



Certificate of Derogation from a Railway Group Standard

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

1. Type of deviation

Temporary non-compliance

Deviation Number: **13/033/TNC**

2. Details of applicant:

Network Rail (Thameslink Programme),
Floor 3, Desk 054, Elder Gate, Milton Keynes, MK9 1EN

The Quadrant: MK, Furzton,

3. Your reference number:

Tracker No. 11158

4. Status of applicant:

Infrastructure Manager, RSSB Member

5. Title of certificate:

Signal L537 Overlap Length, South Bermondsey Junction. ELR: BTH1.

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

RGS Number:	Issue No:	Issue Date:	Title:
GK/RT0064	One	December 2000	Provision of Overlaps, Flank Protection and Trapping

6b. RGS clause(s):

4.3.1 Table 2

6c. RGS clause requirements:

4.3.1

In TCB areas with colour light signals where it is not reasonably practicable to provide a full overlap for a main or shunt class route, it is permissible, subject to risk assessment (see section 4.9), for the overlap length to be less than that specified in section 4.2, subject to minimum values set out in Table 2.

The overlap lengths quoted in Table 2 represent the absolute minima which are permitted. Wherever reasonably practicable, the reduced overlap length shall be greater than the minimum.

Maximum Permissible/Attainable Speed not Exceeding	Minimum Overlap Distance
... 60 mile/h	135m

7. Scope of deviation:

L537 Signal, South Bermondsey Junction. ELR BTH1.

8. Impacts of complying with the current RGS requirement:

The overlap for L537 signal is currently 119 m with a permitted approach line speed of 60 mph (deficient by 16 m). The South Bermondsey Turnback project is not altering this signal or its overlap length. The project is introducing a turnback facility at South Bermondsey station, providing a new signal L542 (which shares an overlap joint with L537 in the opposite direction), which has resulted in the need to review the adequacy of the overlap.

To move the overlap onto the next track circuit to achieve compliance would require the following works within the existing Westpac Interlocking:

Unconventionally, 537 is an SGM-1 unit and in the majority of cases where facing points are within the overlap of a signal, a GO-1 unit will be used in conjunction with an O-1 unit. The use of the GO-1 unit in conjunction with an O-1 reduces the amount of free wiring required but, in this instance, the original designers have chosen to use an SGM-1 unit and have free wired the swinging overlap control circuitry, which adds complexity to the interlocking. Due to the complexity involved, it would be preferential to change 537 SGM-1 to a GO-1/O-1 configuration which would require additional units and rack space, and significant reconfiguration of the new and existing junction circuitry.

9. Proposed alternative actions:

Retain existing 119 m overlap length, with minimum alterations to Westpac Interlocking.

10. Impacts of the alternative actions:

L537 is fitted with TPWS TSS which is fully effective for passenger trains with 12%G braking at 40 mph (speed at signal).

The sighting on the signal L537 is good with a required reading distance of 291 m and achievable of 330 m (previous signal). It is not a multi-SPAD signal.

11. What other options have been considered?

Other options to achieve compliance would be to introduce a PSR on approach to L537 or move the shared overlap joint. Both these options would have a detrimental affect on the train service. To achieve compliance and resolve the existing deficiency were considered not reasonably practical as the situation will be resolved within eighteen months of this enabling stage commissioning, as part of the full resignalling of the area.

12. Consultation with affected parties

Relevant TOCs have been consulted through scheme plan review.

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:

- Drawing 11-SO-015-C extract.

14. Method of elimination:

South Bermondsey Turnback is an enabling stage to London Bridge Resignalling, which will resignal the area affected at Christmas 2014, introducing a 50 mph PSR on the approach to L537, therefore making the overlap compliant.

15. Start and end date:

From 17/08/2013 to 16/08/2014.

16. Signature of applicant:

Head of Signal Engineering

Date of application:

26/02/2013

17. Lead Standards Committee details:

Name of Committee:

Control Command and Signalling

Date of meeting

21/03/2013

Minute reference:

13/CCS/03/057

Authorised by:

Signed by Tom Lee on 11/04/2013

Date of Authorisation:

11/04/2013

Tom Lee
Head of New Systems
Head of Delivery, Control Command & Signalling, and Energy