

# Using a Track Work Authority

## Introduction

A Track Work Authority (TWA) allows track work on running lines between rail traffic movements. Protection Officers manage the approach of rail traffic to worksites. Rail traffic may pass through worksites only under controlled conditions.



### WARNING

Workers must be in safe places before rail traffic is allowed to approach beyond the inner Handsignaller or pass through the limits of worksites.

## Obtaining a Track Work Authority

The Protection Officer obtains a TWA from the Signaller responsible for the portion of track.

### *Protection Officer*

1. Tell the Signaller:
  - your name
  - your contact details
  - your Safeworking designation
  - the type of work
  - the intended duration

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2. Identify the line name and nominate the worksite location as being between:
  - two signals, or
  - a signal and a set of points, or
  - a signal and the end of a terminal line, or
  - a set of points and the end of a terminal line.

Signals and points must be identified by their numbers.

3. Identify the worksite kilometre location and protection arrangements to be used. If signals are to be used for protection, nominate the signal numbers.
4. Ask the Signaller for the Train Running Information for rail traffic planned to pass through the worksite.



### **WARNING**

Train Running Information provides only a guide to planned movements and cannot be relied upon.

### *Signaller*

5. Confirm the TWA details including:
  - the Protection Officer's name and contact details
  - type of work
  - the duration of work
  - the line name
  - the nominated worksite kilometre location
  - the protection arrangements to be used.

## Using a Track Work Authority

6. Use the reference points provided by the Protection Officer to identify the worksite location and make sure that:
  - the last rail traffic to enter the affected portion of track is identified and its location is known
  - there is no rail traffic approaching the worksite.
7. Tell the Protection Officer:
  - the Train Running Information
  - the identification number of the last rail traffic to enter the affected portion of track and its last known location
  - that there is no rail traffic approaching the worksite.

### *Protection Officer*

8. Confirm the information provided by the Signaller:
  - about the Train Running Information
  - about the identification number of the last rail traffic to enter the affected portion of track and its last known location
  - that there is no rail traffic approaching the worksite.

### **Jointly with a Track Occupancy Authority**

A TWA may be obtained in an area where a Track Occupancy Authority (TOA) is current.

### *Signaller*

1. Tell the Protection Officer seeking the TWA to confer with the Protection Officer holding the TOA. Confirm that:
  - the Protection Officers have conferred with each other
  - the Protection Officer holding the TOA agrees with the protection arrangements.

## Using a Track Work Authority

### *TWA Protection Officer*

2. Confirm that the worksite will be protected:
  - for bidirectional lines, in both directions, or
  - for unidirectional lines, in the normal direction of travel.

If the TOA is for a wrong running-direction track vehicle movement, railway track signal protection must be placed at least 500m and no more than 1000m from the worksite in the wrong running-direction.

## Authorising a Track Work Authority

### *Signaller*

1. Get authorisation from the Network Controller to issue the TWA.

### *Network Controller*

2. Confirm the details of the TWA with the Signaller, and authorise the TWA.

### *Signaller*

3. When authorised, issue the TWA.

### *Protection Officer*

4. When authorised, put the required protection in place.

## Using a Track Work Authority

### Protecting worksites



#### **WARNING**

The outer Handsignaller must be put in place before the inner Handsignaller.

#### *Protection Officer*

1. Protect worksites by:
  - managing the approach of rail traffic to worksites
  - managing the transit of rail traffic through worksites
  - if necessary, managing rail traffic on other lines.
2. Make sure that all protection is correctly placed.
3. Where practicable, reduce the number of points of entry to a worksite area by clipping and locking points.

### Managing signals affected by work on track

Work on track may affect signals so they display **STOP**. In this procedure these signals are called affected signals.

#### *Protection Officer*

1. Arrange for affected signals to be set and held at **STOP**.
2. Place a Handsignaller at each affected signal, in the direction of approaching rail traffic.
3. Tell the Handsignaller to display a **STOP** handsignal to approaching rail traffic.
4. If the affected signal is a controlled absolute signal, direct the Handsignaller to get the Signaller's authority to allow the rail traffic to pass the signal at **STOP**.

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5. If the affected signal is an automatic signal, give the Handsignaller instructions about allowing rail traffic to pass the signal at **STOP**.

### *Handsignaller*

6. If the affected signal is a controlled absolute signal, follow the Protection Officer's directions, and get the Signaller's authority to allow the rail traffic to pass the signal at **STOP**.
7. If the affected signal is an automatic signal, follow the Protection Officer's instructions to allow rail traffic to pass the signal at **STOP**.

## Managing rail traffic approaches to worksites

### *Protection Officer*

1. Decide if it is safe for rail traffic to transit the worksite.
2. Decide the appropriate speed for rail traffic to transit the worksite.
3. Tell the inner Handsignaller whether to handsignal Drivers or Track Vehicle Operators to:
  - travel through the worksite at normal speed, or
  - travel through the worksite at caution, or
  - stop and be told about special travel conditions.

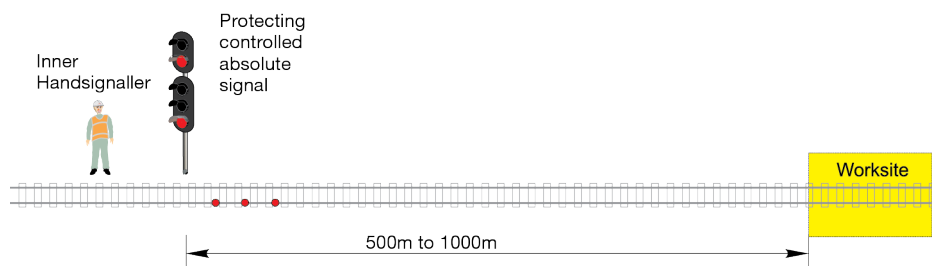
## Using a Track Work Authority

### Protecting worksites using Handsignallers at protecting signals

#### Signals between 500m and 1000m from the worksite

##### *Protection Officer*

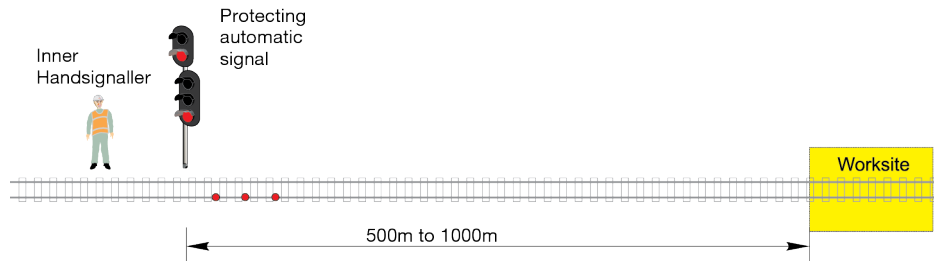
1. Arrange for the last signal in the direction of approaching rail traffic, between 500m and 1000m from the worksite, to be set and kept at **STOP**:
  - at a controlled absolute signal by asking the Signaller, or
  - at an automatic signal:
    - by making arrangements with the authorised Maintenance Representative, or
    - by operating a signal key switch, if fitted, in accordance with *NPR 754 Using a signal key switch*.
2. Place an inner Handsignaller and three railway track signals at this last signal.
3. If there are affected signals, place a Handsignaller at each affected signal.



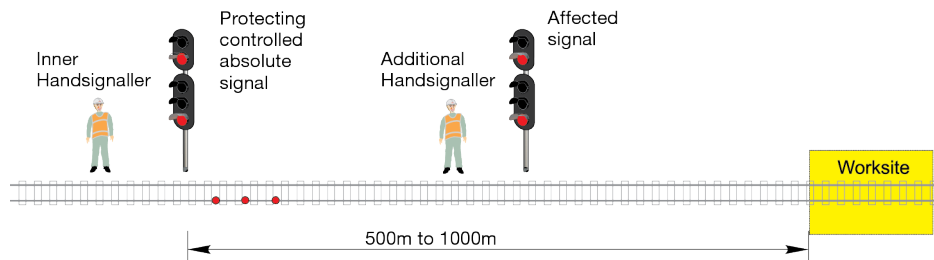
**FIGURE 1:** Example of protecting a worksite between 500m and 1000m from a controlled absolute signal that can be held at **STOP**

network procedures

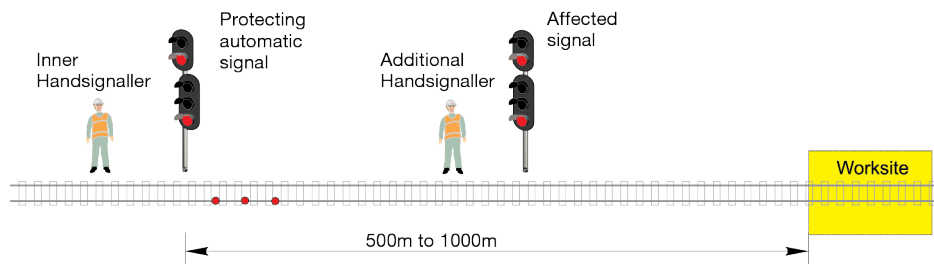
# Using a Track Work Authority



**FIGURE 2:** Example of protecting a worksite between 500m and 1000m from an automatic signal that can be held at **STOP**



**FIGURE 3:** Example of additional Handsignaller placed if work affects a signal between the worksite and the protecting controlled absolute signal



**FIGURE 4:** Example of additional Handsignaller placed if work affects a signal between the worksite and the protecting automatic signal

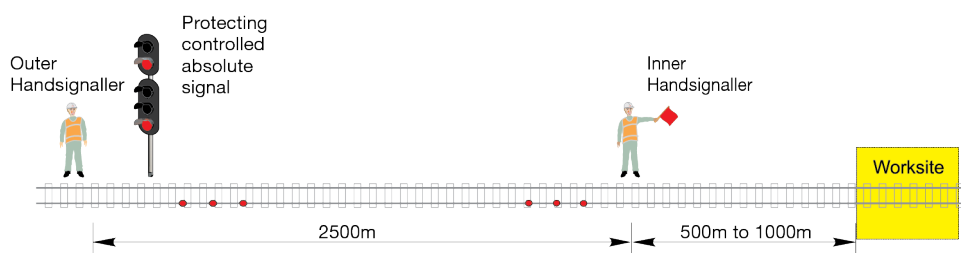


## Using a Track Work Authority

### Signals more than 1000m and less than 3500m from the worksite

#### *Protection Officer*

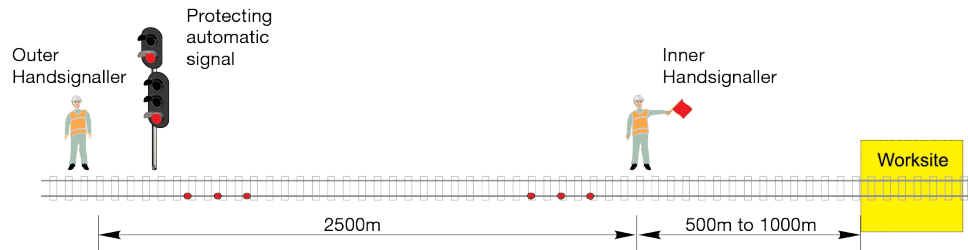
1. If there are no signals between 500m and 1000m from the worksite in the direction of approaching rail traffic, arrange for the last signal within 2500m of where the inner Handsignaller will be positioned to be set and kept at **STOP**:
  - at a controlled absolute signal by asking the Signaller, or
  - at an automatic signal:
    - by making arrangements with the authorised Maintenance Representative, or
    - by operating a signal key switch, if fitted, in accordance with *NPR 754 Using a signal key switch*.
2. Place an outer Handsignaller and three railway track signals at this signal.
3. Place the inner Handsignaller and three railway track signals between 500m and 1000m from the worksite.
4. If the distance between the outer Handsignaller and the inner Handsignaller at the signal is less than 2500m, tell the outer Handsignaller to warn Drivers and Track Vehicle Operators about the reduced distance.



**FIGURE 5:** Example of protecting a worksite with a controlled absolute signal more than 1000m and less than 3500m from the worksite

network procedures

# Using a Track Work Authority



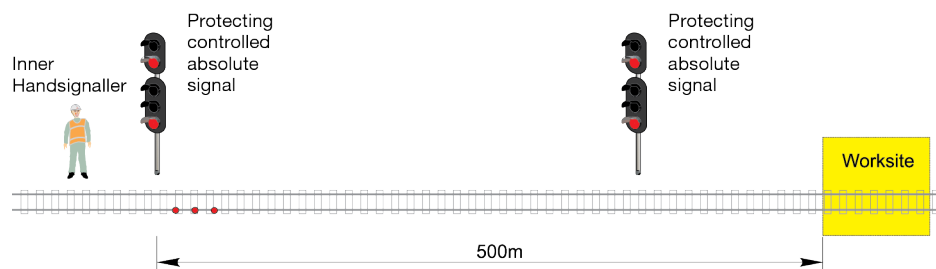
**FIGURE 6:** Example of protecting a worksite with an automatic signal more than 1000m and less than 3500m from the worksite

## At least two controlled absolute signals within 500m of the worksite

### Protection Officer

If there are at least two controlled absolute signals within 500m of the worksite.

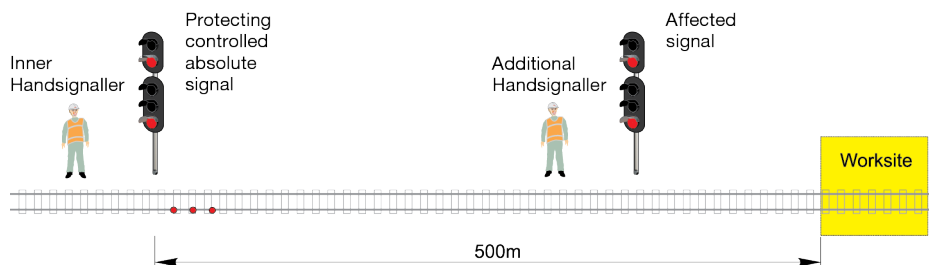
1. Ask the Signaller to set and keep both signals at **STOP**.
2. Place the inner Handsignaller and three railway track signals at the first signal in the direction of approaching rail traffic.
3. If the other signals can be cleared, further Handsignallers are not necessary.



**FIGURE 7:** Example of protecting a worksite using two controlled absolute signals

4. If there are affected signals, place a Handsignaller at each affected signal.

## Using a Track Work Authority

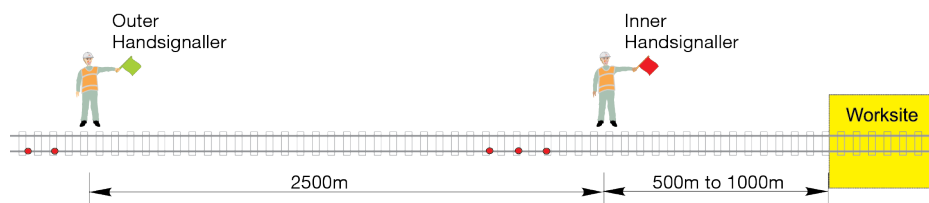


**FIGURE 8:** Example of additional Handsignaller placed when the signal between the worksite and the protecting signal cannot be cleared

### Protecting worksites using Handsignallers only

#### *Protection Officer*

1. Choose locations where Handsignallers, Drivers and Track Vehicle Operators can see each other clearly.
2. Place an outer Handsignaller and two railway track signals 2500m from where the inner Handsignaller will be positioned in the direction of approaching rail traffic.
3. Tell the outer Handsignaller to display a **CAUTION** handsignal to approaching rail traffic.
4. Place an inner Handsignaller and three railway track signals between 500m and 1000m from the worksite in the direction of approaching rail traffic.
5. Tell the inner Handsignaller to display a **STOP** handsignal to approaching rail traffic.



**FIGURE 9:** Example of protecting a worksite using Handsignallers only

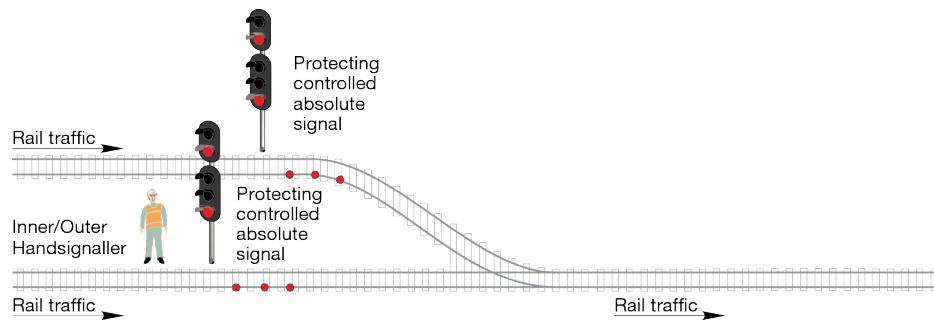
## Using a Track Work Authority

### Using a Handsignaller at a single line crossing location

#### *Protection Officer*

If two adjacent signals on converging tracks are used to protect a worksite.

1. Place three railway track signals at each signal. Place the Handsignaller in a safe place, where approaching rail traffic on either line can be seen.



**FIGURE 10:** Example of Handsignaller placed to direct rail traffic at a single line crossing location

### Managing rail traffic transits through worksites

#### *Protection Officer*

1. Before authorising the inner Handsignaller to signal rail traffic to approach and pass through a worksite, make sure that:
  - workers have gone to the designated safe places
  - the line is clear of workers and equipment between the worksite and the inner Handsignaller's location
  - the line is clear and safe for the passage of rail traffic through the worksite
  - if an automatic signal is being kept at **STOP** to protect a worksite, the line is clear to the first signal beyond the worksite.

## Using a Track Work Authority

2. If it is safe for rail traffic to pass the outer Handsignaller at a controlled absolute signal, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>outer Handsignaller action</i>
Rail traffic is to proceed at caution	<ol style="list-style-type: none"> <li>(a) After rail traffic has stopped, remove the railway track signals from the line.</li> <li>(b) If required, tell the Driver or Track Vehicle Operator about the reduced distance to the inner Handsignaller.</li> <li>(c) Ask the Signaller to:                             <ul style="list-style-type: none"> <li>• clear the controlled absolute signal held at <b>STOP</b>, or</li> <li>• give authority to allow rail traffic to proceed past the signal at <b>STOP</b>.</li> </ul> </li> <li>(d) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.</li> </ol>

## Using a Track Work Authority

3. If it is safe for rail traffic to pass the inner Handsignaller at a controlled absolute signal, and pass through the worksite, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>inner Handsignaller action</i>
Rail traffic is to proceed at normal speed	(a) Remove the railway track signals from the line: <ul style="list-style-type: none"> <li>• if there is time to do it safely, or</li> <li>• after rail traffic has stopped.</li> </ul> (b) Ask the Signaller to clear the controlled absolute signal held at <b>STOP</b> .
Rail traffic is to proceed at caution	(a) After rail traffic has stopped, remove the railway track signals from the line. (b) Ask the Signaller to: <ul style="list-style-type: none"> <li>• clear the controlled absolute signal held at <b>STOP</b>, or</li> <li>• give authority to allow rail traffic to proceed past the signal at <b>STOP</b>.</li> </ul> (c) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.
Rail traffic is to proceed under special conditions	(a) After rail traffic has stopped, tell the Driver or Track Vehicle Operator: <ul style="list-style-type: none"> <li>• the maximum speed allowed</li> <li>• about further Handsignallers ahead</li> <li>• in writing, about multiple worksites ahead.</li> </ul> (b) Remove the railway track signals from the line. (c) Ask the Signaller to: <ul style="list-style-type: none"> <li>• clear the controlled absolute signal held at <b>STOP</b>, or</li> <li>• give authority to allow rail traffic to proceed past the signal at <b>STOP</b>.</li> </ul> (d) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.

## Using a Track Work Authority

4. If it is safe for rail traffic to pass the outer Handsignaller at an automatic signal, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>outer Handsignaller action</i>
Rail traffic is to proceed at caution	(a) After rail traffic has stopped, remove the railway track signals from the line. (b) If required, tell the Driver or Track Vehicle Operator about the reduced distance to the inner Handsignaller. (c) Give authority to allow rail traffic to proceed past the signal at <b>STOP</b> . (d) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.

5. If it is safe for rail traffic to pass the inner Handsignaller at an automatic signal, and pass through the worksite, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>inner Handsignaller action</i>
Rail traffic is to proceed at caution	(a) After rail traffic has stopped, remove the railway track signals from the line. (b) Give authority to proceed past the <b>STOP</b> signal. (c) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.
Rail traffic is to proceed under special conditions	(a) After rail traffic has stopped, tell the Driver or Track Vehicle Operator: <ul style="list-style-type: none"> <li>• the maximum speed allowed</li> <li>• about further Handsignallers ahead, and</li> <li>• in writing, about multiple worksites ahead.</li> </ul> (b) Remove the railway track signals from the line. (c) Give authority to proceed past the <b>STOP</b> signal. (d) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.

## Using a Track Work Authority

6. If it is safe for rail traffic to pass the outer Handsignaller at an automatic signal fitted with a signal key switch, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>Outer Handsignaller action</i>
Rail traffic is to proceed at caution	(a) After rail traffic has stopped, remove the railway track signals from the line. (b) If required, tell the Driver or Track Vehicle Operator about the reduced distance to the inner Handsignaller. (c) Restore the key to the switch. (d) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator. (e) When the leading vehicle has completely passed the signal, immediately remove the key from the switch.

7. When rail traffic has cleared the worksite, confirm with the Handsignaller:
- that the key was removed immediately after the leading vehicle completely passed the signal
  - that the signal is displaying a **STOP** indication.



## Using a Track Work Authority

8. If it is safe for rail traffic to pass the inner Handsignaller at an automatic signal fitted with a signal key switch, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>Inner Handsignaller action</i>
Rail traffic is to proceed at normal speed	(a) Remove the railway track signals from the line: <ul style="list-style-type: none"> <li>• if there is time to do it safely, or</li> <li>• after rail traffic has stopped.</li> </ul> (b) Restore the key to the switch. (c) When the leading vehicle has completely passed the signal, immediately remove the key from the switch.
Rail traffic is to proceed at caution	(a) After rail traffic has stopped, remove the railway track signals from the line. (b) Restore the key to the switch. (c) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator. (d) When the leading vehicle has completely passed the signal, immediately remove the key from the switch.
Rail traffic is to proceed under special conditions	(a) After rail traffic has stopped, tell the Driver or Track Vehicle Operator: <ul style="list-style-type: none"> <li>(b) the maximum speed allowed</li> <li>(c) about further Handsignallers ahead</li> <li>(d) in writing, about multiple worksites ahead.</li> </ul> (e) Remove the railway track signals from the line. (f) Restore the key to the switch. (g) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator. (h) When the leading vehicle has completely passed the signal, immediately remove the key from the switch.

## Using a Track Work Authority

9. When rail traffic has cleared the worksite, confirm with the Handsignaller
  - that the key was removed immediately after the leading vehicle completely passed the signal
  - that the signal is displaying a **STOP** indication.
10. If it is safe for rail traffic to pass the outer Handsignaller not at a signal, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>outer Handsignaller action</i>
Rail traffic is to proceed at caution	(a) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.

11. If it is safe for rail traffic to pass the inner Handsignaller not at a signal, and pass through the worksite, tell the Handsignaller to take the following actions:

<i>Movement allowed</i>	<i>inner Handsignaller action</i>
Rail traffic is to proceed at normal speed	(a) Remove the railway track signals from the line, if there is time to do it safely. (b) Signal <b>PROCEED</b> to the Driver or Track Vehicle Operator.
Rail traffic is to proceed at caution	(a) Remove one railway track signal from the line, if there is time to do it safely. (b) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.

## Using a Track Work Authority

<i>Movement allowed</i>	<i>inner Handsignaller action</i>
Rail traffic is to proceed under special conditions	(a) Signal the Driver or Track Vehicle Operator to <b>STOP</b> . (b) After rail traffic has stopped, tell the Driver or Track Vehicle Operator: <ul style="list-style-type: none"> <li>• the maximum speed allowed</li> <li>• about further Handsignallers ahead</li> <li>• in writing, about multiple worksites ahead.</li> </ul> (c) Signal <b>PROCEED AT CAUTION</b> to the Driver or Track Vehicle Operator.



### **WARNING**

If there is not enough time to remove the railway track signals safely, leave them on the track and signal **STOP** to the approaching rail traffic.

12. Make sure the inner and outer Handsignallers have replaced the railway track signals after rail traffic has passed.

### **Rail traffic clearing multiple worksites**

#### *Protection Officer*

1. Place a **CLEARANCE** sign or Handsignaller at least 50m beyond the last worksite.

#### *Drivers and Track Vehicle Operators*

2. Resume normal speed only after the rear of the last vehicle has passed the **CLEARANCE** sign or the Handsignaller.

## Using a Track Work Authority

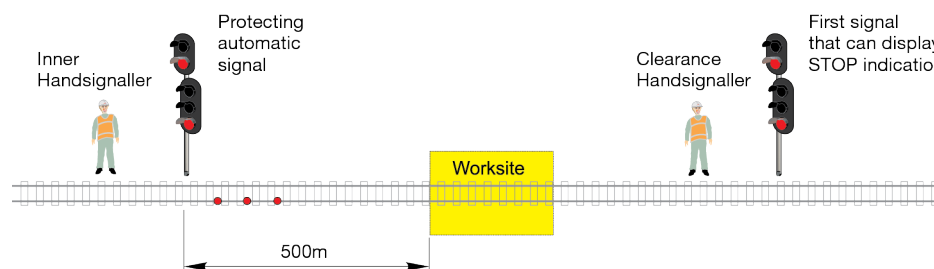
### Using clearance Handsignallers if protecting signals cannot be cleared

#### *Protection Officer*

1. Place a clearance Handsignaller at the first signal beyond the worksite that can display a **STOP** indication.

#### *Clearance Handsignaller*

2. Make sure that the line is clear for rail traffic to approach.
3. Tell the Signaller and the Protection Officer when rail traffic has passed complete beyond the signal and that the line is clear.



**FIGURE 11:** Example of placement of a clearance Handsignaller at the first signal that can display a **STOP** indication, to tell the Protection Officer when the line is clear for rail traffic to approach

### Using clearance Handsignallers if tonnage signals are affected

#### *Protection Officer*

1. If a tonnage signal is affected by work on track, or is being used to control rail traffic approaching the worksite, a clearance Handsignaller must be placed at the signal controlling the tonnage signal.

#### *Clearance Handsignaller*

2. Tell the Protection Officer when the line is clear for rail traffic as far as that signal.

## Using a Track Work Authority

### Returning the track to service

#### *Protection Officer*

1. Make sure that all equipment is clear of the line.
2. Make sure that all workers have cleared the worksites.
3. Make sure that:
  - protection has been removed
  - if necessary, signals have been restored to normal use
  - the track is safe for use.
4. If removed, the signal key switch key is restored.
5. Tell the Signaller that the work is complete, and about any restrictions on track use.
6. Fulfil the TWA.

#### *Signaller*

7. Confirm with the Protection Officer:
  - their name
  - the worksite location
  - that workers and equipment are clear of the Danger Zone
  - that, if used, the signal key switch key has been restored
  - that the TWA is fulfilled.

### Keeping records

Network Controllers, Signallers and the Protection Officer must record, in permanent form, the TWA details, including protection arrangements.

## Using a Track Work Authority

### Network Procedures

- NPR 704 Using Infrastructure Booking Authorities*
- NPR 707 Clipping points*
- NPR 708 Using X, Y and Z keys*
- NPR 709 Using railway track signals*
- NPR 712 Protecting work from rail traffic on adjacent lines*
- NPR 754 Using a signal key switch*

### Effective date

29 September 2019