the *Protection Officer* if conditions, such as visibility, change.

If visibility conditions deteriorate to where the *Lookout* can no longer maintain *Sighting Distance*, the *Lookout* must warn the workers to get them clear of the *Danger Zone* and then tell the *Protection Officer* of the changed conditions.



WARNING: Lookouts must do no work other than look for and give warning to workers about the approach of Rail Traffic.

Lookouts must not:

- manage the passage of *Rail Traffic*, or
- do any other work.

6.5 Giving Warning

When *Rail Traffic* approaches the worksite the *Lookout* must immediately warn the workers.



NOTE: Warning must be given as soon as *Rail Traffic* is seen to be approaching even if the *Rail Traffic* has not reached the minimum *Sighting Distance*.

The workers must:

- acknowledge the *Lookout's* warning by raising an arm above their head;
- remove their tools, equipment and materials from the *Track*; and
- move to a position of safety.

Only if all workers and their equipment are in a *Safe Place* can the *Lookout* face the approaching *Rail Traffic* and give an ALL *CLEAR Handsignal*, in accordance with Rule 2003 Handsignals and Verbal Commands, to the *Rail Traffic Crew*.

The *Lookout* must maintain the ALL *CLEAR Handsignal* until the *Rail Traffic Crew* acknowledges the *Handsignal*.

The *Lookout* must make sure that the line is *Clear* before telling the *Protection Officer* that it is safe for work to resume.

6.6 Adjacent Line

If the *Safety Assessment* indicates that workers need to be protected from *Rail Traffic* on *Adjacent* lines, the *Protection Officer* must arrange for *Adjacent* lines to be *Protected* in accordance with Procedure 9010 Protecting Work from Rail Traffic on Adjacent Lines.

The *Protection Officer* may arrange for the speed of *Rail Traffic* on *Adjacent* lines to be restricted.

7. Calculating the Minimum Warning Time



WARNING: If the calculated minimum warning times cannot be met or there is any doubt that sufficient *Sighting Distance* is available, then another *Protection* method must be used.



WARNING: When using a single *Lookout* to provide warning for both directions then a minimum of 15 seconds is used for the reaction time.

The minimum warning time required shall be calculated as follows:

- reaction time (minimum 5 seconds);
- time required to move the workers, tools, equipment and materials *Clear* of the *Track* (determined in the test conducted by the *Protection Officer*); plus
- being in a position of safety for a minimum of 10 seconds before *Rail Traffic* arrives.

7.1. Example of How Warning Time is Calculated

Figure 3013-1 Calculation Table

Reaction time	5 Seconds
Time required to move the workers, tools, equipment and materials clear of the track	20 Seconds
Minimum time to be in a position of safety before rail traffic arrives.	10 Seconds
Minimum warning time required.	Total 35 Seconds

The minimum *Sighting Distance* needed to see an approaching movement, so that sufficient warning can be given, is dependent on the minimum warning time required and the maximum *Track Speed*, determined from Figure 3013-2 in section 7.2 and as demonstrated in the following example:

Example: The minimum warning time required in this example is 35 seconds and the maximum *Track Speed* in the area is 120 km/h; therefore the required minimum *Sighting Distance* of approaching *Rail Traffic* from the table in Figure 3013-2 is 1170 metres. The *Lookout* must be positioned to be able to see the approaching *Rail Traffic* at least 1170 metres in order to give the minimum warning time required.

The *Protection Officer* must:

- know the maximum speed for *Rail Traffic* on the portion of line that the work is to take place; and
- conduct a test to determine how long it will take for the workers to remove their equipment and move to the *Safe Place*.

7.2. Minimum Sighting Distance

Figure 3013-2 Sighting Distance table.

Maximum Track Speed	Minimum Warning Time					
	20 sec	25 sec	30 sec	35 sec	40 sec	45 sec
160km/h	890m	1115m	1335m	1560m	1780m	2000m
150km/h	835m	1045m	1250m	1460m	1665m	1875m
140km/h	780m	975m	1170m	1365m	1560m	1750m
130km/h	725m	905m	1085m	1265m	1445m	1625m
120km/h	670m	835m	1000m	1170m	1335m	1500m
110km/h	615m	765m	920m	1070m	1225m	1375m
100km/h	560m	695m	835m	975m	1115m	1250m
90km/h	500m	625m	750m	875m	1000m	1125m
80km/h	445m	560m	670m	780m	890m	1000m
70km/h	390m	490m	585m	680m	780m	875m
60km/h	335m	420m	500m	585m	670m	750m
50km/h	280m	350m	420m	490m	555m	625m
40km/h	225m	280m	335m	390m	445m	500m
30km/h	170m	210m	250m	295m	335m	375m
25km/h	140m	175m	210m	245m	280m	315m
20km/h	115m	140m	170m	195m	225m	250m
15km/h	85m	105m	125m	150m	170m	190m



NOTE: Distances in Figure 3013-2 have been rounded up to the nearest 5m.

8. Communications with Network Control

The *Protection Officer* must be the only point of contact between the *Network Controller* and the work group for matters of worksite *Protection*.

The *Protection Officer* must, if necessary, seek an extension of time.

When the agreed time limit has been exceeded by 15 minutes and the *Protection Officer* has not requested an extension of time the *Network Controller* must act in accordance with Rule 4017 Overdue Occupancies.

8.1 Change of Protection Officer

An outgoing *Protection Officer* must tell an incoming *Protection Officer* about the worksite *Protection* arrangements.

The incoming *Protection Officer* must:

- tell affected *Network Controllers* about the changed contact arrangements; and
- make a *Permanent Record* of the handover of *Lookout Working*.

9. Ending Lookout Working

The *Protection Officer* must make sure, and tell the *Network Controller* that:

- all workers, tools, equipment and materials are *Clear* of the worksite; and
- *Lookout Working* has ended.

10. Keeping Records

The *Network Controller* and the *Protection Officer* must keep *Permanent Records* about the details and changes to the worksite *Protection* arrangements.

11. References

1004 Track Access Accreditation

2003 Handsignals and Verbal Commands

3011 Absolute Signal Blocking

4017 Overdue Occupancies

9010 Protecting Work from Rail Traffic on Adjacent Lines

12. Effective Date

1 Oct 2016