



AUSTRALIAN RAIL TRACK CORPORATION LTD

This document has been adopted by the ARTC with the permission of the NSW Government and will continue to apply under the authority of the ARTC General Manager Infrastructure, Strategy & Performance until further notice

Discipline
Engineering Standard – NSW

Category
Signalling

Title
Placing Signals at Stop to Protect a Worksite

Reference Number
SDS 21 – (RIC Standard: SC 00 13 01 21)

Document Control

Status	Date	Prepared	Reviewed	Endorsed	Approved
Issue 1 Revision 2	Mar 05	Standards and Systems	Standards Engineer	GM Infrastructure Strategy & Performance	Safety Committee
		Refer to Reference Number	H Olsen	M Owens	Refer to minutes of meeting 12/08/04

DISCLAIMER

Australian Rail Track Corporation has used its best endeavors to ensure that the content, layout and text of this document is accurate, complete and suitable for its stated purpose. It makes no warranties, express or implied, that compliance with the contents of this document shall be sufficient to ensure safe systems of work or operation. Australian Rail Track Corporation will not be liable to pay compensation in respect of the content or subsequent use of this document for any other purpose than its stated purpose or for any purpose other than that for which it was prepared except where it can be shown to have acted in bad faith or there has been willful default.

DOCUMENT APPROVAL

The technical content of this document has been approved by the relevant ARTC engineering authority and has also been endorsed by the ARTC Safety Committee.

DOCUMENT SUPPLY and CONTROL

The Primary Version of this document is the electronic version that is available and accessible on the Australian Rail Track Corporation Internet and Intranet website.

It is the document user's sole responsibility to ensure that copies are checked for currency against the Primary Version prior to its use.

COPYRIGHT

The information in this document is Copyright protected. Apart from the reproduction without alteration of this document for personal use, non-profit purposes or for any fair dealing as permitted under the Copyright Act 1968, no part of this document may be reproduced, altered, stored or transmitted by any person without the prior written consent of ARTC.

About This Standard

This Principle addresses the method of placing a signal at stop to protect a worksite referenced throughout these Principles and with regard to the descriptions and definitions currently accepted and in use.

Document History

Primary Source – RIC Standard SC 00 13 01 21 SP Version 1.1

List of Amendments –

ISSUE	DATE	CLAUSE	DESCRIPTION
1.1	01/09/2004		<ul style="list-style-type: none">▪ Reformatting to ARTC Standard
1.2	14/03/2005	Disclaimer	<ul style="list-style-type: none">▪ Minor editorial change▪ Footer reformatted

Contents

21. PLACING SIGNALS AT STOP TO PROTECT A WORKSITE	6
21.1 INTRODUCTION	6
21.2 CONCEPT	6
21.3 REQUIREMENTS - WORKSITE PROTECTION KEY AND LOCK ARRANGEMENT	6
21.4 CONTROL REQUIREMENTS	7
21.5 EXTENT OF WORKSITE	7
21.6 WORKSITE PROTECTION USING SIGNALS	8

21. Placing Signals at Stop to Protect a Worksite

21.1 Introduction

This principle addresses the requirements for provision of a key lock arrangement at a signal, to place the signal at stop in order to protect a worksite.

21.2 Concept

Utilisation of signals to protect worksites is advantageous as train drivers are aware of the location of signals and the same level of protection offered by the signalling system can be extended to protect worksites.

21.3 Requirements - Worksite Protection Key and Lock Arrangement

A key and a key locked switch fitted in an SL locked box attached to the signal post below the lamp case shall be provided on selected signals.

The key applicable to each signal shall be mechanically indexed and labelled showing the extent of the protected area (possession area) i.e. from and to in kilometres, the line to which it applies and the signal number.

The key is called a protection key.

Example:

SY136 Up Main 7.8km to 6.5km

A maximum of 18 wardings are available as follows:

WSA	WSB	WSC	WSD	WSF
WSG	WSH	WSJ	WSK	WSL
WSM	WSN	WSO	WSP	WSR
WSS	WST	WSU		

Wardings shall be allocated so that the maximum distance is provided between reuse of the same warding.

When the key lock box is unlocked with the SL key, a flap shall be opened displaying the signage, "WORKSITE – DO NOT PASS AT STOP WITHOUT AUTHORITY" in white writing on red background. The sign shall not be restored unless the key is inserted and turned to restore the signal.

The SL locked box shall be labelled: **Protection Key "XXX"** (Signal number).

21.4 Control Requirements

When the protection key is removed from the key lock box the signal and trainstop (if fitted) shall return to the stop position.

The worksite shall be nominated to commence clear of the overlap of the previous signal. Conditional overlaps may also be utilised for this purpose. Where full block overlaps are utilised well in excess of braking requirements, (e.g. Cullerin - Fish River) an overlap point may be derived to be that point which the Design Principles would ordinarily nominate as the required overlap. The furthest extent of the worksite shall not be further than 5 km from the commencement.

Where conditional overlaps are in use the removal of the protection key must also disable the full overlap of the signal in the rear.

21.5 Extent of Worksite

The limits of each worksite area shall be identified by signs at the respective locations. The sign shall give the notations 'Worksite' and the kilometrage, with black writing on a white background.

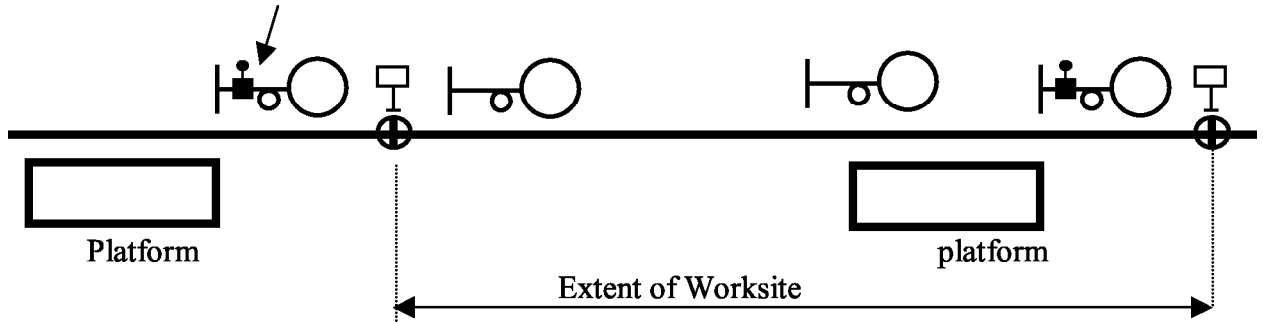
Each start may or may not be the finish location of the previous one.

The extent of any work area shall not exceed 5km, unless specially approved due to the particular site conditions. A risk assessment of any altered arrangements must be performed to determine the alternative arrangement and ensure all other configuration aspects (such as Safeworking Rules) are addressed.

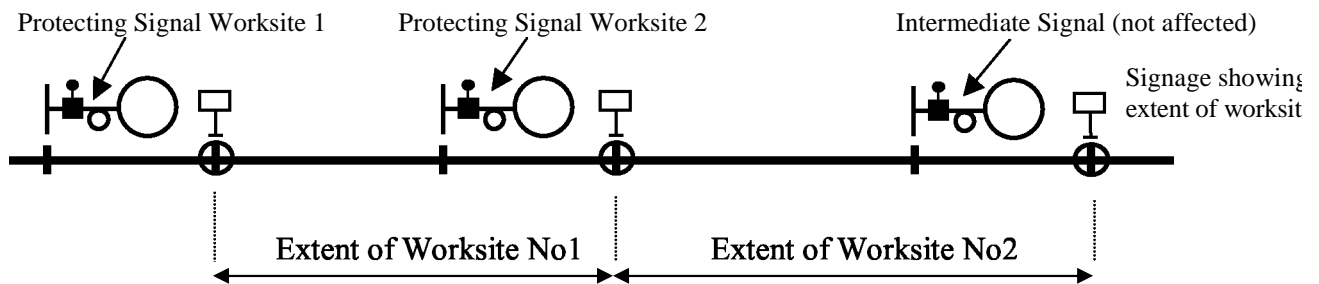
21.6 Worksite Protection Using Signals

Scenario 1 City underground signalling:

Worksite protection key box



Scenario 2 Metropolitan / Country signalling



Example Sign