GUIDELINE

# Rail Traffic PAE Risk Management

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The Operations Standing Committee verified that RISSB's accredited process was followed in developing the product, before the RISSB Board approved the document for publication.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Guideline. Their efforts ranged from membership of the Development Group through to individuals providing comments on a draft of the product during the open review.

I commend this Guideline to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.
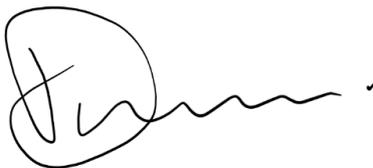
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Rail Industry Safety and Standards Board

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Document details

First published: 11 March 2014

Document history

Publication Version	Effective Date	Reason for and Extent of Change(s)
2025	4 April 2025	This document has been reviewed to ensure it remains relevant and applicable. The latest review assessed the content, confirming that while updates were made to align with current industry practices, technologies, and regulatory requirements, the original authorship and copyright have been acknowledged as required.

Approval

Name	Date
Rail Industry Safety and Standards Board	4 April 2025

Copyright

Objective

For the purpose of this Guideline, the risk that is being managed is proceed authority exceedance (PAE) which includes:

(a)   signals passed at danger (SPAD);

(b)   exceeds limit of authority;

(c)   stop signal overruns; and

(d)   enters block without authority.

This Guideline is applicable to any rail traffic and aims to:

(e)   provide guidance and understanding to prevent PAE occurrences;

(f)   mitigate the risks arising from a PAE;

(g)   improve knowledge of PAE risk; and

(h)   promote consideration of the different types of PAE and associated risk to rail transport operators (RTOs).

For ease of readability, the term proceed authority exceedance, or PAE, throughout the document can also mean the more familiar and commonly used reference of SPAD.

RTOs, which includes both rolling stock operators (RSOs) and rail infrastructure managers (RIMs), may refer to the good practice presented within this Guideline to inform, review, update and develop their safety management system (SMS) in relation to PAE risk management.

Lead performance indicators suggest that other safeworking risks could be mitigated through good management of PAEs, making for an overall safer system.

It is recognised that PAE risks vary between RTOs and so this Guideline is not intended to mandate any particular practice to manage PAE risk.

Whilst the guidance herein focuses on the operational management of PAE risk specifically, RTOs should consider PAE risk management as part of their broader operational and safety risk management strategy. This Guideline does not provide for systemic PAE risk management from the engineering domain. Users should also refer to AS 7474, *Rail industry – System safety* to manage PAE risks from the systems approach as appropriate.

This Guideline also identifies a range of resources that may be accessed for further information relating to PAE risk management.

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Figures

Tables

Section 1   Scope and general

1.1   Scope

The Guideline is designed to be used by RTOs by providing insight into the causes of PAEs and giving examples of good practice in relation to their management and prevention.

While this Guideline does not seek to consider every circumstance in which a PAE could occur and to describe the many forms of risk mitigation, the information herein may be used by RTOs to identify and implement good practice.

This document is not specifically intended to cover sugar cane railways and heritage railways operating on private or isolated railways, but elements from this Guideline do have application and may be applied to such systems as deemed appropriate by their RTO.

1.2   Referenced documents

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document:

- AS 7457, *Management of SPADs and Proceed Authority Events*
- AS 7470, *Human Factors Integration and Technical Requirements for Rail Engineering Projects*
- AS 7474, *Rail industry – System safety*
- AS 7631, *Railway infrastructure – Sighting*
- AS 7660, *Radio Communication in the Rail Corridor*
- AS 7721, *Lineside Signals, Indicators and Signal Signage*
- ISO 31000, *Risk Management – Guidelines*
- RISSB Australasian SPAD Classifications
- *Accident Analysis and Prevention article psychological factors for driver distraction and inattention in the Australian and New Zealand rail industry* (Naweed, 2013b).
- *RISSB Code of Practice – Railway Operations – Rail Investigations*
- *RISSB Code of Practice – Safety critical communication*
- *Guideline Integration of Human Factors in engineering design*
- *ITSR Managing signals passed at danger*
- *ONRSR Guideline Investigation Reports by Rail Transport Operators*
- *ONRSR Guideline Notifiable Occurrences Reporting Requirements 2022*
- *ONRSR Guideline Safety Management System*
- *ONRSR National Rail Safety Data*
- *Rail Safety Investigation Code of Practice*
- *Throwing good money after SPAD? Exploring the cost of signal passed at danger (SPAD) incidents to Australasian rail organisations* (Naweed, 2018).
- *Hurry Up and Wait: Danger Signals in the Rail Environment* (Naweed, 2013a)
- *Psychological factors for driver distraction and inattention in the Australian and New Zealand rail industry* (Naweed, 2013b).
- *ATSB investigation report RO-2017-010*
- *TAIC investigation report RO-2018-102*