

Railway Group Standard

G/RT7016

Issue Five

Date March 2014

Interface between Station Platforms, Track and Trains

Synopsis

This document mandates requirements for the design and maintenance of station platforms for their safe interface with trains.

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Railway Group Standard**GI/RT7016****Issue** Five**Date** March 2014**Interface between Station
Platforms, Track and Trains****Issue record**

Issue	Date	Comments
One	February 2004	Original document.
Two	December 2007	Replaces issue 1, and incorporates some requirements from GI/RT7014, issue 1, Infrastructure Requirements at Stations, GI/RT7010, issue 1, Lighting of Railway Premises and GE/RT8060, issue 1, Technical Requirements for Dispatch of Trains from Platforms.
Three	December 2009	Small scale changes replaces issue 2 The requirement in respect to platform cross fall in section 11.1.3 has been replaced with the text based on the previous standard GI/RT7014. Other parts of GI/RT7016 issue 2, are unchanged from the previous issue.
Four	September 2010	Small scale change replaces issue 3 Section 2.2 Vertical track alignment through station platforms deleted (requirement withdrawn).
Five	March 2014	Replaces issue 4, the requirements for platform extensions on curves, platform width, and cross fall have been revised. Requirements for extending the length of existing platforms have been deleted. Requirement for height of platform recess included. Appendices A, B, C and D have been moved to GI/GN7616 and Appendix E to RIS-7702-INS

Amended or additional parts and / or sections of revised pages have been marked by a vertical black line in the adjacent margin.

Superseded documents

The following Railway Group documents are superseded, either in whole or in part as indicated:

Superseded documents	Sections superseded	Date when sections are superseded
GI/RT7016, issue 4, Interface between Station Platforms, Track and Trains	All	07 June 2014

GI/RT7016 issue 4 ceases to be in force and is withdrawn as of 07 June 2014.

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Supply

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Railway Group Standard**GI/RT7016****Issue** Five**Date** March 2014**Interface between Station
Platforms, Track and Trains****Part 1 Purpose and Introduction****1.1 Purpose**

- 1.1.1 This document mandates requirements for the design and maintenance of station platforms for their safe interface with track and trains.

1.2 Introduction**1.2.1 Background**

- 1.2.1.1 This section (1.2) is a descriptive introduction to this document. It does not contain mandatory requirements, but draws attention to an important point about alterations (as defined).

1.2.2 Alterations to station platforms

- 1.2.2.1 It is the intention of this document that alterations (as defined) to stations contribute to improving safety, and that alterations (as defined) to platforms contribute to improving safety by the eventual achievement of 'standard' platforms throughout Network Rail managed infrastructure (that is, platforms meeting the requirements of this document). However, this improvement in safety should be achieved without imposing unreasonable costs on the industry.
- 1.2.2.2 'Alteration' is therefore defined as 'the substantial lengthening or rebuilding of all or part of an existing platform and / or an associated structure, or renewal of station equipment or platform furniture, which provides a reasonable opportunity to bring the items concerned into conformity with the requirements of this document'.

1.2.3 Related requirements in other documents

- 1.2.3.1 The following Railway Group Standards contain requirements that are relevant to the scope of this document:
- a) GC/RT5033 sets out the requirements for arrangements to be provided on terminal tracks to arrest a train and protect people, stations and structures from the effects of an overrun.
 - b) GC/RT5021 sets out the requirements for the track system, including the limitations on track cant at stations.
 - c) GC/RT5212 sets out requirements for defining and maintaining clearances to trains.
 - d) GE/RT8270 sets out requirements and responsibilities for the assessment of compatibility of infrastructure and rolling stock. In the context of this document it applies when assessing compatibility between infrastructure and rolling stock, and between infrastructure and infrastructure where the assets concerned are the responsibility of different infrastructure managers. It is therefore relevant when alterations (as defined) to station platforms are proposed, or when an increase in the speed of trains passing on the line adjacent to a station platform is proposed.
 - e) GM/RT2149 sets out requirements for maintaining the operational envelope of rail vehicles. It specifies requirements for rolling stock passenger footstep position and stepping distances.

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1.2.4 Supporting documents

- 1.2.4.1 GI/GN7616 Guidance on Interface between Station Platforms, Track and Trains gives guidance on interpreting the requirements of GI/RT7016, relating to platform geometry and specifically supports Parts 2, 3, 4, 5, 6, 7, 8, 9 and 11.
- 1.2.4.2 RIS-7702-INS Rail Industry Standard for Lighting at Stations provides a standard on lighting at stations, for the infrastructure managers responsible for managing and operating stations, to use if they so choose.

1.3 Approval and authorisation of this document

- 1.3.1 The content of this document was approved by Infrastructure Standards Committee on 13 November 2013.
- 1.3.2 This document was authorised by RSSB on 18 December 2013.

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Part 2 Location of new platforms**2.1 Horizontal track alignment through station platforms**

- 2.1.1 Station platforms shall be located on straight track unless the particular geographical characteristics of the potential sites and the characteristics of the railway infrastructure at the proposed location of the platform do not provide a reasonable opportunity for achieving this.
- 2.1.2 Station platforms shall not be located on horizontal curves with radii less than 1000 m.
- 2.1.3 It is permitted for platform extensions to be located on horizontal curves with radii less than 1000 m but not less than 500 m.
- 2.1.4 Before station platforms are located on curved track, consideration shall be given to the following:
 - a) Train to platform stepping distances, taking the types of train likely to call at the platform into account.
 - b) Visibility (either direct, by means of CCTV screens, or by mirrors) along the length of trains for train crew and station staff responsible for dispatching trains.
- 2.1.5 GC/RT5021 requires that the normal limiting design value for cant adjacent to a station platform is 110 mm, with an exceptional limiting design value of 130 mm.

2.2 Vertical track alignment through station platforms

- 2.2.1 GI/GN7616 Guidance on Interface between Station Platforms, Track and Trains gives guidance on vertical track alignment through station platforms.

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Part 3 Standard platform position relative to adjacent track

3.1 Platform height

- 3.1.1 For new platforms and alterations (as defined) to existing platforms, the height at the edge of the platform shall be 915 mm (within a tolerance of +0 mm, -25 mm).
- 3.1.2 Where a new platform or an alteration (as defined) to an existing platform abuts an existing platform, any discrepancy in height of the platform shall be gradually tapered into the existing platform. The transition gradient shall not exceed 1:20.

3.2 Platform offset

- 3.2.1 For new platforms and alterations (as defined) to existing platforms, the platform edge shall be the minimum distance from the adjacent track (within a tolerance of +15 mm, -0 mm) consistent with the lower sector structure gauge set out in GC/RT5212 Appendix 1.
- 3.2.2 For most platforms, curves with radii greater than or equal to 360 m require a platform offset of nominally 730 mm (within a tolerance of +15 mm, -0 mm). GC/RT5212 sets out exceptions where Class 373 trains or 2.6 m wide containers are required to pass the platform. GC/RT5212 also sets out requirements where the curve radius is less than 360 m.
- 3.2.3 Where a new platform or an alteration (as defined) to an existing platform abuts an existing platform, any discrepancy in alignment of the platform shall be removed over a length commensurate with complete platform coper unit lengths, but at a rate not steeper than 1:80.

3.3 Footsteps of new trains relative to standard platform position

- 3.3.1 GM/RT2149 sets out the requirements for footsteps for passenger use on new trains relative to a platform positioned in accordance with sections 3.1 and 3.2.

3.4 Increased stepping distances associated with achieving the standard platform position

- 3.4.1 Not all footsteps of existing trains are compliant with the nominal footstep height set out in GM/RT2149.
- 3.4.2 Not all existing platforms are compliant with this document.
- 3.4.3 Setting the position of a platform edge to meet the requirements of sections 3.1 and 3.2 could therefore result in the stepping distances quoted in section 3.3 being exceeded in the case of some trains that do not meet the current requirements of GM/RT2149.
- 3.4.4 Where this is the case, measures to protect the safety of passengers when boarding or alighting from trains scheduled to call at the particular platform (or section of platform) shall be put in place before the usable platform length is brought into use.