



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: **12/209/DGN**

2. Details of applicant:

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

The Quadrant: MK, Furzton, Floor 3,

3. Your reference number:

Tracker No. 11169

4. Status of applicant:

Infrastructure Manager, RSSB Member

5. Title of certificate:

West Hampstead Train Approaching Approach Locking Release with Conditional Double Red

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):

Appendix A – A4

6c. RGS clause requirements:

“A4 Proof of No Train Approaching

For running signals, the minimum requirement is for all track sections clear from the signal to the sighting point of the outermost signal in rear which would change from green to a cautionary aspect. This distance may be extended (as far as the first signal not changing aspect) where agreed with Railtrack. This will generally be done to avoid additional track sections being provided solely for the purpose of approach locking release.

For shunting signals, the extent of the approach track sections requiring to be proved clear shall be agreed with Railtrack but shall be not less than 45m (50 yds) (as detailed in section 4.2).”

7. Scope of deviation:

Eight pairs of signals affected in the West Hampstead PSB control area as part of the Midland Mainline Linespeed Improvement Project. Look back arrangements apply to the inner signal approach locking release only.

- Inner WH61 outer WH59 (Down Fast approach to Radlett Junction)
- Inner WH54 outer WH56 (Up Fast approach to Radlett Junction)
- Inner WH84 outer WH86 (Up Fast approach to Harpenden Junction)
- Inner WH112 outer WH114 (Up Fast approach to Leagrave Junction)
- Inner WH134 outer WH136 (Up Fast approach to Flitwick Junction)
- Inner WH143 outer WH141 (Down Fast approach to Bedford South Junction)
- Inner WH156 outer WH158 (Up Fast approach to Bedford South Junction)
- Inner WH162 outer WH164 (Bedford North Junction).

8. Impacts of complying with the current RGS requirement:

To provide a compliant solution would require extending the train approaching look-back for an additional signal section due the requirement for provision of Conditional Double Red (CDR) sequence. The CDR is required as part of the project for SPAD mitigation due to the increase line speeds proposed.

Provision of this additional section, in most cases at West Hampsted PSB area, would involve significant alterations to existing interlocking and lineside infrastructure due to current interlocking boundaries.

Such changes would be substantial and disproportionate to the benefits offered – see attached consultation report.

9. Proposed alternative actions:

It is proposed to retain the current train approaching controls provided in the West Hampsted area.

10. Impacts of the alternative actions:

Impact of the provision of a conditional double red, means that the distant aspects then moving one signal back. See consultation report for full details.

However, the outer signal has an aspect only level of control (designed to extend the influence of the TPWS) and that signal does not require to any additional interlocking provision.

When the junction is not available or replaced, the outer signal will be held at red only until the approaching train has passed a TPWS (OSS) at a position on the approach to the outer signal. Under these circumstances, the outer signal will always clear (therefore effectively acting as a more robust inner junction signal).

Because the outer signal will always clear on the approach of the train, the stopping position of the train is therefore at the same place as it would be prior to the provision of CDR controls.

If the signal was put back, while a driver may be 'surprised' by a reversion, no additional hazard arises because the outer signal will always clear as the train approaches, permitting the train to proceed to the same position at which the driver was planning to stop anyway. The release of locking on the inner signal following a signal reversion will be mitigated by the TPWS provision on the outer signal meaning a train approaching the outer signal to fast will be stopped before the inner signal that was replaced.

It should be noted that the current look back does not prevent a signal being reverted in front of a driver in the event the signaller is required to cancel the route.

11. What other options have been considered?

Provision on full look back was considered in each case, but a consistent application in West Hampstead PSB was considered to be the most ALARP solution as operation to the signaller will then be the same for all CDR controls.

12. Consultation with affected parties

Single duty holder application, see also consultation report attached.

CDR provision has been consulted with TOC/FOC as part of the project SORA process.

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.

Attachments:

- Consultation Report Ref. 1169-ESG-102463 REP CAR 001 v1: St Pancras to Sheffield Line Speed Increase (102463) of November 2012.
- Presentation dated 06/09/2012: St Pancras to Sheffield LSI, Derogation Application – Comprehensive Approach Locking Look Back.

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:

15/11/2012

17. Lead Standards Committee details:

Name of Committee:

Control Command and Signalling

Date of meeting

06/12/2012

Minute reference:

12/CCS/12/253

Authorised by:

Signed by Jeff Allan on 10/01/2013

Date of Authorisation:

10/01/2013

Jeff Allan

Head of Delivery, Control Command & Signalling, and Energy