

AS 7636:2022



## Railway structures

**RiSSB**  
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Infrastructure Standard



This Australian Standard® AS 7636 Railway structures was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

ARTC

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KiwiRail

Rio Tinto

Sydney Trains

Queensland Rail

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TfNSW

The Standard was approved by the Development Group and the Infrastructure Standing Committee in February, 2022. On March 01, 2022 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard

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

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.



**Deb Spring**  
Chief Executive Officer  
Rail Industry Safety and Standards Board

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This Standard was prepared by the Rail Industry Safety and Standards Board (RISSB) Development Group AS 7636 Railway structures. Membership of this Development Group consisted of representatives from the organisations listed on the inside cover of this document

## Objective

The objective of this Standard is to provide the minimum requirements for the design, manufacture, construction, maintenance, decommissioning and disposal of rail structures. It is not intended to supplant higher performance standards based on local experience and good engineering practice, which may be contained in structural and material standards, codes, guidelines, and procedures of individual rail organisations.

The intent of application of this Standard is that it results in consistent treatment of rail structures across the Australian and New Zealand rail industry.

## Compliance

There are four types of provisions contained within Australian Standards developed by RISSB:

1. Requirements.
2. Recommendations.
3. Permissions.
4. Constraints.

**Requirements** – it is mandatory to follow all requirements to claim full compliance with the Standard. Requirements are identified within the text by the term 'shall'.

**Recommendations** – do not mention or exclude other possibilities but do offer the one that is preferred. Recommendations are identified within the text by the term 'should'.

Recommendations recognise that there could be limitations to the universal application of the control, i.e. the identified control is not able to be applied or other controls are more appropriate or better.

**Permissions** – conveys consent by providing an allowable option. Permissions are identified within the text by the term 'may'.

**Constraints** - provided by an external source such as legislation. Constraints are identified within the text by the term 'must'.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities or interfacing organisations where the risk may be shared.

*This Standard includes a commentary on some of the clauses. The commentary directly follows the relevant clause, is designated by 'C' preceding the clause number and is printed in italics in a box. The commentary is for information and guidance, it does not form part of the requirements and recommendations of this Standard.*



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## 1 Scope and general

### 1.1 Scope

**1.1.1** This Standard provides a whole-of-life approach to rail structures used in Australian rail operations, and covers:

- (a) general management requirements;
- (b) design;
- (c) manufacturing;
- (d) construction and commissioning;
- (e) monitoring and maintenance;
- (f) decommissioning and disposal.

**1.1.2** This Standard applies to:

- (a) heavy rail networks, and can be applied to light railway and cane railway networks;
- (b) new structures, and can be applied to existing structures as determined by the rail infrastructure manager (RIM);
- (c) all structures adjacent to, below and above railway track where they could affect or be affected by rail operations;
- (d) all gauges.

**C1.1.2** *Commentary*

*The core knowledge on which this Standard has been developed is based upon narrow (1067 mm), standard (1435 mm) and broad gauge (1600 mm) however can be applied to other gauges as appropriate.*

**1.1.3** Railway structures addressed in this Standard include the following asset classes and structure types, as defined in Appendix A.1:

- (a) bridges;
- (b) culverts and subways;
- (c) tunnels;
- (d) retaining walls;
- (e) miscellaneous structures.

**1.1.4** Typical railway structure material types that are addressed in this Standard include:

- (a) timber;
- (b) steel (including wrought iron);
- (c) concrete;
- (d) brick and masonry;
- (e) other miscellaneous materials (e.g. fibre reinforced plastics).