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26 July 2016



Mr Andrew Hall  
Deputy Chief Inspector of Rail Accidents  
Cullen House  
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Hampshire GU11 2HP

Dear Andrew,

**RAIB Report: Fatal accident at Moreton-on-Lugg near Hereford**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 28 February 2011.

The annex to this letter provides details of the action taken regarding this recommendation, the status of which is now '**Implemented**'. We do not propose to take any further action in respect of this recommendation, unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 28 July 2016.

Yours sincerely,

John Parsonage

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<sup>1</sup> In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

### Recommendation 3

*The intention of this recommendation is to ensure that whenever signalling renewal or major maintenance work is planned, those responsible understand when it is necessary to formally evaluate the opportunity to improve compliance with the latest engineering standards.*

Network Rail should develop and implement (paragraph 175a):

- criteria for when it is necessary to formally assess the need to bring existing signalling and level crossing assets in line with latest design standards; and
- a process to record the findings of such assessments.

### ORR decision

1. Having considered Network Rail responses ORR is of the view that Network Rail has taken sufficient action to address the intent of the recommendation.
2. After reviewing information received from Network Rail, ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:
  - taken the recommendation into consideration; and
  - taken action to implement it.

**Status: Implemented.**

### Previously reported to RAIB

3. On 1 April 2014 ORR reported to RAIB that Network Rail had published Notice Board NB123 in December 2013 which reiterated the need to consider work is done to achieve best practice in design early in a project's timescale and highlighted the standard NR/L2/SIG/1121 ModX02 clauses 2.2, 5.1.5 and 5.1.71.
4. ORR also reported that the Network Rail process to publish the Means of Control for level crossings is planned to conclude in April 2014. The process had already started with the definition of the "Bow Tie" diagrams which map the barriers and mitigations that prevent the primary risk of collision on level crossings.

### Update

5. Following timescale extensions, Network Rail provided the following closure statement on 5 January 2016:

*On the basis that document NR/L2/SIG/30009/E810 version 1 contains requirements that fulfil both parts of the RAIB recommendation 3, it is Network Rail's assertion that this recommendation may be closed. The compliance date for this document is 6th March 2010. A copy of the document is attached for reference. The following statement provides justification in terms of the RAIB*

*recommendation wording. The relevant clause numbers within the document appear in brackets.*



NR\_L2\_SIG\_30009\_E  
810.pdf

*This document contains the requirement (Section 2: Scope) to assess the compliance of existing controls to current principles whenever signalling interlocking functionality is updated but when trackside signalling equipment, i.e. excluding level crossing equipment, is not updated. The document states policy (Section 4: Requirements) that is to be applied to a variety of common issues with the signalling, including approach locking and route release controls (Section 4.8) which are particularly pertinent to the Moreton-on-Lugg incident scenario.*

*The results of the assessment must be recorded on the project file, then (in accordance with Section 4) reviewed by the Sponsor and submitted to the Route Strategy Planning Group for authorisation. The results of the authorisation are then recorded on the project file. Failure to follow any of the requirements in the document will require the project to apply for variation to the requirement, with all such variations being monitored by the Chief Engineer's department.*

6. After reviewing the closure statement ORR requested that Network Rail:
  - (a) confirm that NR/L2/SIG/30009/E810 is used as part of its evaluation process and provide evidence of where this requirement is identified as standard practice in its operating processes; and
  - (b) comment on ORR's view that NR/L2/SIG/30009/E810 needs to be further updated to capture interlocking types not currently referred to, such as route relay interlockings and mechanical interlockings, and also considers all computer based interlocking technologies.
  
7. Network Rail provided the following further update on 17 February 2016:
  - *Network Rail has mandated the assessment in the principles handbook, and has highlighted the need to take reasonable opportunity in NB123. NR has also defined project specific process in PAN40 issued by the Investment Projects department of NR, this has resulted in production of E810 assessments where layout limitations are identified.*
  - *Network Rail points out that E810 is technology independent and applies to all interlocking types, this has been clarified in recent briefings that current level crossing controllers specifically qualify and are considered as interlockings.*

*Network Rail recognises that NR/L2/SIG/30009/E810 is specific to a particular type of infrastructure change, and that similar alterations are separately documented in NR/L2/SIG/30009/Z210. To expand the applicability of the document an updated version is in production which captures re-lock, re-*

*platform and re-control proposals and amalgamates the published elements of PAN40, NB123 and Z210.*

8. Following further discussions between ORR and Network Rail, Network Rail has expressed the view that, rather than there being a need to revise NR/L2/SIG/30009/E810 The Signalling Principles Handbook:

*...the E810 assessment requirements do cover level crossing controllers and are sufficient to cause a sponsor/designer to consider any change to safety functionality that may be reasonable to undertake concurrent with renewal of a level crossing controller.*

*The key issue is one of 'behaviour' and we have addressed this through a re-brief of E810 which emphasises that it applies to level crossing interlocking controllers not just signal interlocking controllers.*

9. To address a continuing concern that a project is not required to consider NR/L2/SIG/30009/E810 when using alternative technologies such as relay based or when modifications to a crossing independent of the interlocking are being undertaken, particularly in the light of a number of caveats in Sections 2 and 4 of the document, Network Rail was asked to provide assurance that NR/L2/SIG/30009/E810 will be applied in every case.

10. On 18 May 2016 Network Rail provided the following statement:

*The application of E810 was particular to interlocking renewal and Z210 was particular to re-control projects (now amalgamated into E810 scheduled to be published in June), where trackside infrastructure is affected the E810 and Z210 assessments would not be applied, however the impact of the proposed change and interfaces would be considered under the scoping and design processes of NR/L2/SIG/11201 and will be documented in Project and Design specifications for the alteration.*