AS 7644:2015

Australian STANDARD®

Rail Corridor Access

RISSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Infrastructure Standard

Rail Corridor Access Preview

This Australian Railway Standard AS 7644 Rail Corridor Access was prepared by the RISSB Development Group. It was signed off by the Development Group and the Infrastructure Standing Committee in June, 2015 and subsequently by the Development Advisory Board (DAB) in June, 2015. The DAB confirmed that the process used to develop the standard was in accordance with the RISSB accredited development process. On June 19, 2015 the RISSB Board approved the Standard for release.

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Chief Executive Officer
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The following organisations were represented on the RISSB Development Group:

ASA TfNSW	ATRS	Aurizon
Brookfield Rail	DPTI SA	Pacific National NSW
PTA WA	Queensland Rail	Rail CRC
Rio Tinto	RTBU	

This standard was issued for an open review and was subject to a combined workshop. It was also independently validated before being signed off and the approvals granted.

RISSB wish to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the committees and through the open review periods.

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RISSB welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at rissb@rissb.com.au or write to Rail Industry Safety and Standards Board, PO Box 4608, Kingston, ACT 2604.

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Notice to Users

This RISSB product has been developed using input from rail experts from across the Rail Industry and represents good practice for the industry. The reliance upon or manner of use of this RISSB product is the sole responsibility of the user who is to assess whether it meets their organisation's operational environment and risk profile.

Justification

Specification of Standard

This Standard describes the requirements for the management of access to rail networks including non-operational lines in conjunction with applicable National Rules and Procedures. The Standard has included reference to the following documents:

(a) AS 4292.1 Railway safety management - general requirements,

(b) AS 4687 Temporary fencing and hoardings,

(c) AS 4799 Installation of underground utility services and pipelines within railway boundaries,

(d) AS 5100 Bridge Design,

(e) AS/NZS 3845 Road Safety Barrier Systems,

(f) AS/ISO 31000 Risk Management,

(g) AS 7630 Railway Infrastructure - Track Classification (RISSB),

(h) AS 7658 Railway Infrastructure - Railway Level Crossings (RISSB),

(i) Glossary of Railway Terminology (RISSB),

(j) Work Health and Safety Act 2011 (Cwlth),

This standard is not intended to cover urban on-street tramway or light rail networks, cane railways, or heritage railways operating on private reservation, but the relevant Railway Infrastructure Manager may apply items from this Standard to such systems as deemed appropriate.

Objectives of Standard

The Standard includes the requirements for managing access to the rail corridor to control the level of risks posed by intentional or unintentional trespass or authorised access.

Recommended control requirements shall appropriately reflect site features, type of access and activities by the involved parties, including:

(a) operations personnel and vehicles,

(b) maintenance personnel and vehicles,

(c) construction personnel and vehicles,

(d) third party services personnel and vehicles,

(e) travelling public (passengers), etc.

The 2014 RISSB Products Survey reported an average reduction of 11% in safety risks that may result from adoption of RISSB products in the infrastructure products category (AS7644

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Standard was not included in the survey because it had not been published at that stage). Based on these assessments, it is broadly concluded that adoption of the AS7644 Standard is likely to lead to a significant reduction in the risks associated with rail incidents e.g. collisions with trains, suicides.

Identification of Benefits

An important indicator of the benefit of the AS 7644 Rail Corridor Access Standard is the level of industry demand for this standard, which is measured by its likely adoption rate. While the AS7644 Standard was not included in the 2014 RISSB Products Survey, 15 infrastructure standards and the Code of Practice were listed. The 2014 survey results indicate that adoption rates for RISSB infrastructure products are high, currently at around 38% and likely to increase in future to 78% of potential users[1]. This result, together with the fact that AS7644 Standard helps to complete existing suite of products, suggests that the industry demand for the standard and its adoption rate following introduction will likely be high.

Another important indication of the benefit of AS7644 is the estimated benefits of RISSB infrastructure products to their users. The 2014 Products Survey reported the following possible reductions in risks and operating costs for adopting members of infrastructure products: 11% for safety risk, 14% for asset costs, 11% for operational costs and 6% for training costs. In addition, users rated potential operational improvement at 5.4 (from 1 to10). Based on these estimates and as AS7644 Standard also helps to complete an existing suite of RISSB infrastructure products, its adoption is expected to lead to significant benefits.

Valuation of the Benefit

The average annual economic burden of railway safety incidents during the past 8 years was estimated to be approximately $360.1 million. The safety incidents included in this estimation are Signals Passed at Danger (SPADs), signal restored, level crossing collisions – persons and vehicles, load irregularity, fatalities and serious injuries (excluding level crossing) and collisions (trains, rolling stock, infrastructure)[2]. The significant amount of economic burden associated with safety incidents in Australia means that a small percentage improvement in safety performance can translate into a significant economic benefit.

The quantification of the benefit that would be obtained from AS7644 Rail Corridor Access Standard is estimated to be $2.4 million per year or present value of $16.6 million over the next 10 years. This estimate was derived from the 2014 RISSB products survey which reported that the estimated benefit of the 16 infrastructure standards for rail safety performance, asset cost savings, operational cost savings and workforce training costs were $3.2 million, $16.8 million, $27.3 million and $100K respectively. In total, the total benefit for adopting the 16 infrastructure standards was $47.3 million per year.

Cost of Implementation

Adoption of the AS 7644 Standard is not expected to impose significant additional cost on the industry, with Rail Infrastructure Managers expected to update the requirements in their risk management strategy progressively.

[1] Potential users do not include those in other sectors of the rail industry that do not use of infrastructure standards
[2] Strategex estimates based on 'Cost Benefit Analysis of RISSB and its products' report by AECOM ("CBA of RISSB Products (2012) ").

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Broader Industry and Economic Benefits

Development of a more complete suite of RISSB infrastructure products will promote their recognition and further adoption by industry members which, leads to greater harmonisation in the rail industry. A more harmonised national rail industry will be more cost-efficient as well as being more competitive with other modes of transport, in particular, road transport, which, in turn, brings the following benefits: lower equipment cost, lower operating costs and cost competitive rail. Induced mode transfer (shifting passengers and freight from road to rail) can result in GHG reductions and road decongestion.

The CBA of RISSB Products Report (2012) estimated the benefit cost ratio of investment in RISSB products for the industry at approximately 17 to 1 (i.e. for every $1 spent, the industry receives $17 of benefits). In addition, the broader economic benefits to the national economy have been estimated at between $92-142 million per year.

Release of the AS7644 Rail Corridor Access Standard can deliver benefits to its individual users as well as contributing to the overall rail harmonisation process.

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Document Control

Identification

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Approval

Name	Date
Development Advisory Board (DAB)	15/06/2015
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Standard Change Procedures

RISSB maintains the master for this document and publishes the current version on the RISSB website.

Any changes to the content of this publication require the version number to be updated.

Changes to this publication must be approved according to the procedure for developing management system documents.

RISSB will identify and communicate changes to this publication.

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Preface

The aim of this Standard is to outline requirements that encourage rail organisations to adopt a whole-of-life approach to the management of rail corridor access. This approach includes the requirements in relation to rail corridor access in terms of design, supply, construction, and maintenance of access controls for a range of operational railways in Australia.

1 Introduction

1.1 Purpose

This Standard describes the requirements for the management of access to rail networks including non-operational lines in conjunction with applicable National Rules and Procedures.

1.2 Scope

This Standard covers rail networks classified in AS/RISSB 7630 Railway Infrastructure - Track Classification

RISSB does not intend for this standard to cover urban on-street tramway or light rail networks, cane railways, or heritage railways operating on private reservation, but the relevant Railway Infrastructure Manager may apply items from this Standard to such systems as deemed appropriate.

This standard includes requirements for managing access including:

(a) operations personnel and vehicles,

(b) maintenance personnel and vehicles,

(c) construction personnel and vehicles,

(d) third party services personnel and vehicles,

(e) travelling public (passengers), etc.

1.3 Compliance

There are two types of control contained within RISSB Standards:

(a) mandatory requirements

(b) recommended requirements

Each of these types of control address hazards that are deemed to require controls on the basis of existing Australian and international Codes of Practice and Standards.

A **mandatory** requirement is a requirement that the standard provides as the only way of treating the hazard.

Mandatory requirements are identified within the text by the terms shall or must.

A **recommended** requirement is one where the standard recognises that there are limitations to the universal application of the requirement and that there may be circumstances where the control cannot be applied or that other controls may be appropriate or satisfactory, subject to agreement with the Rail Infrastructure Manager and/or Rail Safety Regulator.

Recommended requirements are to be considered when compliance with the standards is being assessed.

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