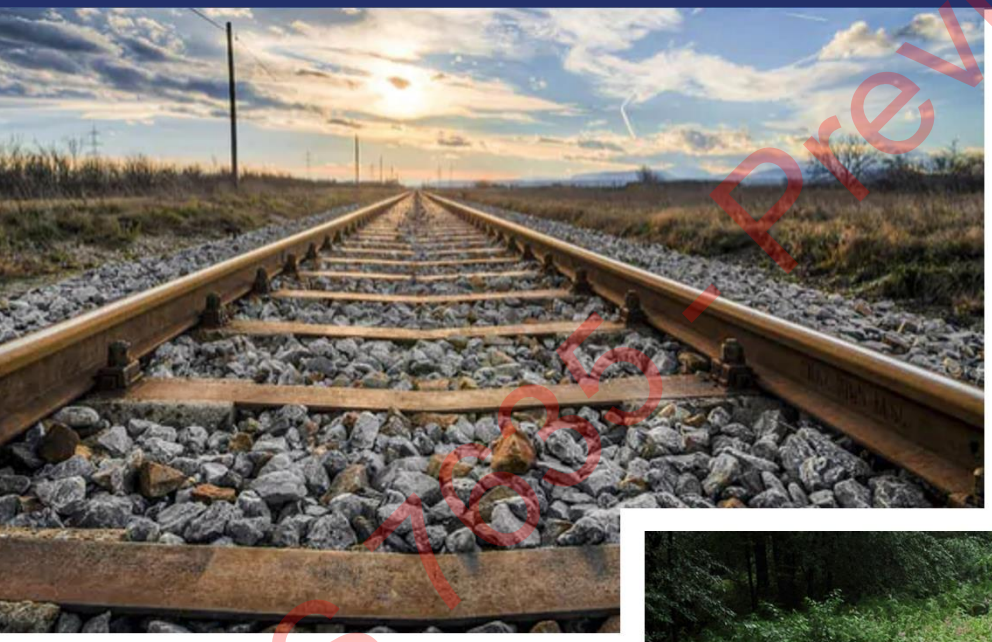
AS 7635:2023

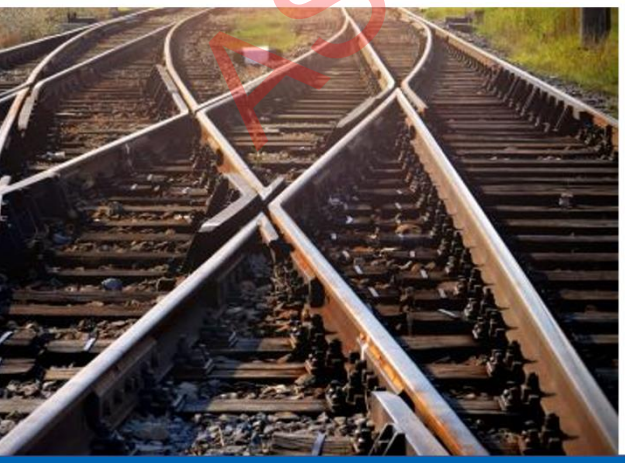
Australian STANDARD®

Track Geometry

RISSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Infrastructure Standard





This Australian Standard® AS 7635 Track Geometry was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Queensland Rail (QR)
Transport for NSW (TfNSW)
Bradken
Public Transport Authority of Western Australia (PTA)
Kiwi Rail
Australian Rail Track Corporation (ARTC)
John Holland Group (JHG)
Aurizon
Monash University (MIRT)
Central Queensland University (CQU)

The Standard was approved by the Development Group and the Infrastructure Standing Committee in June, 2023. On June 21, 2023 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently reviewed 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.

Damien White
Chief Executive Officer
Rail Industry Safety and Standards Board

Keeping Standards up-to-date

Australian Standards developed by RISSB are living documents that reflect progress in science, technology and systems. To maintain their currency, Australian Standards developed by RISSB are periodically reviewed, and new editions published when required. Between editions, amendments may be issued. Australian Standards developed by RISSB could also be withdrawn.

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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.

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Track Geometry

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2013	August 15,2013	First publicaton

Approval

Name	Date
Rail Industry Safety and Standards Board	21/06/2023

Copyright

This Standard was prepared by the Rail Industry Safety and Standards Board (RISSB) Development Group AS 7635 Track Geometry. 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 specify track geometry standards for design, construction, commissioning, monitoring, maintenance and modification of rail tracks in Australia

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.

RISSB Standards address known hazards within the railway industry. Hazards, and clauses within this Standard that address those hazards, are listed in Appendix A.

Appendices - in RISSB Standards may be designated either "normative" or "informative". A "normative" appendix is an integral part of a Standard and compliance with it is a requirement, whereas an "informative" appendix is only for information and guidance.

Contents

1 Scope and general 5
1.1 Scope 5
1.2 Normative references 5
1.3 Terms and definitions 5
1.4 Abbreviations 7
2 Track design 8
2.1 General 8
2.2 Design Parameters 8
2.3 Track gauge 9
2.4 Horizontal alignment 10
2.5 Vertical alignment 12
2.6 Length of tangent track between curves 14
2.7 Track geometry at platforms 14
2.8 Dual gauge tracks 14
2.9 Basic design 14
3 Construction 15
3.1 New track 15
3.2 Serviceable materials 15
3.3 Additional restrictions at worksites 15
4 Monitoring and maintenance 16
4.1 Inspection – frequency and tasks 16
4.2 Assessment 18

Appendix Contents

Appendix A Hazard register 21
Appendix B Design parameters (see section 2.2) 22
B.1 Narrow gauge basic design parameters 22
B.2 Standard gauge basic design parameters 23
B.3 Broad gauge basic design parameters 24
B.4 New track construction tolerances (see section 3.1) 25
Appendix C Guidelines 26
C.1 Geometry defects – threshold and responses for std. gauge plain line track 26
C.1.1 Response category table for standard gauge 27
Appendix D Track Quality Indices 28
Appendix E Bibliography 29

1 Scope and general

1.1 Scope

This Standard covers rail networks classified in AS 7630, with the exception of high speed rail.

This standard is intended to cover the design, inspection, and maintenance response times of the track geometry.

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

This Standard is not intended for use in the design and operation of high speed rail networks, monorail networks, or miniature or amusement park railways.

Geometric defects of welds and corrugations in rails are covered in AS 7640.

Turnouts are covered in AS 7642 & AS1085:21.

1.2 Normative references

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 1085.21 Railway track material turnout switches and crossing
- AS 7502 Road Rail Vehicles
- AS 7509 Rollingstock – Dynamic Behaviour
- AS 7630 Railway Infrastructure – Track Classification
- AS 7640 Railway Infrastructure – Rail Management
- AS 7642 Turnouts and other special trackwork

Note:
Documents for informative purposes are listed in Appendix D – Bibliography.

1.3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

1.3.1
bends

bends occur where two tangent tracks meet at near 180 degrees without an intermediate curve.

1.3.2
rail cant

measure of the inclination of the rail towards the track centre expressed as 1 in XX

1.3.3
applied superelevation

superelevation adopted for a particular curve.