

Certificate of Derogation from a Railway Group Standard

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

1. Type of deviation

Deviation Number: 12/123/DGN

Derogation

2. Details of applicant:

Network Rail, Milton Keynes, MK9 1EN. The Quadrant: MK, Furzton, Floor 3, Desk 054, Elder Gate,

3. Your reference number:

Tracker No. 10723

4. Status of applicant:

Infrastructure Manager, RSSB Member

5. Title of certificate:

York Station Permissive Controls - Y205, Y211, Y213 Signals.

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

RGS Number:	Issue No:	Issue Date:	Title:
GK/RT0044	One	February 2000	Controls for Signalling a Train onto an Occupied Line

6b. RGS clause(s):

5.3.3

6c. RGS clause requirements:

"5.3.3

The following controls shall be applied to the signal(s) towards which the movement of the Second Train is being made, in order to maintain the First Train at a stand while the Second Train is making its movement, and to prevent reading through by the driver of the Second Train:

- a) The signal(s) is permitted to display a proceed aspect only when the Second Train has stopped or nearly stopped on completion of its movement.
- b) AWS or ATP associated with the signal shall not be permitted to give any indication which conflicts with the requirement for the driver of the Second Train to stop short of the First Train.
- c) The signal(s) shall be replaced to danger as soon as practicable after the front of the First Train passes the signal."

7. Scope of deviation:

York Station; YORKSTH and YORKNTH1 SSI interlocking systems.

Permissive routes as listed below, applying to Platform 11 as we;; as 9 and 10 for the Section 7 routes:

- Y205(C)C1, Y205(C)C2, Y205(C)C3, Y205(C)D1, Y205(C)D2, Y205(C)E
- Y207(C)A, Y207(C)B, Y207(C)C
- Y211(C)C1, Y211(C)C2, Y211(C)C3, Y211(C)D1, Y211(C)D2, Y211(C)E
- Y213(C)C, Y213(C)D
- Y629(S)A, Y629(S)B, Y629(S)C.

8. Impacts of complying with the current RGS requirement:

Adding the full controls to comply would need a significant extension to the SSI equipment as it is currently close to maximum memory capacity. The cost would be disproportionate to the safety benefits.

9. Proposed alternative actions:

It is proposed to partially comply to the current required interlocking controls, and retain current mitigation of Signallers Box Instruction.

Whilst inhibiting the signaller from being able to simultaneously set routes for the first train out and the second train in, the proposed controls will not inhibit the provision of the forward route of the first train before the second train has been proved to a stand, either resulting from signaller action or ARS.

Any timetable change will require a review of the risk assessment.

10. Impacts of the alternative actions:

Controls onto an occupied line are not included in the original set of requirements to which controls in York Station interlocking systems are currently implemented. Existing arrangement have been in place for twenty-two years, while interlocking principles have been further developed, resulting in existing controls not being in line with current standards.

A HAZOP workshop has been convened to assess risk of controls onto an occupied line not being provided in the interlocking. Based on the conclusions of the workshop, the severity of the non-compliance is low, since it is currently mitigated by Signal Box instructions, which reinforce provisions of Rule Book Module TS2 regarding permissive working. Only a violation of these rules would result in a potential collision situation.

The risk of ARS action has been considered and the conclusion is that the risk is low.

There is no precedent for such breach of regulations in York Station. The risk of not providing the controls listed in GK/RT0044 section 5.3.3 is also mitigated by the fact that all permissive movements at York station are timetabled and are non-passenger movements only that are used for the joining of trains, the driver of the second train is proceeding at a cautionary speed having received his movement authority from a position light aspect and is always expecting to come to rest to enable his train to be joined with the first train that is occupying the platform.

When taking into account the above factors, and the provision of the proposed SSI data constructs for controlling permissive movements, it is deemed that the risk is reduced so far as is reasonably practicable.

11. What other options have been considered?

The project considered the following options to regularise the existing temporary non-compliance:

- 1) Bringing the whole interlocking in line with current standards: requirements falls outside the capability of this project, and would require provision an additional interlocking for the York Station area.
- 2) Applying controls onto an occupied line for affected signals and routes only: will generate inconsistencies in behaviour between different areas of the interlocking controlled from the same workstation and will not provide a significant reduction in risk. It is estimated that applying compliant controls for affected signals only will add a further 3.6% to the interlocking memory. The existing interlocking memory is operating at 94.4% with a further 1% planned for stage 5 works; this will bring the final interlocking memory up to 99% of its operating capacity. This will impact on its performance and reliability, and hence safety of the whole York Station Area.

12. Consultation with affected parties

Prior to the investigation of providing additional controls in order to provide partial compliance, a qualitative risk assessment has been undertaken, with participation from train operators, Network Rail Operations, Route Asset Manager and Signalling Design Group and representatives of the SSI data Design Providers for this project.

Upon investigation, it was found that partial compliance could be gained through provision of additional SSI data constructs, within the capacity of the existing interlocking. For completeness, reference to the initial qualitative risk assessment has been retained within this application as elements of that risk assessment remain applicable, to providing additional mitigation when undertaking permissive movements such as existing signalbox instructions and rule book practice.

Railway Undertakings Northern, TPE and East Coast: positive response received.

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:

- Signalling scheme plan version K extracts 1, 2 and 3
- Delta Rail's Signalling and Signalling Control Ref 1883-YHR-TEC-RP-001 Issue 1 dated 11/06/2012: SSI Data Capacity Review York Holgate Remedial Works, York IECC area
- Network Rail's Qualitative Risk Assessment Workshop Report.

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: 25/07/2012

17. Status in respect of National Technical Rules:

GK/RT0044 Issue 1 is not on the list of the proposed NNTRs under the Conventional or High Speed Rail TSIs.

18. Status in respect of National Safety Rules:

GK/RT0044 Issue 1 is not on the list of the proposed National safety Rules under the Conventional or High Speed Rail TSIs.

19. Lead Standards Committee details:

Name of Committee:	Date of meeting	Minute reference:
Control Command and Signalling	16/08/2012	12/CCS/08/157

Authorised by:

Date of Authorisation:

Signed by Jeff Allan on 18/09/2012

18/09/2012

Jeff Allan Head of Delivery, Control Command & Signalling, and Energy