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# NWT 320 Signal Key Switch Blocking

## Purpose

To prescribe the rules for working in the Danger Zone using Signal Key Switch (SKS) Blocking.

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## Principle

SKS Blocking uses automatic signals fitted with a signal key switch to exclude rail traffic from a portion of track for a specified period.

SKS Blocking may be used if the Protection Officer has assessed that the work to be performed will not:

- involve multiple worksites, or
- require a work on track authority, or
- break the track, or
- alter track geometry or structure.

Drivers and Track Vehicle Operators must follow any instructions given by Handsignallers.

 **Warning**

If the safety assessment shows that a work on track authority is necessary, work must be carried out using:

- *NWT 302 Local Possession Authority, or*
- *NWT 304 Track Occupancy Authority, or*
- *NWT 306 Track Work Authority.*

SKS Blocking maybe used to exclude rail traffic for work:

- not requiring tools, or
  - using tools which can be easily and immediately removed from the track by one person and are:
    - light, non-powered hand tools, or
    - light, battery powered tools or devices, or
    - light, powered hand tools.
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# NWT 320 Signal Key Switch Blocking

## Establishing SKS Blocking

Signallers may permit the implementation of SKS Blocking.

SKS Blocking must not be established if the nominated worksite location is within the limits of:

- a Local Possession Authority, or
  - a Track Occupancy Authority, or
  - the protection arrangements for a Track Work Authority.
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## Rail traffic

Protection Officers must manage rail traffic approach to and passage through the portion of track within the SKS worksite protection limits.

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## Protection Officer

At all times there must be a nominated Protection Officer for the SKS Blocking.

The Protection Officer must:

- be the only person to tell workers about the:
  - locations of safe places
  - safety measures in place
  - extent of the area protected.
- be the only person to speak to the Signaller about safety arrangements
- make sure that the protection is in place before work starts.

The Protection Officer must identify the line and define the worksite location as being between two signals.

Signals must be identified by their numbers.

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## Protecting an SKS worksite

Effective communication must be maintained between the Protection Officer and:

- the Signaller
- the Handsignaller.

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# NWT 320 Signal Key Switch Blocking

The Protection Officer must make sure that:

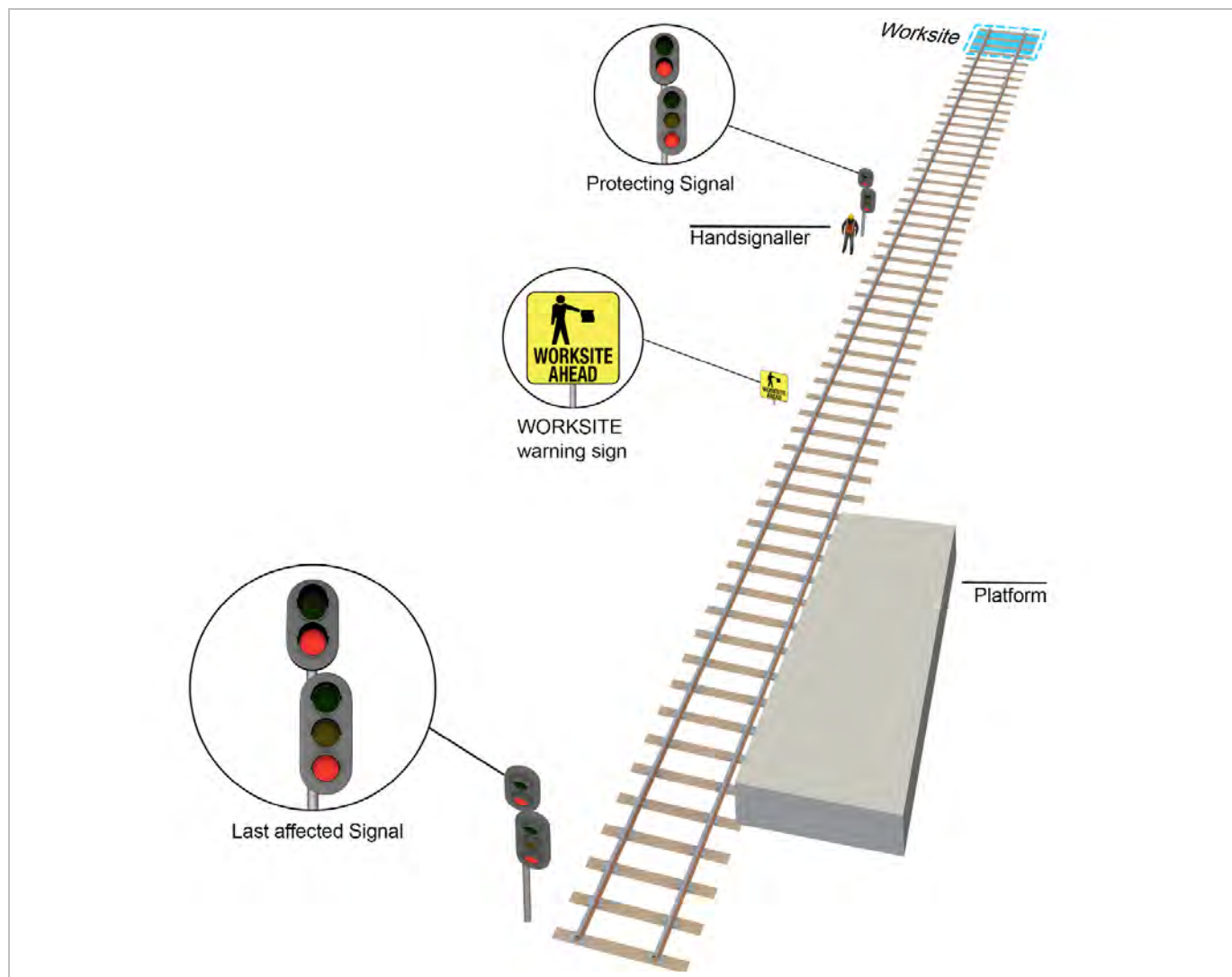
- unless an easily reached safe place is available and a Lookout is provided, worksites must not be established within 500m of the protecting signal
- all points of entry into the affected portion of track are protected.

If using Lookouts as part of SKS Blocking protection, the Protection Officer must make sure that the minimum warning time requirements are satisfied.

## Worksite warning

If a platform is located between the last affected signal and the protecting signal, a WORKSITE warning sign must be placed beyond the departure end of that platform.

**FIGURE 1:** Example of a WORKSITE warning sign placed beyond the departure end of a platform located between the last affected signal and the protecting signal



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# NWT 320 Signal Key Switch Blocking

## Operating the signal key switch

The SKS Blocking worksite must be protected with an automatic signal kept at stop by removing the key from the associated signal key switch.

A Handsignaller must be placed at the signal.

 **Warning**

The Handsignaller must remain at the protecting signal for the duration of the SKS Blocking and speak with the Signaller only when instructed to do so by the Protection Officer.

Before entering the Danger Zone, the Protection Officer must:

- confirm with the Handsignaller, that the key has been removed from the switch and the signal is displaying STOP, and
- confirm with the Signaller, that there is no approaching rail traffic between the protection and the identified worksite location.

## Intermediate sidings

If an intermediate siding is occupied by rail traffic and movements from the siding could enter the affected portion of track, the siding must be secured by:

- the Protection Officer clipping and locking points, or
- the Signaller applying blocking facilities to points release controls.

If the intermediate siding is unoccupied:

- rail traffic must not be authorised to occupy the siding while SKS Blocking is in place
- protection against movements from the siding is not required.

## Managing the approach of rail traffic

Before authorising the Handsignaller to restore the key to the switch to allow rail traffic to approach the worksite, the Protection Officer must make sure that workers and their equipment are clear of the Danger Zone.

Only the Protection Officer may tell the Handsignaller whether to allow rail traffic to proceed.

Handsignallers must:

- operate the signal key switch only on the direction of the Protection Officer, and
- immediately remove the key when the leading vehicle of the rail traffic has passed the protecting signal.

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# NWT 320 Signal Key Switch Blocking

 **Warning**

If the key is not removed from the switch immediately after the leading vehicle of the rail traffic has passed the protecting signal, SKS Blocking must be ended.

 **Note**

The Danger Zone must not be reoccupied until the Protection Officer gets an assurance from the Handsignaller:

- that the key was removed immediately after the leading vehicle completely passed the protecting signal, and
- that the protecting signal is at STOP.

## Protecting signal does not clear

If the protecting signal does not clear within the expected time after restoring the key to the switch, the Handsignaller must tell the Protection Officer.

The Protection Officer must contact the Signaller to determine if the last rail traffic to enter the affected portion of track is preventing the protecting Signal from displaying a PROCEED indication.

If rail traffic is not preventing the protecting signal from displaying a PROCEED indication, SKS Blocking must be ended.

 **Warning**

Signals must only be passed at stop in accordance with *NSG 608 Passing signals at STOP* only after SKS Blocking has been ended.

## Ending SKS Blocking

To end SKS Blocking, the Protection Officer must tell the Signaller:

- their name and the worksite location, and
- that workers and their equipment are clear of the Danger Zone, and
- that the key has been restored to the switch.

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## Keeping records

Signallers and Protection Officers must record, in permanent form:

- the SKS Blocking details, and
  - details of communication about Train Running Information.
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## Related Documents

*NPR 711 Using Lookouts*

*NPR 712 Protecting work from rail traffic on adjacent lines*

*NPR 751 Calculating Minimum Warning Time*

*NPR 753 Using Signal Key Switch Blocking*

*NPR 754 Using a signal key switch*