

SPAD Risk Management

GUIDELINE



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Glossary of Abbreviations and Acronyms

Abbreviation/Acronym	Description
ARTC	Australian Rail Track Corporation
ATSB	Australian Transport Safety Bureau
ATP	Automatic Train Protection
CORS	Confidential Observation of Rail Safety
CMS	Competence Management System
CRC	Cooperative Research Centre
ETCS	European Train Control System
HFESA	Human Factors and Ergonomics Society of Australia
ONRSR	Office of the National Rail Safety Regulator
PFA	Psychological First Aid
ISO	International Standards Organisation
ITSR	Independent Transport Safety Regulator (NSW)
NTC	National Transport Council
RIFOD	Returned In Face Of Driver
RSSB	Rail Safety Standards Board (UK)
RTO	Rail Transport Operator
SFAIRP	So Far As Is Reasonably Practicable
SPAD	Signal Passed at Danger
SMS	Safety Management System
TPWS	Train Protection Warning System

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1. Introduction

The purpose of this Guideline is to provide examples of good practice in preventing and mitigating the risks arising from a Signal Passed at Danger (SPAD) and to improve the understanding of SPAD risk. Rail Transport Operators (RTOs), which includes both rolling stock operators and rail infrastructure managers, may benchmark themselves against the good practice presented within this Guideline. Good practices have been presented in a scaled maturity model style to separate what is basically a minimal approach from the more sophisticated approaches indicative of a mature safety management system.

It is recognised that SPAD risks will vary between networks and RTOs and hence this Guideline is not intended to mandate any particular practices to manage SPAD risk. It is intended to share good practice and solutions within the rail industry. Effective management of SPAD risks will also assist in managing a range of other rail safety risks. The same precursors to SPADs can be factors leading to many other risks and it follows that good SPAD performance is a sound indicator of good safety management generally.

This document identifies a range of resources that may be accessed for further information about SPADs and SPAD risk management. In particular, the Independent Transport Safety Regulator (ITSR), the New South Wales arm of the Office of the National Rail Safety Regulator (ONRSR) produced a SPAD Guideline that provides tools and detailed guidance which can supplement work in this Guideline¹.

Whilst the guidance herein focuses on the management of SPAD risk specifically, RTOs must consider SPAD risk management as part of their broader operational and safety risk portfolio and risk management strategy. This approach supports the principles of So Far As Is Reasonably Practicable (SFAIRP), which ensures that the legislated duty of care obligations of RTOs do not require safety at any cost. This Guideline also responds directly to the items in RISSB's *Hazard Register* relating to SPADs, particularly hazards 5.9.1.1 through 5.9.1.42 as well as 5.7.1.26, 5.7.1.27, 6.11.1.13, 9.13.1.4, 9.52.1.1. Refer to the *Hazard Register* for further details (RISSB, December 2013).

1.1 Intended audience

This Guideline is designed for:

- Rolling stock operators, and
- Rail infrastructure managers, including:
 - Those involved in shaping strategic organisational response SPAD management
 - All staff involved in the development and implementation of SPAD management strategies and those affected by SPADs.

1.2 How to use this Guideline

The Guideline is designed to be used by railway professionals seeking to improve the way in which they manage and prevent SPAD occurrences. It provides illustrated examples of international best practice in relation to the management and prevention of SPADs.

The remainder of this Guideline is structured as follows:

- Chapter 2 – background information about SPADs: why they occur, associated risks, classification and costs;
- Chapter 3 – common contributing factors that lead to SPADs;
- Chapter 4 – the development of SPAD risk management strategies;
- Chapter 5 – measures to prevent SPADs occurring;
- Chapter 6 – the importance of post SPAD incident management and data capture;
- Chapter 7 – examples of joint initiatives that can enhance SPAD management;
- Chapter 8 – a brief discussion on managing the implementation of new technology; and,
- Chapter 9 – suggested further reading.

Footnote: ¹ITSR, 2011, *Managing signals passed at danger*.