

ANPR 703

## Using Absolute Signal Blocking

### Applicability

NSW

SMS

### Publication Requirement

External Only

### Document Status

Issue/Revision #	Effective from
2.1	23 February 2020

## Introduction

*Absolute Signal Blocking* (ASB) is a method of working in the *Danger Zone* by excluding rail traffic from a portion of track by maintaining *controlled absolute signals* at STOP.

## Using Absolute Signal Blocking

### Protection Officer

1. Make sure that your safety assessment shows that a work on track authority is not necessary for the work.
2. Tell the *Network Control Officer*:
  - your name and contact details, and
  - the type of work, and
  - the *location* of the work, including the track name and at least one of the following identifiers:
    - section and kilometre location
    - station name
    - points identification
    - permanent structures, such as bridge, roadway or overpass used only in conjunction with one of the above identifiers, and
  - the identification of the controlled absolute signal or signals to be used to protect the limits of the ASB, and
  - the intended start and finish times.
3. If Absolute Signal Blocking is to be authorised to start after a unidirectional rail traffic movement:
  - watch the rail traffic pass complete beyond the worksite location, and
  - give the Network Control Officer the identification number of the lead unit of the train or the last track vehicle number where track vehicles are operating as a train.

4. Ask the Network Control Officer to exclude *rail traffic* from the portion of *track* by:
  - setting and keeping Controlled Absolute Signals at STOP with *blocking facilities* applied to the signal controls, or
  - setting and keeping Controlled Absolute Signals at STOP with blocking facilities applied to the signal controls, and
    - *authorising* the removal of the *manual points control mechanism*, or
    - authorising the points to be secure to prevent access by rail traffic.
5. Confirm with the Network Control Officer the location and identification of the Controlled Absolute Signals being used to protect the work.

### Network Control Officer

6. Identify if the Absolute Signal Blocking requires more than one Network Control Officer to exclude rail traffic from the worksite. If the proposed Absolute Signal Blocking affects more than one Network Control Officer, the Network Control Officers must nominate an authorising Network Control Officer.

### Network Control Officer / Authorising Network Control Officer

7. Confirm the location of the proposed worksite.
8. Make sure that:
  - the signals being used for protection are Controlled Absolute Signals, and
  - the protecting signals will not be cleared for a different route if rail traffic could enter the proposed worksite, and
  - the last rail traffic to enter the affected portion of track is identified and its location is known, and
  - there is no approaching rail traffic between the protecting Controlled Absolute Signals and the proposed worksite, and
  - any rail traffic that has passed clear and complete beyond the proposed worksite will not be authorised to return.
9. Where Signallers are used, the Signaller must tell the *Network Controller* about the request to exclude rail traffic.
10. Set the protecting signals at STOP and apply blocking facilities.

11. Where required, make sure other affected Network Control Officers have set the protecting signals at STOP and applied blocking facilities.
12. If authorising the removal of the manual points control mechanism, make sure that there is no rail traffic *closely approaching* a signal that will be placed at STOP by the removal of the manual points control mechanism.
13. If authorising the points to be secured to prevent access by rail traffic, set the points and authorise the points to be secured.
14. Authorise the Absolute Signal Blocking.
15. Make a permanent record of the Absolute Signal Blocking.
16. Tell the *Protection Officer*:
  - that blocking facilities have been applied, and
  - that the affected portion of track is protected, and
  - the identification number of the last rail traffic to enter the affected portion of track and its last known location, and
  - that there is no rail traffic approaching the worksite.

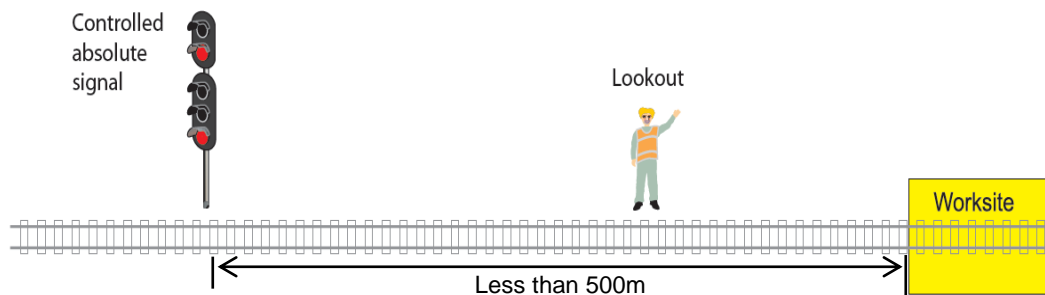
### Protection Officer

17. If authorised by the Network Control Officer, secure the points to prevent access by rail traffic.
18. Before work begins, confirm with the Network Control Officer:
  - that protecting Controlled Absolute Signals have been set at STOP and blocking facilities applied, and
  - the identification number of the last rail traffic to enter the affected portion of track and its last known location, and
  - that the track is clear of rail traffic between the Controlled Absolute Signals being used for protection and the proposed worksite, and
  - that any rail traffic that has passed the worksite will not return, and
  - the agreed safety measures are in place, and
  - Absolute Signal Blocking is Authorised.
19. If authorised by the Network Control Officer remove and safeguard the manual points control mechanism.

## Types of Absolute Signal Blocking protection

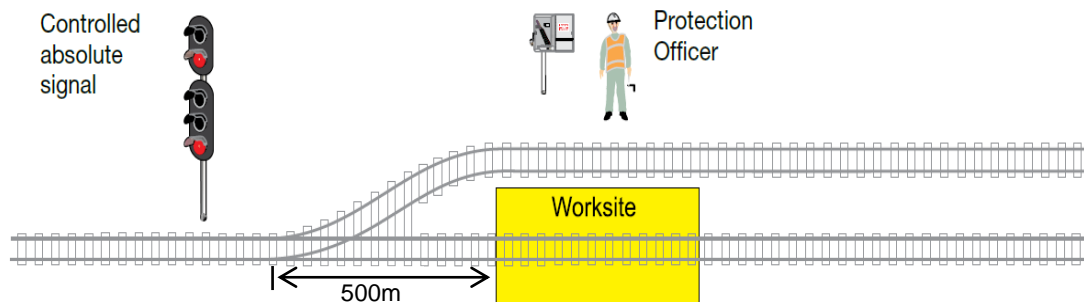
### One Controlled Absolute Signal at STOP

Figure ANPR 703-1



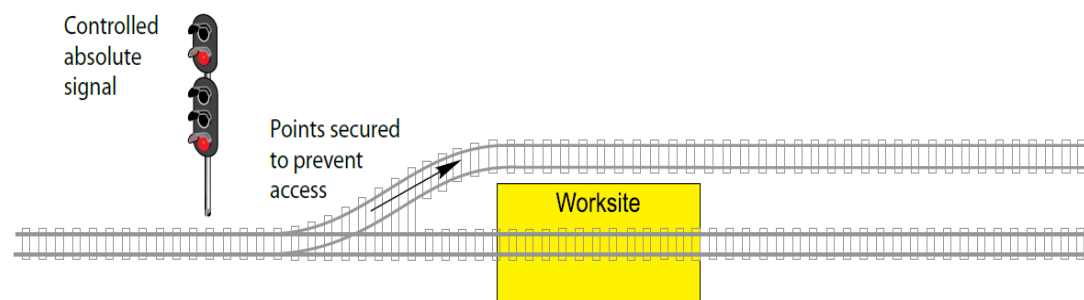
Example of protection arrangements using one controlled absolute signal within 500m and a Lookout.

Figure ANPR 703-2



Example of protection arrangements using one controlled absolute signal and the manual points control mechanism removed and the controlled absolute signal at STOP.

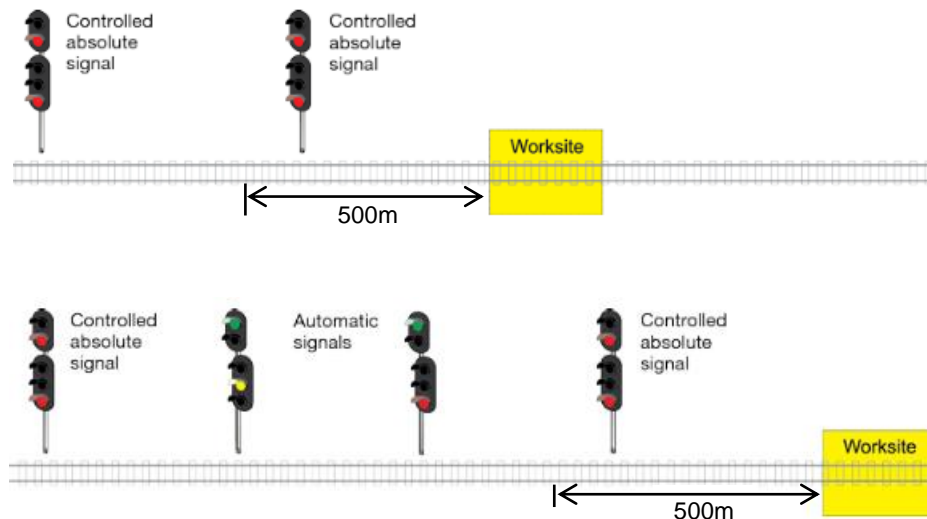
Figure ANPR 703-3



Example of protection arrangements using one controlled absolute signal and the points secured to prevent access.

## Two consecutive Controlled Absolute Signals at STOP

Figure ANPR 703-4



Examples of protection arrangements using two consecutive controlled absolute signals.

## Ending Absolute Signal Blocking

### Protection Officer

1. Tell the Network Control Officer when the worksite is clear of workers and equipment.
2. If the manual points control mechanism was removed, tell the Network Control Officer when it has been returned.
3. If the points have been secured to prevent access by rail traffic, tell the Network Controller when they have been restored to normal.

### Network Control Officer

1. Make sure that the points and signals are working correctly after the points have been restored to normal operation.
2. When told by the Protection Officer that the worksite is clear, remove the blocking facilities.

## Effective Date

23 February 2020