



Certificate of Derogation from a Railway Group Standard

(in accordance with part 6 of the Railway Group Standards Code)

1. Type of deviation

Derogation

Deviation Number: **12/180/DGN**

2. Details of applicant:

Network Rail (Investment Projects),
Desk 054, Elder Gate, Milton Keynes, MK9 1EN

The Quadrant: MK, Furzton, Floor 3,

3. Your reference number:

Tracker No. 11219

4. Status of applicant:

Infrastructure Manager, RSSB Member

5. Title of certificate:

Cardiff Area TORR Release Conditions.

6a. Details of Railway Group Standard (RGS):

RGS Number:	Issue No:	Issue Date:	Title:
GK/RT0063	One	November 1996	Approach Locking and Train Operated Route Release

6b. RGS clause(s):

5.3

6c. RGS clause requirements:

"5.3 Additional Requirements for Running Movements

One additional sequence of train detection (TISP – Train in Section Proving) or condition (over and above that required for release of approach locking) shall be satisfied to initiate the release of the route in addition to the requirements of section 5.2 if:

- the route or any route conflicting with it controls passenger movements;

or

- the speed over any portion of the route which conflicts with other routes exceeds 15 mph;

or

- the speed of any conflicting route at the point of conflict exceeds 15 mph.

The sequence or condition shall be one of the following;

- occupancy of two adjoining track circuits in the direction of travel followed by clearance of the first;

or

- occupancy of three adjoining track circuits in the direction of travel followed by sequential clearance of two track circuits;

or

- sequential train detection employing a treadle if track circuits are insufficient in number or are of such a length that the initiation of TORR would be unreasonably delayed;

or

- proof of no train approaching the signal at the time TORR is to be initiated.

All sequences or conditions shall include checks wherever practical to ensure that an irregular sequence of events has not occurred between successive steps. If an irregular sequence of events is detected, the operation of TORR for that signal shall be inhibited for the current movement.”

7. Scope of deviation:

Cardiff Area Signalling Renewal (CASR) project area. Routes without required number of track sections.

8. Impacts of complying with the current RGS requirement:

There are a number of routes on the project where the paucity of train detection sections would require additional detection elements solely for the purpose of TORR.

Provision of these sections would incur additional costs for provision and ongoing maintenance. Also, additional track sections would increase the likely hood of any secondary risks that may occur in the event of failure of the additional equipment.

9. Proposed alternative actions:

This is proposed for routes on the project where the paucity of detection elements makes it impractical to have separate sequences for signal disengagement, approach locking release and TORR.

In most instances, an additional sequence of train detection will be used to initiate TORR. However, a sequence of two track sections will be used if an additional track section would be required for compliance with GK/RT0063, for TORR sequence only.

This application follows a similar approved deviation 10/220/DGN (tracker 7819), applied to modular projects that use similar train detection technology.

10. Impacts of the alternative actions:

It is understood that the main purpose of the additional sequence was to address risks associated with potential common mode failures on track circuits sharing IRJ's.

The CASR project is using Frauscher FAdC axle counter train detection that significantly reduces the risk of spurious operation that might satisfy the TISP and TORR conditions.

See also attached HAZID which was conducted by the modular project. This has been reviewed and remains valid for the CASR application because the traffic levels were not deemed a mitigation.

11. What other options have been considered?

Additional track sections were considered, but due to increase cost of provision and ongoing maintenance, coupled with overall increase reliability (due to less failure point), this option was not considered reasonable.

It was considered that, solely for the purpose of TORR, the provision of axle counter technology already significantly reduces the likely hood of spurious operations that might satisfy TORR.

12. Consultation with affected parties

This is considered to be a single duty holder responsibility.

13. Additional actions/observations:

Upon receipt, the applicant is required to identify affected, interfacing parties and copy this certificate, together with supporting information, to those parties.

Attachment:

- HAZID report version 1.1 dated 14/12/2010.

14. Method of elimination:

N/A

15. Start and end date:

N/A

16. Signature of applicant:

(Signals), Head of Signal Engineering

Date of application:

02/10/2012

17. Lead Standards Committee details:**Name of Committee:**

Control Command and signalling

Date of meeting

08/11/2012

Minute reference:

12/CCS/11/225

Authorised by:

Signed by Jeff Allan on 27/11/2012

Date of Authorisation:

27/11/2012

Jeff Allan

Head of Delivery, Control Command & Signalling, and Energy