

# Network Safeworking Rules and Procedures

# **Centralised Traffic Control System**

Rule Number: 5001

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### 1. Purpose

The purpose of this rule is to describe the operation of the *Centralised Traffic Control (CTC) System of Safeworking* used in the *Network*.

### 2. General

The *CTC* system comprises:

- a Location for the control of Points and signals;
- Controlled Absolute Signals at the entrance to each Section;
- Controlled Absolute Signals protecting the Route through Interlockings;
- Absolute Signals (Intermediate Signals) to divide Sections into multiple Blocks; and
- Track-Circuits or Axle Counters.

Sections within the CTC Territory consist of single or multiple lines that are Uni-Directional or Bi-Directional.

Interlocking of Track-Circuits, Axle Counters, Points and Protecting Signals prevent a Running Signal from displaying a Proceed indication unless:

- the *Block* beyond the signal is not *Occupied*;
- there are no conflicting Routes set; and
- the Points are correctly set.

The *Network Controller* controls the entry of *Rail Traffic* into *Sections* and through *Interlockings*.

If the *CTC* system is reported as, or suspected to be, faulty or unreliable, a method of *Special Working* must be used until the system has been restored.

### 3. Proceed Authorities

The Authority for Rail Traffic to enter and Occupy a Block under the CTC system is:

- a Proceed signal;
- a verbal Authority; or
- a written Authority.

### 4. Failure of Control Functions

If the function to control *Points* and signals fail, the *Network Controller* must instruct the *Competent Worker* to:

- confirm the setting of Points;
- manually operate the Points as required; and
- manually Secure the Points, if necessary.

The Rail Traffic Crew must obtain an Authority to pass Fixed Signals at STOP in accordance with Rule 6013 Passing Fixed Signals at STOP.

# 5. Entering Signalled Track from Non-Signalled Location

Where there is no *Fixed Signal* to control entry into *CTC Territory*, the *Network Controller* must *Authorise Rail Traffic* entry.

The Network Controller must:

- verify that there are no conflicting Rail Traffic movements or Track Occupancies,
- where provided, give the release for Switchlock operation; and
- give permission for the *Points* to be operated.

Rail Traffic entering from non-signalled areas must be prepared to Stop at the next Fixed Signal and comply with the indication displayed.

### 6. References

6013 Passing Fixed Signals at STOP

### 7. Effective Date

21 November 2022



# Network Safeworking Rules and Procedures

### **Train Order Working**

Rule Number: 5017

Arc Infrastructure maintains the master for this document and publishes the current version on the Arc Infrastructure website. All changes and updates to the Network Safeworking Rules and Procedures are authorised by the Arc Infrastructure Rule Book Committee. This document is uncontrolled when printed.

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# 1. Purpose

The purpose of this rule is to describe the operation of the *Train Order* Working *System of Safeworking* used in the *Network*.

### 2. General

Train Order Working is a System of Safeworking where Train Orders are issued as Movement Authorities and are delivered, or dictated, over communications equipment, to Rail Traffic Crews and recorded in written form on a Movement Authority form in accordance with Procedure 9016 Written Authorities and Forms.

The movement of all *Rail Traffic* is controlled by *Authorities Issued* by the *Network Controller*.

The objective of the *Train Order Working* system is to prevent more than one *Rail Traffic* movement being between any two *Authorised Train Order Crossing* or Non-*Crossing Stations* at the same time.

The Rail Traffic Crew must have a valid Authority before entering a Section.

#### 2.1 Network Controller

The Network Controller must:

- efficiently manage Network activities;
- formulate, Authorise and Issue Authorities;
- record Occupancies; and
- to avoid conflicts when formulating new *Authorities*, refer to the *Network Control Diagram*, the *Network* Control system, where available, and existing *Authorities*.

### 2.2 Network Control Diagram

The primary tool for operational safety is a *Network Control Diagram*, which details:

- planned, Authorised and actual Rail Traffic Occupancies;
- planned, Authorised and actual Track Occupancies; and
- events or conditions that may affect safety.

The *Network Control Diagram* is the primary Safeworking tool and should be kept up to date.



NOTE: Electronic Network diagrams will be used where available.

The Network Controller must refer to the Network Control Diagram in order to:

- plan Rail Traffic requirements; and
- avoid Occupancy conflicts.

# 3. Authority types

The Network Controller Issues the following Authorities for Occupation of Running Lines:

- Proceed Authority;
- Proceed Authority in Advance;
- Joint Authority:
- Crossing Authority:
- Conditional Authority;
- Conditional Authority in Advance and
- Shunt Authority.

### 4. Station Limits



NOTE: Signs are described in Rule 6007 Signs.

The start and end of *Train Order Territory* is identified by signs:

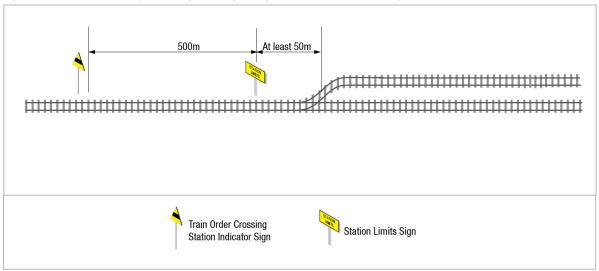
- a commencement of *Train Order Territory* sign will identify the start of *Train Order Territory*; and
- an End of *Train Order Territory* sign will identify the end of *Train Order Territory*.

### 4.1 Crossing Stations

Crossing Stations are designated by:

- Crossing Station indicator signs, located at least 500 metres from the Station Limits sign; and
- A Station Limits sign, located at least 50 metres before the first Points. The Station name is displayed on, and below, the Station Limits sign.

Figure 5017-1 Example layout of signs designating a Crossing Station. Only one end is shown.



The *Track Element* from the *Station Limits* sign to the *Facing Points* is known as the Up Approach or Down Approach. The first *Track Element* the *Rail Traffic* will occupy based on the usual direction of travel.

 For example: Rail Traffic Approaching a Station in the Up Direction would occupy the Up Approach as it passes the Station Limits Sign, and Rail Traffic approaching a Station in the Down Direction would occupy the Down Approach as it passes the Station Limits Sign.

### 4.2 Non-Crossing Stations

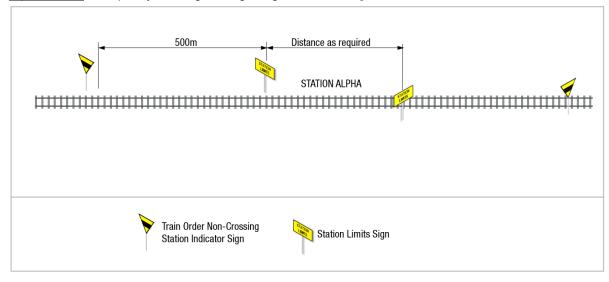
Non-Crossing Stations are designated by:

- Non-Crossing Station indicator signs, located at least 500 metres from the Station Limits sign; and
- the Station name, which will be displayed on the Station Limits sign.



NOTE: The distance between the *Station Limits* signs at Non-*Crossing Stations* will be determined by operational requirements, such as the length of *Rail Traffic Consists*.

Figure 5017-2 Example layout of signs designating a Non-Crossing Station.



# 5. Designating Limits of Authority

The start and end points of the Limit of Authority must be specified.

The *Limit of Authority* must be designated by specifying the *Locations* between which the movement is *Authorised*.

### 5.1 Limit of Authority Start Point

The start point of a *Train Order* will be:

- the Track element where the *Train Order* is received; or
- in the case of a *Proceed Authority* in Advance, the track element nominated on the *Train Order*.

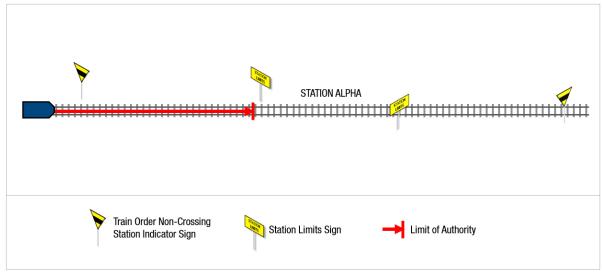
### 5.2 Limit of Authority End Point

A Limit of Authority end point must be designated as follows.

#### 5.2.1 Station limits sign as the end point

If a *Station Limits* sign is designated as the end *Location* of a *Train Order*, the *Limit* of *Authority* extends to the arrival end *Station Limits* sign at that *Station*.

Figure 5017-3 Example of where the Limit of Authority end point is a Station Limits sign.



### 5.2.2 A location within a station as the end point

If a specified *Location* at a *Station*, such as *Main Line*, Loop or CBH *Siding*, is designated as the end *Location* of a *Train Order*, the *Limit of Authority* extends to the Clearance Point at the departure end *Points*.

The Clearance Point is defined by a Clearance board or *Catch Points*. Where there is no Clearance board or *Catch Points*, *Rail Traffic Crews* must stop their *Rail Traffic* short of the *Converging* line so other *Rail Traffic* has safe passage onto the *Adjacent* line or, where *Self Restoring Points* are installed, the "NO STANDING BEYOND THIS POINT" sign.

Figure 5017-4 Example of where the Limit of Authority end Point is a Main Line.

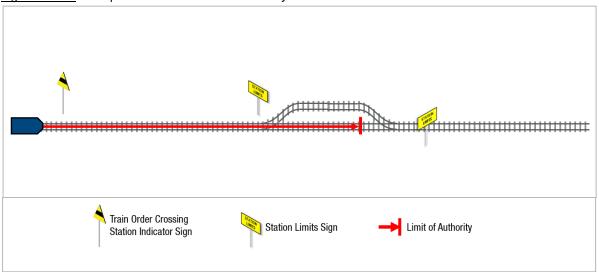
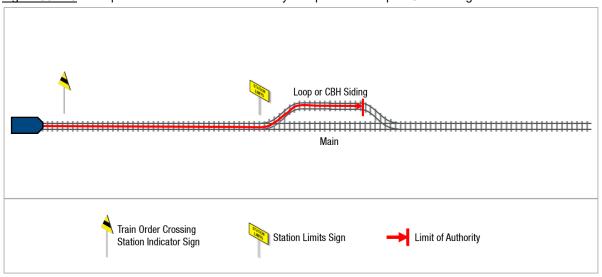


Figure 5017-5 Example of where the Limit of Authority end point is a Loop or CBH Siding.



### 6. Operating with Authorities

An Authority may be Issued for Rail Traffic to proceed through more than one single line Section.

The Authority to enter and Occupy a Section is:

- possession of the Train Order, or
- possession of an Alternative Movement Authority.

And where provided, clearing of relevant Fixed Signals.

The Network Controller must not Issue an Authority for a following Rail Traffic movement until it is confirmed that the previous Rail Traffic movement has reported as Arrived Complete at the Station in advance.

Rail Traffic with an Authority issued through a Station must only occupy the Main Line or other Track elements as specified on the Train Order.

Where a shunt is required at a *Station*, the *Train Order* must be issued to that *Station* only so that a *Shunt Authority* can be issued or permission to *Shunt* can be given.

Where a *Train Order* is *Issued* to the terminating *Location* of a *Train* service, the *Train Order* shall be *Issued* to *Station Limits* only. The *Network Controller* will then apply *Rail Traffic* blocking within the *Station* on the applicable track elements required for the service to enter and occupy within the *Station* as required.

When required by the *Network Controller*, *Rail Traffic Crews* must confirm their understanding of the *Limit of Authority*.

### 6.1 Reporting

Reporting in accordance with this rule is a Safety Critical requirement that assist *Rail Traffic Crews* in maintaining Situational Awareness, it also alerts the *Network Controllers* and other *Network* users of the position and presence of *Rail Traffic*.

#### 6.1.1 Progress

In areas where Radio communications are provided, the *Rail Traffic Crew* must make a general broadcast over the radio of the *Rail Traffic* progress through *Stations* as it occurs, the *Network Controller* will respond to the broadcast wherever possible.

Where radio communications are unavailable, *Rail Traffic Crews* must record and report progress as required by the *Network Controller*, using on-board communications equipment.

Rail Traffic Crews must report to the Network Controller when Shunting at a Station is complete, and:

- that the Siding is Secured; and
- at Annett's locked Sidings, that the Annett's key is on the Locomotive (AKOL).

Departure must be reported only after the rearmost vehicle has cleared the departure end *Station Limits* of the specified *Station*.

Arrival at a *Station* must only be reported after the *Rail Traffic* has *Arrived Complete* within the specified *Station*.

Rail Traffic Crews must report to the Network Controller on departure from the Station prior to the Limit of Authority end point.



NOTE: Where communications to the *Network Controller* fail and the *Rail Traffic Crew* are unable to report departure, the *Rail Traffic* may continue as directed on the *Train Order*.

#### 6.1.2 Prior to Crossing

When a *Crossing* is *Authorised*, *Rail Traffic Crews* must verify with the *Network Controller* their understanding of the *Crossing* instructions before departure from the *Station* prior to the *Station* where a *Crossing* is *Authorised*.

### 6.2 Rail Traffic Working Advice

The *Network Controller* must *Issue* a *Rail Traffic* Working Advice which provides relevant information, including:

- any opposing Rail Traffic;
- any preceding Rail Traffic which has not terminated;
- the next following Rail Traffic;
- LPAs; and
- WoTAs.



NOTE: Rail Traffic includes Track Vehicles.

### 6.3 Competent Workers Receiving Authorities

Competent Workers may receive Authorities and instructions and deliver them to Rail Traffic Crews.

Competent Workers at attended Stations must keep copies of Authorities received.

If a Rail Traffic Crew does not receive an Authority directly from the Network Controller, the Rail Traffic Crew must verify the Authority, with the Network Controller, before departure.

#### 6.4 Identification Numbers

If the leading *Locomotive* is to be replaced, the *Rail Traffic Crew* must advise the *Network Controller*.

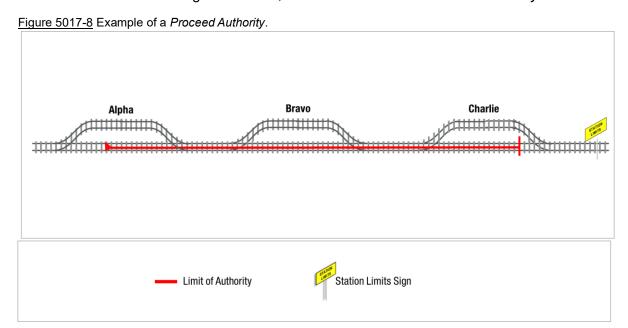
The *Network Controller* must *Cancel* existing *Authorities* that contain references to the replaced *Locomotive* and *Issue* new *Authorities* showing the new *Locomotive*.

### 6.5 Challenging an Authority

Competent Workers must challenge an Authority if they believe or become aware that the Authority is incorrect.

### 6.6 Proceed Authority

A *Proceed Authority* is a *Train Order* that *Authorises Rail Traffic* to *Occupy* and proceed on the *Main Line* or other designated *Track*, between limits defined on the *Authority*.



### 6.7 Conditional and Crossing Authorities

A Conditional Authority is a Train Order that Authorises Rail Traffic:

- to proceed to a Station in advance in order to Cross another Rail Traffic movement;
   and
- after the *Crossing* movement has been completed, proceed to the end limit of the *Authority*.

A Crossing Authority is a Train Order that Authorises Rail Traffic to:

- Proceed to an end point and Cross another Rail Traffic movement; or
- Cross another Rail Traffic at the Start Point of a Train Order.

All Rail Traffic Crossings must be included in the Authority.

Only one intermediate Crossing may be shown on an Authority.



NOTE: An *Authority* may contain more than one *Crossing*. The *Authority*'s end point must be the *Station* where the second *Crossing* occurs.

Rail Traffic Crews approaching a Station where a Crossing is Authorised must, where communications are available, confirm with the opposing Rail Traffic Crew, the Crossing instructions.

Where communications are not available the *Rail Traffic Crew* must proceed in accordance with section 7.2 of this rule.

#### 6.7.1 Failure of Network Control System

Where the Network Control System is unavailable, Conditional Authorities are not permitted.

Train Orders including a Crossing may be issued as Crossing Authority only and must not include instructions to Proceed to another Location after the Crossing.

#### 6.7.2 Crossing instructions

A Crossing occurs when:

- opposing Rail Traffic movements meet at an Authorised Crossing Station; or
- a following *Rail Traffic* movement passes a preceding *Rail Traffic* movement at an *Authorised Crossing Station*.

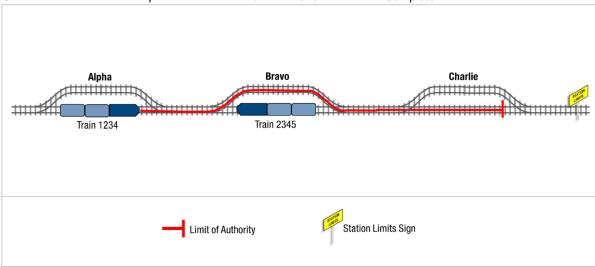
Rail Traffic must not depart a Station at which a Crossing has been arranged until:

- the opposing Rail Traffic movement has Arrived Complete; or
- an Authority has been Issued for Rail Traffic to depart.

The *Authority* containing the instructions for the *Crossing* movement must include the *Rail Traffic* identification and:

- the leading Locomotive identification; or
- all Track Vehicles identifications.

<u>Figure 5017-9</u> *Train* No 1234 has an *Authority* to Proceed to Bravo Loop, *Cross Train* No 2345 then Proceed to Charlie. The condition to depart Bravo is that *Train* No 2345 has arrived *Complete* at Bravo.



<u>Figure 5017-10</u> *Train* No 1234 has an *Authority* to Proceed to Bravo Loop, *Cross Train* No 2345 (this is the one permitted Intermediate *Crossing*), then Proceed to Charlie Loop, Cross *Train* No 3456. The end point of this *Authority* must be Charlie as this is the *Station* where the second *Crossing* occurs.



### 6.8 Check of Crossings with the Network Controller

After the read back or confirmation of a *Train Order* including a *Crossing* has been confirmed as correct by the *Network Controller*, the *Rail Traffic Crew*, must:

- ascertain whether the opposing *Rail Traffic* has been *Issued* with a *Train Order* for the intended *Crossings*; and
- request the *Network Controller* to confirm the *Stations* where *Crossings* are to be affected by repeating the particulars of the *Train Order Issued* to the opposing *Rail Traffic*.

The *Network Controller* and the recipient must endorse details of information given on the bottom portion of their *Train Order*.



NOTE: It is not necessary for the *Rail Traffic Crew* to prepare a copy of the *Train Order* that has been *Issued* to the opposing *Rail Traffic*.

### 6.9 Shunt Authority

Rail Traffic may be authorised to Travel on the Network by Issue of a Shunt Authority.

A Shunt Authority is a Train Order that Authorises the Occupation of the Section and Track elements as specified in the Train Order for Shunting requirements at a Station.



WARNING: Rail Traffic must not Occupy the Section beyond the Limit of Shunt sign, unless the Rail Traffic Crew are in possession of an Authority for the Section, even where the Rail Traffic movement will not go beyond the Station Limits sign.

If there is no *Authority Issued* for the shunting *Rail Traffic* to *Occupy* the *Section* in advance, a *Shunt Authority* must be *Issued* for *Shunt* movements beyond the *Limit* of *Shunt* sign where provided or beyond the *Station Limits* sign where a Limit of *Shunt* sign is not provided.

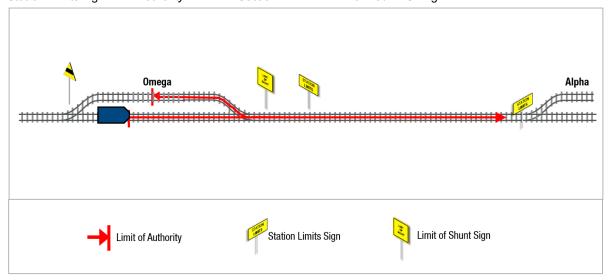
A Shunt Authority permits Rail Traffic to move in either direction.

Shunt movements within Station Limits or, where provided, Limit of Shunt signs, must be approved by the Network Controller. In this circumstance a Train Order is not required. Before approving Shunting movements within Station Limits the Network Controller must ensure that:

- no Authority has been Issued for other Rail Traffic into or through that Station;
- where the Network Control system is available, Blocking Facilities are applied; and
- after giving approval for a *Shunt* movement, not *Issue* other *Rail Traffic* an *Authority* into or through that *Station*.

The approval to *Shunt* and the application of *Blocking Facilities* must be recorded on the *Network Control Diagram*.

Figure 5017-11 Example of a *Shunt Authority* for a *Rail Traffic* movement beyond the *Limit of Shunt* sign or *Station Limits* sign. This *Authority* is for the *Section* but must be *Fulfilled* at Omega.



# 7. Crossings

The *Network Controller Issues* written instructions about *Crossing* movements, and the *Track* to be *Occupied*, within the *Train Order*.

Rail Traffic Crews set Points as required.

#### 7.1 Communications Available

#### 7.1.1 Crossing Rail Traffic

Rail Traffic Crews must:

- comply with instructions provided within the Authority; and
- communicate with the *Crew* of the *Rail Traffic* to be *Crossed* and reach agreement on which *Rail Traffic* is to enter the *Station* first.

The crew of the Rail Traffic that is to enter first; must:

- set the Route, if required, and enter the Station on the specified Track,
- report arrival to the Network Controller when the Rail Traffic has Arrived Complete;
- set the Route for and admit the opposing Rail Traffic;
- obtain an Authority to Proceed if not in possession of an Authority; and
- after the Crossing movement has been completed, set the Route for departure.

#### 7.1.2 Passing Rail Traffic

Rail Traffic Crews must comply with instructions provided within the Authority.

The crew of the *Rail Traffic* that is to arrive first must:

- set the Route, if required, and enter the Station on the specified Track;
- report arrival to the Network Controller when the Rail Traffic has Arrived Complete;
   and
- set the *Route* for and admit the passing *Rail Traffic* as required.

The passing Rail Traffic Crew must:

- confirm with the Rail Traffic Crew to be passed that:
  - the instructions within the Authorities are not in conflict; and
  - the *Route* is set or needs to be set.
- If the Route is not set, set the Route;
- arrive on the specified Track; and
- obtain an Authority to proceed if not in possession of an Authority to do so.

#### 7.2 Communications not Available

#### 7.2.1 Crossing Rail Traffic

If communications are not available between Rail Traffic Crews, the Rail Traffic to Occupy the Main Line must:

- stop at the arrival end Station Limits sign; and
- wait to be admitted by the opposing Rail Traffic Crew.

The crew of the Rail Traffic to Occupy the Crossing Loop must:

- set the Route and enter the Station on the specified Track;
- set the *Route* for and admit the opposing *Rail Traffic* to the *Main Line*;
- obtain an Authority to proceed if not in possession of an Authority to do so; and
- after the Crossing movement has been completed, set the Route for departure.

### 7.2.2 Passing Rail Traffic

If communication is not available between *Rail Traffic Crews*, the *Rail Traffic* to arrive first must:

- set the Route, if required, and enter the Station on the specified Track;
- report arrival to the Network Controller when the Rail Traffic has Arrived Complete;
   and
- set the *Route* for and admit the passing *Rail Traffic* as required.

The passing Rail Traffic must:

- wait to be admitted by the preceding Rail Traffic Crew; and
- obtain an Authority to proceed if not in possession of an Authority to do so.

### 8. Change of Crossing Location

If it is necessary to change a *Crossing Location* specified on current *Authorities*, the *Network Controller* must:

- first, Cancel the Authority held by the Rail Traffic whose journey is being shortened, then Cancel the Authority held by the Rail Traffic whose journey is being extended; and
- then, Issue new Authorities with altered Crossing instructions, with the Authority for the Rail Traffic whose journey is to be shortened Issued first.

# 9. Issuing a Proceed Authority in Advance

A Proceed Authority in Advance is a Proceed Authority Issued while Rail Traffic is en-route and may be Issued while the Rail Traffic is in motion.

Where the *Proceed Authority* in *Advance* is to be *Issued* while *Rail Traffic* is in motion, the *Rail Traffic* must be under the control of more than one crew member.

If there is only one *Rail Traffic Crew* member, then the *Rail Traffic* must be stationary to receive a *Proceed Authority* in *Advance*.

A Proceed Authority in Advance will not come into effect until the Rail Traffic arrives at the Limit of Authority end Point for the current Authority.

# 10. Cancelling an Authority

An Authority that cannot be Fulfilled must be Cancelled.

An Authority may be Cancelled and a new Authority Issued whilst Rail Traffic is in motion, provided that the Rail Traffic:

- has not passed the current Limit of Authority;
- will not pass the limit of the new Authority; and
- is under the control of more than one crew member.

If there is only one *Rail Traffic Crew* member and the *Authority* is a written *Authority*, then the *Rail Traffic* must be stationary before the *Authority* is *Cancelled*.

If there is any doubt as to whether the *Rail Traffic* cannot be prevented from exceeding the proposed *Limit of the Authority*, the *Rail Traffic* must be stopped, and its *Location* determined before an *Authority* is *Cancelled*.

# 11. Fulfilling an Authority

An Authority is Fulfilled after all instructions contained within it have been carried out.

# 12. Keeping records

Network Controllers must keep a Permanent Record of relevant details and movements in the Network.

### 13. References

6007 Signs

9016 Written Authorities and Forms

### 14. Effective date

23 September 2024



# Network Safeworking Rules and Procedures

# **Alternative Movement Authority**

Rule Number: 5019

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# 1. Purpose

The purpose of this rule is to detail the protocols for using *Alternative Movement Authorities*. These are *Issued* to *Authorise Rail Traffic* movements when the Proceed *Authority* normally provided by the *System of Safeworking* is not available.

### General

An Alternative Movement Authority is an Authority that is created in the Network Control system where available, or manually by the Network Controller.

This is recorded by the recipient on an *Alternative Movement Authority* form and is used to *Authorise Rail Traffic* movements past:

- a Departure Signal at STOP in Single Line Automatic Signalling areas; and
- for Single Line Working in Double Line Automatic Signalling areas, in accordance with Rule 5027 Single Line Working.

During Alternative Movement Authority working, safe separation between Rail Traffic movements must be maintained.

Unless entry is *Authorised*, *Rail Traffic* must be *Restrained* from entering the limits of *Alternative Movement Authority* working.

An Alternative Movement Authority must:

- specify the Limit of Authority for the movements it Authorises;
- · specify the line to be used; and
- where necessary, specify any speed restrictions that must be applied.

### 3. Assurances

The Network Controller must be assured that:

- conflicting Occupancies or Routes are not Authorised;
- the *Track* within the limits of the *Alternative Movement Authority* will be *Occupied* only by *Authorised Rail Traffic*;
- Effective Communication is established between:
  - Rail Traffic Crews; and
  - affected Competent Workers;
- previously Issued Proceed Authorities have been Cancelled or Fulfilled;
- current Work on Track Authorities in affected Sections are Fulfilled, or worksites are Protected against movements under the Alternative Movement Authority;
- other Competent Workers known to be affected have been told about the planned movements under the Alternative Movement Authority;
- when Rail Traffic is Travelling in the Wrong Running-Direction, Rail Traffic Crews are advised of Temporary Speed Restriction details until Temporary Speed Restriction signs are erected;
- the Route to be taken by Rail Traffic is:
  - set and Secured; or
  - will be set and Secured by a Competent Worker,
- Protecting Signals are at STOP and if the Alternative Movement Authority is not been Issued within the Network Control System, Blocking Facilities, if available, are applied in accordance with Rule 6003 Blocking Facilities; and
- releasing switches for Intermediate Sidings are in the NORMAL position with Blocking Facilities applied.

Where *Blocking Facilities* are required, but cannot be applied, *Rail Traffic* must be *Restrained* in writing on a *Restraint Authority* in accordance with Rule 4001 Protecting Disabled Rail Traffic.

### 3.1 Active Control Level Crossings



WARNING: On *Uni-Directional* lines *Active Control Level Crossing* equipment may be operating correctly, however for a *Wrong Running-Direction* movement, it may not provide the required *Protection* due to the *Level Crossing* equipment not operating until the *Rail Traffic* is too close to the *Level Crossing*.

Where possible the *Network Controller* must be assured that *Active Control Level Crossings* are:

- operating correctly;
- attended by Competent Workers if not operating correctly; or
- closed to road and pedestrian traffic.

Where unable to obtain or apply these assurances, the *Network Controller* must advise *Rail Traffic Crews* to treat *Active Control Level Crossings* as faulty and act in accordance with Rule 2015 Active Control Level Crossing Management.

# 4. Issuing an Alternative Movement Authority

The Network Controller Authorises Travel by compiling and Issuing an Alternative Movement Authority form.

The Network Controller must arrange for an Alternative Movement Authority to be Issued to the Rail Traffic Crew carrying out the Authorised movements.

Rail Traffic Crews must not pass signals at STOP unless:

- Authorised on the Alternative Movement Authority form; and
- in accordance with Rule 6013 Passing Fixed Signals at STOP.

Rail Traffic Crews must be advised on the Alternative Movement Authority form of:

- what is known about the condition of Active Control Level Crossings;
- any speed restrictions in the Wrong Running-Direction; and
- any speed restrictions that may be applied by the Infrastructure Representative because of the fault.

#### 4.1 Limit of Authorities

The Network Controller may issue Alternative Movement Authorities for Sections within their area of control.

An Alternative Movement Authority can be Issued for more than one Section, up to, but not beyond, a Location at which a Crossing is to take place.

### 4.2 Competent Workers Receiving Authorities

Competent Workers may receive Alternative Movement Authorities on behalf of the Network Controller and deliver them to Rail Traffic Crews.

If a Rail Traffic Crew does not receive an Alternative Movement Authority directly from the Network Controller, the Rail Traffic Crew must verify the Alternative Movement Authority with the Network Controller before departure.

### 5. Restraint of Rail Traffic

Rail Traffic must be Restrained from entering a Block in which Alternative Movement Authority working is In-Effect.

The Restraint Authority must direct Rail Traffic not to depart that Location irrespective of any available Proceed Authority.

# 6. Reporting

The Network Controller must tell Rail Traffic Crews or other Competent Workers of the Locations at which they are to report entry, progress and exit.

# 7. Authorising a Following Rail Traffic Movement

Where following movements are permitted by *Permissive Working* the *Limit of Authority* for any following *Rail Traffic* must not be beyond the next *Station*.

When unoccupied *Blocks* behind *Rail Traffic Travelling* on an *Alternative Movement Authority* are to be released for following *Rail Traffic* movements, the *Network Controller*must tell the *Rail Traffic Crew* to report when the *Rail Traffic* has passed *Complete* beyond:

- nominated Absolute Signals; or
- the Authorised Non-Crossing Location during Single Line Working.

When told by the *Rail Traffic Crew* that the *Rail Traffic* has passed *Complete* beyond nominated *Absolute Signals* or Non-Crossing Locations, the *Network Controller* may *Issue* an *Alternative Movement Authority* for a following *Rail Traffic* movement.

# 8. Cancelling an Alternative Movement Authority

An Alternative Movement Authority 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 Alternative Movement Authority has been Cancelled.

# 9. Fulfilling an Alternative Movement Authority

An Alternative Movement Authority must be Fulfilled only when the Rail Traffic Crew or Competent Worker assures the Network Controller that the Authorised Rail Traffic movement has been Completed and the Section is Clear.

The Network Controller must tell affected Competent Workers that the Alternative Movement Authority has been Fulfilled.

# 10. Returning to Normal Working

Before normal working is resumed the Network Controller must ensure that:

- any Authority Issued to enter the affected Section is Cancelled or Fulfilled;
- the affected Section is Clear of any Rail Traffic;
- any Active Control Level Crossings in the Section are restored to normal operation;
- · Blocking Facilities are removed;
- if required, Points that had been Secured are restored for normal operation; and
- instructions still In-Effect for the Restraint of Rail Traffic are Cancelled.

### 11. Keeping Records

Network Controllers must keep a Permanent Record of:

- the Issue of an Alternative Movement Authority, and
- details of affected Competent Workers told about the Authorised Rail Traffic movements.

Rail Traffic Crews and other Competent Workers must keep a Permanent Record of the Issue of an Alternative Movement Authority.

### 12. References

2015 Active Control Level Crossing Management

4001 Protecting Disabled Rail Traffic

5027 Single Line Working

6003 Blocking Facilities

6013 Passing Fixed Signals at STOP

### 13. Effective Date

21 November 2022



# Network Safeworking Rules and Procedures

### **Manual Block Working**

Rule Number: 5023

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### 1. Purpose

The purpose of this rule is to describe how to manually maintain *Blocks* between *Rail Traffic* movements in the *Network* where the *Rail Traffic* may not be reliably detected on *Centralised Traffic Control (CTC) Territory*.

### 2. General

The Network Controller uses Manual Block Working to prevent Rail Traffic from entering occupied Blocks.



WARNING: If *Rail Traffic* that does not reliably operate *Track-Circuits* is to *Travel* over *Points* that automatically return to a normal setting, and the *Points* are in a position where they can automatically return to normal, the *Points* must be *Secured* for the passage of the *Rail Traffic*.

This rule does not apply to *Track Vehicle* movements. *Track Vehicle* movements must be in accordance with Rule 3019 Track Vehicles.

Manual Block Working is used when:

- it is specified in other *Network* publications;
- Track-Circuits or Axle Counters may not reliably detect Rail Traffic; or
- the Network Controller requires Manual Block Working to be used.

The Authority for entry to a Block is a PROCEED signal indication.



NOTE: Where a *Departure Signal* is the entry signal and that *Departure Signal* fails, an *Alternative Movement Authority (AMA)* will be the *Authority* for entry into the *Block*.

Manual Block Working must be used only for Right Running-Direction movements.

The limits for *Manual Block Working* must extend from one *Controlled Absolute Signal* to another *Controlled Absolute Signal*.



NOTE: Permissive Working is not permitted during Manual Block Working.

Signals at STOP must not be passed during *Manual Block Working* unless *Authorised* by the *Network Controller* in accordance with Rule <u>6013 Passing Fixed Signals at STOP</u>.

### 3. Assurances

Network Controllers must be assured that:

- the Block is clear of Rail Traffic before Authorising Manual Block Working;
- only Rail Traffic Authorised to Travel under Manual Block Working will enter the Block; and
- the *Block* is clear of *Rail Traffic* before resuming normal operations.

# 4. Authorising and Reporting

The Network Controller Authorises and implements Manual Block Working.

The Network Controller must advise other affected Network Controllers that Rail Traffic will be worked under Manual Block Working conditions.

Where required, the Rail Traffic Crew or a Competent Worker must report to the Network Controller.

- entry into the Block Section; and
- exit from the Section.

# 5. Maintaining Separation

Once Rail Traffic enters the Block, the Network Controller must:

- set the entry-end signal at STOP, with *Blocking Facilities* applied in accordance with Rule 6003 Blocking Facilities; and
- maintain the *Blocking Facilities* until the *Rail Traffic* has passed complete beyond the nominated *Location*.

### Restraint of Rail Traffic

Rail Traffic must be prevented from entering a Block Section in which Manual Block Working is in effect by the use of Blocking Facilities.

When it is necessary for *Rail Traffic* to be *Restrained* the *Network Controller* may provide written advice on a *Restraint Authority* to *Rail Traffic Crews*.

# 7. Active Control Level Crossing

If Rail Traffic needs to pass over an Active Control Level Crossing operated automatically by Track-Circuits, but the Rail Traffic cannot be relied upon to activate the Track-Circuits, Rail Traffic Crews must:

- stop short of the Active Control Level Crossing, and if possible manually operate the Active Control Level Crossing; or
- arrange to stop approaching road and pedestrian traffic.

Rail Traffic may proceed over the Active Control Level Crossing only if it is safe to do so.

# 8. Ending Manual Block Working

The Network Controller must be assured that the Block Section is Clear of any Rail Traffic before ending Manual Block Working.

# 9. Keeping Records

The Network Controller must keep a Permanent Record of the details of Manual Block Working.

### 10. References

3019 Track Vehicles

6003 Blocking Facilities

6013 Passing Fixed Signals at STOP

### 11. Effective date

21 November 2022



# Network Safeworking Rules and Procedures

Single Line Working

Rule Number: 5027

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### 1. Purpose

The purpose of this rule is to detail the protocols for using *Single Line Working*. This allows *Rail Traffic* to be worked in both directions over a single line where *Uni-Directional* (Double line) operations normally apply.

### 2. General

Single Line Working may be established over *Uni-Directional* multiple line Sections, if one or more lines are not available for normal use.

Single Line Working allows following Rail Traffic entries into an Occupied Single Line Working Section, but not into the same Block.

When Single Line Working is planned in advance, it must be Advertised.

Single Line Working must be confined to the most suitable *Crossovers* on each side of the unavailable portion of line.

Station Limits signs may be placed to designate the limits of Single Line Working if Points or a Crossover, used for Single Line Working, is not Protected by a Running Signal in the direction of approach.

Where used, a *Station Limits* sign must be placed at least 120 metres before the *Facing* or *Trailing Points* of the *Crossover*.

The Network Controller must:

- manage Rail Traffic in both directions over the Single Line Working Section; and
- apply *Blocking Facilities*, in accordance with Rule <u>6003 Blocking Facilities</u>, to prevent the entry of unauthorised *Rail Traffic* into the *Single Line Working Section*.

The Network Controller must advise Rail Traffic Crews approaching the Single Line Working that Single Line Working is In-Effect.

### 3. Assurances

Before introducing Single Line Working, the Network Controller must ensure that:

- Effective Communication is established with Competent Workers;
- the affected Section of Track is Clear of all Rail Traffic and prior Movement Authorities or Alternative Movement Authorities for the affected Section have been Fulfilled:
- Track Occupancies for the operational line have been Fulfilled or suspended:
- Protection Officers of Track Occupancies for the non-operational line have been advised:
- signals allowing entry have been set to STOP and Blocking Facilities in accordance with Rule 6003 Blocking Facilities have been applied to prevent unauthorised entry of Rail Traffic;
- other Rail Traffic has been Restrained;
- affected Network Controllers have been advised of the Single Line Working; and
- workers known to be affected have been advised of the Single Line Working.

### 3.1 Active Control Level Crossings

When Single Line Working is planned in advance, Active Control Level Crossings that are not designed to operate normally in both directions, must be Protected by Competent Workers or closed to road and pedestrian traffic.

Unless the *Network Controller* has ensured that *Active Control Level Crossing* equipment is operating correctly, or *Competent Workers* are in attendance, the *Network Controller* must advise *Rail Traffic Crews* to treat *Active Control Level Crossings* as potentially faulty and act in accordance with Rule 2015 Active Control Level Crossing Management.

### 3.2 Approaching Rail Traffic

The Network Controller must tell Rail Traffic Crews:

- that Single Line Working will be In-Effect,
- the *Protecting Signal* identification number and, if applicable, the *Locations* of any additional *Station Limits* signs; and
- that the signal before the entry to the Single Line Working Section will be at STOP.

Rail Traffic Crews must report to the Network Controller when their Rail Traffic arrives at the Protecting Signal.

Rail Traffic must be Restrained from entering a Section in which Single Line Working is In-Effect until Authorised to enter.

### 3.3 Entry of Rail Traffic

Before Authorising Rail Traffic to proceed into Single Line Working Sections, the Network Controller must be assured that:

- the Block over which Rail Traffic is to Travel is Clear of Rail Traffic; and
- the Route is set or will be set by the Rail Traffic Crew or other Competent Worker.

# 4. Authority to Travel

The Authority to Travel in the Right Running Direction will be normal signal indications.

*Track Vehicles* will travel in the *Right Running Direction* on *Movement Authorities* as per Rule 3019 Track Vehicles.

When *Travelling* in the *Right Running-Direction*, *Rail Traffic Crews* must obey *Intermediate Signal* indications.

The Authority to Travel in the Wrong Running-Direction is an Alternative Movement Authority Issued by the Network Controller to the Rail Traffic Crew in accordance with Rule 5019 Alternative Movement Authority.



NOTE: The passing of signals at STOP must be in accordance with Rule 6013 Passing Fixed Signals at STOP.

Before Authorising the Rail Traffic to enter the single line Section, the Network Controller must set the Route, or tell the Competent Worker or Rail Traffic Crew to set the Route for the safe passage of Rail Traffic.

The Rail Traffic Crew must ensure the Route is set for the safe passage of the Rail Traffic.

The Alternative Movement Authority must contain details of:

- the Route to be taken;
- any Points to be checked, set and Secured;
- any Fixed Signals that are to be passed at STOP;
- any speed restriction applicable;
- the operating status of Active Control Level Crossings; and
- any reporting requirements.

The Network Controller will Issue the Alternative Movement Authority to the Rail Traffic Crew, and the Rail Traffic Crew must read it back in accordance with Procedure 9016 Written Authorities and Forms.

# 5. Travelling Through a Single Line Working Section

When *Travelling* in the *Right Running-Direction*, *Rail Traffic Crews* must obey *Intermediate Signal* indications.

Unless assured that *Active Control Level Crossings* are operating correctly, *Rail Traffic Crews* must treat the *Level Crossings* as faulty in accordance with Rule <u>2015 Active Control Level Crossing Management.</u>

### Reporting

Rail Traffic Crews, running in the wrong direction, must tell the Network Controller when the Rail Traffic has:

- entered the Single Line Working Section;
- passed Complete beyond nominated Locations as detailed on the Alternative Movement Authority; and
- exited Complete from the Single Line Working Section.

# 7. Departing the Single Line Working Section

Rail Traffic must not depart the Single Line Working Section without the Authority of the Network Controller.

Before Authorising Rail Traffic to depart the Single Line Working Section, the Network Controller must be assured that:

- the Block Section ahead is unoccupied;
- no conflicting Routes are set; and
- the Route is set or will be set by the Rail Traffic Crew or other Competent Worker.

The Rail Traffic Crew must ensure the Route is set for the safe passage of the Rail Traffic.

The Network Controller and the Rail Traffic Crew must Fulfil the Alternative Movement Authority when the Rail Traffic has Arrived Complete.

# 8. Establishing a Non-Crossing Location

The Approved Operations *Delegate* may approve the use of a Non-Crossing *Location* to facilitate the movement of following *Rail Traffic* for *Wrong Running Direction* movements.



WARNING: This only applies in the Wrong Running Direction.

A Non-Crossing *Location* may be used to divide a *Section* to allow for following *Rail Traffic* to enter the single line *Section* before the preceding *Rail Traffic* has *Cleared* the single line *Section*.

#### The Network Controller must:

- confirm that approval to establish a Non-Crossing Location has been given by the Approved Operations Delegate;
- confirm that the affected Section of Track is Clear of all Rail Traffic:
- ensure that Rail Traffic will not be Authorised to Occupy the Single Line Working Section before the Non-Crossing Location has been established;
- ensure there is a *Competent Worker* with *Effective Communication* at the designated Non-Crossing *Location*; and
- tell the *Competent Worker* at the designated Non-Crossing *Location*:
  - the Running -Directions for which the Non-Crossing Location will be used; and
  - the Running-Direction for the first movement.

#### The Competent Worker at a Non-Crossing Location must:

- make sure they have Effective Communication with the Network Controller,
- confirm whether the Non-Crossing Location applies for both Running-Directions;
- confirm the Running-Direction for the first movement;
- stand in a Safe Place; and
- ensure Rail Traffic Crews approaching from expected Running-Directions will have a Clear view of that Location.

# 9. Working a Non-Crossing Location

The Network Controller may Issue an Alternative Movement Authority for Rail Traffic to Travel:

- through the Single Line Section; or
- only as far as the Non-Crossing Location.

The Network Controller must advise the Competent Worker at the Non-Crossing Location before Issuing an Alternative Movement Authority for Travel through or to the Non-Crossing Location.

# 9.1 Issue of an Alternative Movement *Authority* to the Non-Crossing Location

On advice from the *Network Controller* that an *Alternative Movement Authority* is to be *Issued* to the Non-Crossing *Location*, the *Competent Worker* must prevent that *Rail Traffic* from passing the Non-Crossing *Location* by placing *In-field Protection* on the line.

The Competent Worker will remove the Protection after the Rail Traffic Crew is in possession of an Alternative Movement Authority to Proceed.

When assured that the *Block Section* is *Clear* the *Competent Worker* must remove the *Protection* from the line and give a Proceed *Handsignal*.

### 9.2 Rail Traffic Passing Beyond the Non-Crossing Location

After Rail Traffic has passed the Non-Crossing Location, and until advised by the Network Controller that the Rail Traffic has Arrived Complete out of the Single Line Working area, the Competent Worker must Protect the Occupied line.

When Rail Traffic has passed Complete beyond the Non-Crossing Location the Competent Worker must get confirmation of the direction of approach of the next Rail Traffic movement from the Network Controller.

# 10. Removing a Non-Crossing Location

Before removing the Non-Crossing Location, the Network Controller must confirm that:

- the line between the limits of Single Line Working is Clear of Rail Traffic; and
- Rail Traffic will not be Authorised to enter the Single Line Working Section before the Non-Crossing Location has been removed.

The Network Controller must tell the Competent Worker at the Non-Crossing Location:

- that the Non-Crossing Location is no longer needed;
- to remove Protection from the line; and
- to advise when this has been done.

# 11. Cancelling an Alternative Movement Authority

An Alternative Movement Authority may be Cancelled only if the Network Controller is assured that the Authorised movement has not started.

The Network Controller must tell affected Competent Workers that the Alternative Movement Authority has been Cancelled.

# 12. Fulfilling an Alternative Movement Authority

An Alternative Movement Authority must be Fulfilled only when the Rail Traffic Crew or Competent Worker assures the Network Controller that the Authorised Rail Traffic movements have been completed and the Section is Clear.

The Network Controller must tell affected Competent Workers that the Alternative Movement Authority has been Fulfilled.

# 13. Returning to Normal Working

Before normal working is resumed the Network Controller must ensure that:

- any Alternative Movement Authority Issued to Travel through the Single Line Working Section is Cancelled or Fulfilled;
- the affected Section is Clear of Rail Traffic;
- any Active Control Level Crossings in the Section are restored for normal operation or Protected:
- temporary Station Limits signs, where used, have been removed;
- any Points that were set and Secured are restored for normal operation; and
- Blocking Facilities are removed.

# 14. Keeping Records

The Network Controller and Competent Worker must keep a Permanent Record of details of the Single Line Working, including Rail Traffic arrival and departure times.

### 15. References

2015 Active Control Level Crossing Management

3019 Track Vehicles

5019 Alternative Movement Authority

6003 Blocking Facilities

6013 Passing Fixed Signals at STOP

9016 Written Authorities and Forms

### 16. Effective Date

31 October 2022