

Oliver Stewart
Senior Executive, RAIB Relationship and
Recommendation Handling

Telephone 020 7282 3864

E-mail oliver.stewart@orr.gsi.gov.uk

20 April 2017



Mr Andrew Hall
Deputy Chief Inspector of Rail Accidents
Cullen House
Berkshire Copse Rd
Aldershot
Hampshire GU11 2HP

Dear Andrew,

RAIB Report: Fatal accident at Motts Lane level crossing, Witham, Essex

I write to provide an update¹ on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 14 January 2014.

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 20 April 2017.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Oliver Stewart', written in a cursive style.

Oliver Stewart

¹ 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 reduce the risk that may be created by the interaction of ARS [Automatic Route Setting] with the controls for level crossings, by reviewing the principles which define the design of such systems.

Network Rail should review its processes for designing and implementing ARS where it interacts with level crossing controls, and amend or enhance them as necessary to produce assurance that the design will result in the crossing operating in accordance with relevant standards and guidance.

ORR decision

1. Network Rail have reviewed their processes for designing and implementing ARS systems where they interact with level crossing controls and found them to be robust. Network Rail concluded that the incident at Motts Lane was due to a failure of the integration of the design interfaces between the different systems controlling signalling and interlocking. In response, Network Rail put together a 'share with pain' briefing for their project engineering department to notify those shortcomings thus try and reduce the risk of a similar incident to Motts Lane occurring.

2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration; and
- has taken action to implement it.

Status: Implemented

Previously reported to RAIB

1. On 16 April 2014, Network Rail provided ORR with the following information:

Network Rail will review its processes for designing and implementing ARS where it interacts with level crossing controls. Where the review does not provide assurance that following the process will result in the crossing operating in accordance with the relevant requirements and guidance, it will propose change.

The review will investigate the life cycle of design, check and implementation, and will test the integration aspects of each stage in the cycle. The output from the review will be a report demonstrating the areas that have been reviewed, the findings from the review, and recommendations for change. The completion date for the agreed final report and its recommendations will be 30 June 2015.

The RAIB recommendation will be closed on completion of the agreed changes to standards and processes. Allowing for publication dates, the completion date for the changes to standards and processes will be 30 September 2015.

Timescale: 30 September 2015

2. On 15 May 2014, ORR asked Network Rail to provide reasoning to support the proposed timescales. Network Rail responded on 7 July 2014 stating:

The end date of 30 September 2015 is the next practicable planned publication date that can be used for any of the standards and requirements that need to be altered as a result of the action plan.

The first phase, investigation into the existing standards, has begun. The review is now coinciding with the Business Critical Rules Programme, which the review will use to capture the potential for better application of requirements to integrate level crossing design. The output of this is due to be substantially complete in November 2014, following which the detailed report to close the first part of the action plan can be started to take BCRP into account. BCRP's principle task is to risk assess using the "bow tie" method, and then create role based manuals. It is anticipated that the process should create manuals for roles that have not previously had requirements, making it an excellent opportunity to define requirements applicable to the circumstances in this RAIB report.

The final output of the report is due in June 2015, but will be preceded with Stakeholder consultation and internal governance phases before then, and in practice the report may be completed before this date.

Following publication of the date, if any requirements are identified as requiring a change, they will be updated, and issued in the September 2015 standards publication.

Update

3. Following timescale extensions, Network Rail a closure statement on 23 September 2016 stating:

Closure of this recommendation was achieved by drafting and briefing a "Share With Pain" to highlight the area of integration where failures lead to the incident at Motts Lane. This recommended action to concentrate integration in key areas and therefore minimise failure arising from lack of consideration of integration in design.

The Lead Manager conducted the document review. This review concluded the requirements as written would not cause the incident scenario or similar if followed as prescribed. It also concluded that the risk of failure of controls in the Motts Lane incident or similar was due to failure of integration of the

design interfaces between different systems controlling signalling and the interlocking.

Previously reported to RAIB

Recommendation 3

The intention of this recommendation is to reduce the risk that may be created by the interaction of ARS [Automatic Route Setting] with the controls for level crossings, by reviewing the principles which define the design of such systems.

Network Rail should review its processes for designing and implementing ARS where it interacts with level crossing controls, and amend or enhance them as necessary to produce assurance that the design will result in the crossing operating in accordance with relevant standards and guidance.

Steps taken or being taken to address the recommendation

3. On 16 April 2014, Network Rail provided ORR with the following information: *Network Rail will review its processes for designing and implementing ARS where it interacts with level crossing controls. Where the review does not provide assurance that following the process will result in the crossing operating in accordance with the relevant requirements and guidance, it will propose change.*

The review will investigate the life cycle of design, check and implementation, and will test the integration aspects of each stage in the cycle. The output from the review will be a report demonstrating the areas that have been reviewed, the findings from the review, and recommendations for change. The completion date for the agreed final report and its recommendations will be 30 June 2015.

The RAIB recommendation will be closed on completion of the agreed changes to standards and processes. Allowing for publication dates, the completion date for the changes to standards and processes will be 30 September 2015.

Timescale: 30 September 2015

4. On 15 May 2014, ORR asked Network Rail to provide reasoning to support the proposed timescales. Network Rail responded on 7 July 2014 stating: *The end date of 30 September 2015 is the next practicable planned publication date that can be used for any of the standards and requirements that need to be altered as a result of the action plan.*

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The final output of the report is due in June 2015, but will be preceded with Stakeholder consultation and internal governance phases before then, and in practice the report may be completed before this date.

Following publication of the date, if any requirements are identified as requiring a change, they will be updated, and issued in the September 2015 standards publication.

ORR decision

5. After reviewing information received ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration and
- Is taking action to implement it. Completion date: September 2015

Status: Implementation On-going. *ORR will advise RAIB when actions being taken to address this recommendation have been completed.*