absolute signal

A fixed signal that must not be passed at **STOP** without the authority of the Signaller.

Absolute Signal Blocking (ASB)

A method used by Qualified Workers to carry out work on track using controlled absolute signals set and kept at **STOP**.

access

A designated safe way into, along, across or out of a Rail Corridor.

Access Provider

An organisation that provides and manages a rail Network and safe method of entry to that Network for Access Users.

active control (level crossing equipment)

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.
Glossary

adjacent
Next to, near to, close to.

adjoining
In contact with, connected to.

advertise
To give written or electronic notice, usually in advance, of planned activities.

affected signal
A signal not available for normal use.

airbrake
A braking system activated by change in air pressure.

aspect
The displayed pattern or position of lights or arms used to give a signal indication.

attended location
A signalling location or block location that is controlled by a Qualified Worker either on-site or at a remote location.
Glossary

**audible warning device**
A device, such as a whistle, siren, horn or hooter, used to give warning.

**automatic signal**
A signal that is normally controlled exclusively by the operation of track-circuits.

**Automatic Train Protection (ATP)**
A safety system fitted to trains and to the track that warns of or enforces speed limits and stopping at some limits of authority.

**authorise**
To give formal written, spoken or signalled authority for an action.

**authority**
A generic term for permission.
Formal authority name.
axle counter

Equipment used in Rail Vehicle Detection Territory to detect the presence of rail vehicles by counting the number of axles entering or leaving a location. They may be used to operate signalling or other infrastructure equipment.

Axle counter territory

The portions of line where axle counters are used for the Rail Vehicle Detection system of Safeworking.

balloon loop

A portion of line that allows rail traffic to change direction of travel without change to the leading end.

bank locomotive

A locomotive provided at the rear of a train to assist it up a steep grade (bank).

basic block working

A form of manual block working which does not require the issue of a Condition Affecting the Network (CAN) form.
Glossary

bidirectional
Allowing for normal movement of rail traffic in either direction according to the infrastructure and system of Safeworking in use.

block
A portion of line with defined limits between which only one rail traffic movement is permitted at any one time.

block location
A defined location that separates blocks.

block post
A temporary block location.

block train
A train required to travel under manual block working in track-circuited territory.

block work
See manual block working.
**blocking facility**

A facility or device used by a Qualified Worker to prevent either the unintended issue of an Occupancy Authority, or the operation of points or signalling equipment.

**CAN block working**

Manual block working using a Condition Affecting the Network (CAN) form to warn Drivers and Track Vehicle Operators about the working.

**cancel**

To withdraw permission for, or to end previously authorised activities, such as Occupancy Authorities, without completing them.

(Written authorities have the word **CANCELLED** written diagonally across them, between two parallel lines).

**catch points**

Single or double bladed points used to derail rail traffic that might enter or foul an adjacent running line.
Glossary

CAUTION handsignal

A handsignal given by a Qualified Worker to indicate the need for rail traffic to proceed being prepared to stop.

When given by an inner Handsignaller protecting a worksite, and unless otherwise advised by that Handsignaller, a maximum speed of 25km/h applies until the rail traffic has passed the worksite limits.

-certify

To classify a worker as competent.
To classify infrastructure or rolling stock as fit for purpose.

clearance Handsignaller

A Handsignaller at a clearance location, who reports the clearance of rail traffic past that location.

clearance location

A location that, once clear of rail traffic, allows a following movement.

clearance point

See clearance location.
clearance post

A post, marker, light or disc to indicate the clearance point of two converging lines.

co-acting signal

A signal, placed near another signal that might be temporarily obscured from a Driver or Track Vehicle Operator’s view, to provide information about the obscured signal’s indication.

commission

To formally place into active service or use.

Condition Affecting the Network (CAN)

A situation or condition that affects or has the potential to affect the safety of the Network.
**consist**

A listed order of the vehicles arranged to make up a complete train.

**consolidated yard**

An area where interlockings controlled by one signalling location have intervening permissive signals. The area is defined exclusively by a **YARD LIMIT (YL)** sign and an **END OF YARD LIMIT (EYL)** sign.

**controlled absolute signal**

A signal that is controlled or operated by a Signaller or a Qualified Worker. The signal must not be passed at **STOP** without authority.

**controlled signal**

A signal that is, or may be, controlled or operated by a Signaller or Qualified Worker.

**converging**

(Lines) meeting and joining to become one line.
**Glossary**

**convoy**

A group of track vehicles not coupled but travelling closely together under a single Occupancy Authority.

**Coordinating Protection Officer**

The Qualified Worker responsible for protection of a coordinated worksite under a Local Possession Authority (LPA). See also Protection Officer.

**cross**

To go past other rail traffic travelling in the opposite direction.

**crossing location**

May consist of single or double ended portion of line, to hold rail traffic, connected to a main line that is used to permit other rail traffic to cross or pass.

**crossover**

A portion of line that is used to divert rail traffic from one running line to another.
Glossary

Danger Zone
Everywhere within 3m horizontally from the nearest rail, and any distance above or below this 3m, unless a safe place exists or has been created.

dangerous goods
Materials defined under the Australian Dangerous Goods Code.

dead end siding
A portion of line connected to a running line or other siding, with points at one end only.

debate
A Qualified Worker authorised and designated to act in place of another.

demarcation fencing
Easily-seen, continuous worksite safety boundary markers.

derail device
A device intended to guide the wheels of rail traffic off rails.
**Glossary**

**direct**
To give instructions.

**disabled**
Unable to travel due to a defect.

**discrete-channel**
A system in which only the intended participants in a radio or telephone conversation can take part in the conversation.

**Driver**
A Qualified Worker controlling the movement of rail traffic.

**effective communication**
The ability to successfully send, receive and understand information. The communication does not need to be continuous.

**Electric Vehicle Maintenance Centre (EVMC)**
A designated location where maintenance work is carried out on electric traction vehicles.
Glossary

**electrical infrastructure**

Equipment and systems for supplying and distributing electricity for traction purposes.

**Electrical Representative**

A person with the appropriate delegated authority and electrical engineering competence to make judgments about electrical safety.

**electrical safety instructions**

Instructions provided by Electrical Maintenance Representatives for work on or near electrical infrastructure.

**Electrical System Operator**

The person responsible for managing the Network electrical system and authorising the removal and restoration of overhead supply.

**emergency**

Incident requiring urgent action. The incident might involve death or serious injury, health or safety effects, significant damage to property or infrastructure, significant train service disruption, or environmental impact.
end-of-train marker

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.

exclusive occupancy

Sole occupancy of track within defined limits.

facing points

Points with the switch blades facing approaching rail traffic.

failsafe

Designed such that failure results in a safe outcome.

fit for purpose

Able to be used for the function required.

fixed signal

A signal that is located permanently near the line.

foul

In a position to obstruct rail traffic on adjacent lines.
Glossary

four-foot

The area between the rails of a railway track.

fulfil

To complete the instructions on, and associated activities for an Occupancy Authority.

(Written authorities have the word **FULFILLED** written diagonally across them, between two parallel lines.)

groundframe

A small trackside interlocking device used for manual points or signal operation.

half-staff

A metal staff located at the ends of a section, and interlocked with signals’ circuits. Also known as half-pilot-staff. Two half-staffs can be joined to provide a pilot staff for the section.

handbrake

A mechanical device used to secure a rail vehicle against movement. Includes spring parking brakes.
handsignal
A signal given by hand movements, with or without flags or lights.
To give a signal by hand.

Handsignaller
A Qualified Worker who gives handsignals to Drivers and Track Vehicle Operators.

haul
To move rail traffic using a motive power source at the leading end.

hazard light
Amber or orange flashing light fitted to a vehicle to provide warning.

headlights
White lights fitted at the front of rail traffic to provide visibility for Drivers and Track Vehicle Operators and to improve the visibility of rail traffic.

in effect
Activate, become current, in force.
Incident Management Framework

A manual issued by Sydney Trains that prescribes rules and procedures to be followed in the event of a major incident.

infrastructure

See civil infrastructure; electrical infrastructure; signalling and telecommunications infrastructure.

instruction sign

A sign, near or fixed to a signal, bearing directions for Drivers and Track Vehicle Operators.

interlocking

Interaction of equipment controlling points and/or signals to prevent conflicting movements, and to make sure that routes are set correctly.

interlocking machine

Equipment used to operate or control interlocked points and signals.

intermediate

Between two others.
intermediate siding
A siding located within a section, generally used for purposes other than crossing or passing of rail traffic.

isolated 1500V overhead wiring section
A 1500V overhead wiring section disconnected from all possible sources of 1500V supply, and made incapable of accidentally being made live.

issue
To give or send copies of authorities, warnings, notices and Network publications to affected Qualified Workers by voice, hand delivery or electronic means.

joint occupancy
Simultaneous occupancy of track within defined limits.

level crossing
A location where the railway line and a road or pedestrian walkway cross paths on the same level.
light, battery powered tool or device
An internally powered tool or device that can be easily carried by one person and be immediately removed from the track. The tool must not have potential to distract the operator, or impede the ability of the operator to respond to the warning of approaching rail traffic.

light locomotive
One or more locomotives not attached to another vehicle.

light, non-powered hand tool
A tool that can be carried and easily removed by one person and is not powered by compressed air, gas, electricity, hydraulics, explosive charge or an internal combustion engine.

light, powered hand tool
An internally powered tool that can be carried easily by one person, without mechanical assistance.

limit of authority
It defines the location to which rail traffic may travel under a Proceed Authority or the limits of a work on track authority. The limit may be defined by a sign, a signal capable of displaying a STOP indication, or a specific kilometrage point on a line.
loading outline

The maximum height and width to which rail vehicles can be loaded for a particular line, as prescribed in the Train Operating Conditions (TOC) manual.

local control panel

An interlocking facility that may be switched to and from local control.

Local Possession Authority (LPA)

An authority that closes a defined portion of line for a specified period.

location

A place in the Network with a designated name, identification number, signalling reference or kilometrage.

locomotive

Self-propelled, railway vehicles used for hauling other rolling stock.
Glossary

Lookout

A Qualified Worker responsible for keeping watch for approaching rail traffic, and for warning other workers to stand clear of the line before the rail traffic arrives.

Lookout Working

A safety measure used by Qualified Workers to carry out work on track without a formally issued work on track authority.

loop

See balloon loop; crossing loop; refuge loop.

low visibility

Any condition that does not allow Qualified Workers to view the distance required to work safely.

Visibility restricted by fog, mist, rain, dust, snow, low light or other similar cause.

main line

The running line normally used for running rail traffic through and between locations.
Glossary

Maintenance Representative

A Qualified Worker with the appropriate authority to maintain the infrastructure.

major incident

An incident assessed as having a potentially major impact on the Network, human life, property or the environment.

manual block working

A method of special working, which ensures sole occupancy by manually maintaining the block between rail traffic movements.

marker lights

Lights which indicate the front or rear of a train.

marshal

To arrange the order of vehicles in a train’s consist.

may

The word ‘may’ indicates permission.
motive power unit
A rail vehicle used to provide the power to move itself or other vehicles.
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must
The word ‘must’ indicates that a statement is mandatory.
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net train weight
The weight of vehicles and their load in a train consist.
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Network
A combination of track and other infrastructure controlled by an Access Provider.
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Network access level crossings
Generally permanent level crossings provided at authorised locations for Network maintenance. Excludes public level crossings and private level crossings.
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Network Control
The function responsible for managing rail traffic paths and issuing Occupancy Authorities.
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Network Controller

Qualified Workers who on a day to day basis manage the safe and efficient operation of the Network:

- for train paths, on time running and possession management the Network Controller is the Train Service Delivery Manager (TSDM)
- for Network incidents, special working, and the authorisation of work on track authorities the Network Controller is the Network Incident Manager (NIM).

Network Incident Notice (NIN)

A notice used to record and distribute information about incidents on the Network.

Network Local Appendices (NLAs)

Publications issued to prescribe special Safeworking arrangements for a location or area.

Network Forms

Forms issued for use as specified in the Network Rules and Network Procedures.

Network Procedures

Procedures issued for the safe conduct of work on the Network. To be read in conjunction with the Network Rules.
Network Rules

Rules issued to mandate the requirements for safe operation in the Network.

normal speed

Normal speed is a speed that does not exceed the speed limit currently in effect for the location and type of rail traffic.

obstruct

To make a line unsafe for the passage of rail traffic.

occupancy

Presence of rail traffic or track workers on track.

open-channel

A system that allows all radio users to take part in all conversations.

Operator

An organisation that manages, operates or maintains rail traffic on the Network.
Operator’s Representative
A person authorised by an Operator to act on their behalf.

pantograph
An apparatus fixed to the roof of electric traction vehicles to draw current from the overhead supply.

pass
To overtake other rail traffic travelling in the same direction.

passive control level crossing
Road and pedestrian level crossing warning that relies on road users and pedestrians looking out for and giving way to rail traffic.

permanent form
A record made in writing or in a computer system, and kept for reference and audit.
permissive signal

A fixed signal that is normally controlled by the passage of rail traffic and its normal indication is a Proceed Authority.

A signal that can be passed at STOP without the authority of a Signaller or Special Proceed Authority (SPA) if it is considered safe to do.

pilot

A Qualified Worker, who accompanies, directs and advises Drivers and Track Vehicle Operators.

To direct or guide Drivers and Track Vehicle Operators and tell them about local conditions and operating restrictions on running lines and at worksites.

pilot staff

A metal staff that authorises travel through a pilot staff section.

Pilot Staff Notice (PSN)

A form used to give details of pilot staff working.

Pilot Staff Ticket

A written authority issued after a Driver or Track Vehicle Operator has seen the pilot staff or half-staff for a section.
Glossary

pilot staff working
A method of working rail traffic, using a pilot staff or half-staff, when the normal system of Safeworking is not available.

Pilot Staff Working Introduction
A formal authority to introduce pilot staff working.

platform
A raised or level area, next to the line, that allows people to enter and leave trains.

points
A track component consisting of paired pieces of tapered rail that can be moved and set to allow tracks to diverge or converge.

points indicator
An indicator showing the position of points.

possession
Closure of one or more lines to allow work to be carried out in the Danger Zone using a Local Possession Authority (LPA) or a Track Occupancy Authority (TOA).
Glossary

Possession Protection Officer (PPO)

The Qualified Worker responsible for coordinating protection of worksites under a Local Possession Authority (LPA). See also Coordinating Protection Officer and Protection Officer.

prescribed train

A train laden in excess of a specified percentage of the maximum load that can be hauled by the motive power unit, for that portion of line.

Proceed Authority

An Authority that allows rail traffic to enter and occupy a portion of line and proceed in the forward direction.

propel

To push rail traffic away from the controlling locomotive or motive power unit.

To manage airbrake operation of moving rail traffic from a cab that is not in the lead vehicle of a train.

protection

The means used to prevent rail traffic from entering a worksite or other portion of line, or to prevent road or pedestrian traffic from entering a level crossing.
Protection Officer (PO)
The Qualified Worker responsible for managing the rail safety component of worksite protection.

pulling list
The listed sequence in which point and signal controls must be operated to set routes.

pulsating
A regular variation in light intensity, used to distinguish the indication from a steady light of the same colour.

Qualified Worker
A worker certified as competent to carry out the relevant task.

rail bond
A cable fixed across a break or joint in one rail, or between two rails, to provide a path for traction return current or track-circuits.

rail-connect
To connect 1500V overhead wiring supply to the traction return rail to ensure the immediate discharge of electricity if the 1500V overhead wiring becomes live.
Rail Commander

A person qualified as Rail Commander that has been appointed by the Network Incident Manager (NIM) to liaise with Emergency Services and manage the rail industry response at an incident site.

Rail Corridor

The land on which a railway is built; comprising all property between property fences, or if no fences, everywhere within 15m from the outermost rails.

Rail traffic

Trains and track vehicle or vehicles travelling on the network.

Railway track signal

A device attached to a rail that explodes on impact, used to attract attention of Drivers and Track Vehicle Operators.

Rail Vehicle Detection (RVD) territory

The portions of line where the system of Safeworking relies on track-circuiting or axle counters.
rake

Vehicles, usually not formed as a train, moved as a unit during shunting and marshalling.

refuge loop

A running line in double-line territory, with entry and exit ends connected to a main line, that is used to hold rail traffic to allow other rail traffic to cross or pass.

release

A device that allows a Qualified Worker to take trackside control of points or signals.

remotely controlled location

An attended location where signals and/or points are controlled by a Qualified Worker at another location.

repeater signal

A signal provided at some locations to give Drivers and Track Vehicle Operators better information about the indication of the next signal.
restrain
To prevent movement of rail traffic with signals, signalling equipment, blocking facilities, or issue of a Condition Affecting the Network (CAN) form as a warning.

restricted speed
A speed that allows rail traffic to stop short of an obstruction within the distance of clear line that is visible ahead.

right running-direction
The normal direction of travel on unidirectional lines.

roll-by inspection
A visual inspection of moving rail traffic to identify equipment, loading security or other defects or failures.

route
The path from one limit of authority to the next in the direction of travel.

running line
A line (other than a siding) that is used for through movement of rail traffic. See also main line and siding.
running signal

A fixed signal placed near a running line to authorise and control running movements.

Running Supervisor

The Qualified Worker acting as a shift manager within an Electric Vehicle Maintenance Centre (EVMC).

safe braking distance

A distance indicated to rail traffic that would allow rail traffic to stop with the application of normal service braking.

safety assessment

An assessment process used to identify hazards for all work planned for the Rail Corridor and its potential to intrude on the Danger Zone.

SAFE Notice

An authorised notice distributed to give advice in addition to that provided in the Network Rules, Network Procedures or Network Local Appendices.
Glossary

safe place
A place where workers and equipment cannot be struck by rail traffic.

section
The line between the departure-end yard limit of one location and the arrival-end yard limit of another location. A section consists of one or more blocks.

secure
To place and keep something in a known or prepared place or position to safeguard it against accidental or unauthorised access or movement.

set back
To move in the reverse direction to that provided in the current Proceed Authority.

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

shunting signal
A fixed signal provided to authorise and control shunting movements.
Glossary

shunting yard
A system of tracks, within defined limits, used for shunting and marshalling.

siding
A portion of line where vehicles can be placed clear of the running lines. See also intermediate siding.

sighting distance
The distance that someone can clearly see along the track.

Signal Key Switch Blocking
A method used by Qualified Workers to carry out work on track using automatic signals fitted with a signal key switch to exclude trail traffic.

Signaller
A Qualified Worker who 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.
signalling and communications infrastructure

Signalling equipment and telecommunications equipment used as part of the Safeworking and operating systems of the Network.

Signals Engineer

A person with the appropriate delegated authority and signals engineering competence to make judgments about signalling safety.

Signals Maintenance Representative

A qualified and authorised signals maintenance worker.

Site Controller

The lead agency officer or multi agency response police officer appointed by and subject to the direction of an Emergency Operations Controller.

Special Proceed Authority (SPA)

A method of special working which may be used when the normal system of Safeworking is not available.
**Glossary**

**Special Train Notice (STN)**
A published notice providing details of train operations or events that might affect train operations.

**special working**
Working rail traffic using a Special Proceed Authority (SPA), pilot staff working or manual block working.

**Speed Restriction Notice**
An information sheet listing temporary speed restrictions for specific locations.

**stable**
To leave rail traffic unattended and secured, usually in a siding.

**staff**
A metal rod which is, or can be used to issue, the token for a section.
substation

A place (including substations, traction substations, transformer rooms, switch rooms, sectioning huts, pole-mounted or pad-mounted transformers) containing high-voltage electrical equipment.

sufficient warning time

The minimum time needed for workers to react to a Lookout’s warning and move themselves and equipment to a safe place; should include time for the Lookout’s reaction and a margin for safety.

system of Safeworking

An integrated system of operating procedures and engineered systems used in the Network, for safe operation of rail traffic, and protection of people and property.

tail lights

Red lights used to designate the end of rail traffic. See also end-of-train markers.

terminal line

A dead-end line.
Glossary

through-movement

Transit or travel in the Network.

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token

A pilot staff or pilot staff ticket used as the authority for rail traffic to occupy a section.

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tonnage signal

A signal before a steeply rising grade, with a sign that directs Drivers and Track Vehicle Operators of prescribed trains, the sign may be before or fitted to the signal.

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track

The combination of rails, rail connectors, sleepers, ballast, points and crossings.

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trackside monitoring equipment

Devices that monitor and respond to track, trackside and rail vehicle conditions.

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Glossary

Track-circuit
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 and signalling equipment.

Track-circuited territory
Portions of line where the system of Safeworking relies on track-circuits to detect the presence of rail traffic.

Track-circuit shorting clip
A cable that can be clamped to a line’s rails to activate track-circuits.

track indicator diagram
A diagram that shows if tracks are occupied and other relevant information.

Track Occupancy Authority (TOA)
An authority for Qualified Workers and their equipment to occupy a defined portion of line for an agreed period.

track speed
The allowed maximum speed for a portion of line.
Glossary

**track vehicle**

A vehicle, usually self-propelled, used for inspecting and/or maintaining infrastructure.

**track vehicle number (identification)**

The unique number displayed on a track vehicle.

**Track Vehicle Crew**

The Qualified Workers responsible for the operation of a track vehicle.

**Track Vehicle Operator**

A Qualified Worker controlling the movement of a track vehicle.

**track work**

Construction, maintenance or repair work on or around infrastructure in the Rail Corridor.

**track workers**

Qualified rail safety workers whose primary duties are associated with work on or around infrastructure in the Rail Corridor.
Glossary

Track Work Authority (TWA)

An authority for non-exclusive occupancy of track by track workers within specified limits.

traction return current

The electric current returning from the 1500V overhead power supply through the rails to sub-stations.

train

A locomotive or self-propelled vehicle, alone or coupled to one or more vehicles.

Train Control diagram (graph)

A diagram showing operational information for a train control area, also known as a Train Control graph.

Train Crew

The Qualified Workers responsible for the operation of a train.

train number (identification)

A train or run number used to provide unique identification of a train.
Train Operating Conditions (TOC) manual

A manual that prescribes the minimum operating requirements for trains and track vehicles in the Network.

Train Operating Conditions (TOC) Waiver

A notice of changes or exceptions to the requirements specified in the Train Operating Conditions (TOC) manual.

Train Running Information

Information about rail traffic movement and frequency provided for a particular location.

train stop

A device that can activate emergency brake applications on passing trains:

- a mechanical train stop is a device located next to the line, at or between signals, which raises an arm to activate a train’s trip gear
- an ATP train stop electronically activates the emergency brake via the train’s Automatic Train Protection (ATP) system.

transfer

Movement from location to location.
Glossary

transit

Through-movement along a portion of line.

travel

Planned or purposeful movement from one location to another.

unattended location

A signalling location or block location that is not a remote controlled location, and where a Signaller is not on duty.

unauthorised

Not given approval, or exceeding the limit of authority. See authorise.

unidirectional

Allowing for normal travel in one direction only according to the infrastructure and system of Safeworking in use.

visibility lights

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.
Weekly Notice

A publication that advertises changes to, and details of, Safeworking arrangements.

wheel scale

A build-up of metallic material on a wheel tread’s surface.

whistle

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

WOLO

Speed restrictions applied during hot weather.

worksite

A worksite with boundaries that are fixed and defined for the duration of the work.

work on track

The work performed in the Rail Corridor.
To perform work in the Rail Corridor.
**work on track authority**

An authority to work on track. See Local Possession Authority (LPA); Track Occupancy Authority (TOA); Track Work Authority (TWA).

**work on track method**

A method to work on track. See Absolute Signal Blocking (ASB); Signal Key Switch Blocking; Lookout Working.

**work train**

A train used in maintenance or construction activities.

**wrong running-direction**

The direction opposite to the normal direction of travel on unidirectional lines.

**yard**

A system of tracks within yard limits.

**yard limit**

A defined operational limit on a running line.

See also section.
Effective date

24 March 2019