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Mr Andrew Hall
Deputy Chief Inspector of Rail Accidents
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Dear Andrew,

RAIB Report: Partial failure of a structure inside Balcombe Tunnel, West Sussex

I write to provide an update¹ on the action taken in respect of recommendations 5 and 6 addressed to ORR in the above report, published on 15 August 2013.

The annex to this letter provides details of the action taken. The status of these recommendations is now '**Implemented**'. We do not propose to take any further action in respect of these recommendations 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 16 October 2015.

Yours sincerely,

Andrew Eyles

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

Recommendation 5

The intention of this recommendation is to improve the quality of decision making in the management of structures.

Network Rail should undertake a comprehensive review and, if necessary, implement a time-bound plan to modify its levels of staffing and competency requirements so that all technical tasks associated with the management of structures are performed or checked in a timely manner by sufficiently qualified and experienced staff.

Brief summary of what was previously reported to RAIB

1. On 18 August 2014 ORR reported this recommendation as 'In progress'. Network Rail was going to appoint an external organisation to assess its structures staff competency.

Update

2. On 23 April 2015 ORR wrote to Network Rail seeking confirmation of whether this recommendation had been implemented by the expected date of 30 December 2014. A copy of the latest version of the STE01 Competency Framework was also requested.

3. In relation to this recommendation we were informed by Network Rail at the examination compliance meeting held on 21 April 2015 that there were concerns about the current number of available examiners to carry out this work. ORR also asked network Rail for an update on this situation and how it planned to resolve it.

4. On 18 May 2015 Network Rail provided the following update:

The intention of this recommendation is to 'improve the quality of decision making in the management of structures'. The immediate causes noted in the RAIB report into Balcombe relates to actions implemented by the Network Rail Asset Engineer (as oppose to actions undertaken by our specialist suppliers). As such our action plan notes actions undertaken to improve Network Rail asset management resources (as previously demonstrated) and the competence of our route based and central asset engineers.

The ORR's concerns regarding the current availability of competent examiners to deliver our examination programme are noted and are the subject of current scrutiny and regular discussions within the examination compliance forum. Measures to ensure that our specialist suppliers meet their contractual obligations with regard to the CEFA contract are managed at route level by our CEFA Project Managers with central support from the Contracts and

Procurement Team. This issue is not considered relevant to the requirements or intention of this recommendation.

An EOT for this recommendation was processed in March 2015 extending the close out of this recommendation until 21st August 2015. This date was derived from the current programme for completion of all STE01 Staff Competency Assessments by end of June 2015, collating assessment results and producing a report on findings by end of July 2015 plus time to confirm completion, review and endorse required closure paperwork and associated supporting evidence.

Network Rail explained that the latest version of the STE01 Competency Framework was not readily transferable due to the size of the document. It was therefore intended to review it with the ORR at the next scheduled liaison meeting. [Further details, including the Competence Assessment Workbook, were subsequently provided to ORR.]

5. On 25 August 2015 Network Rail submitted its closure statement for recommendation 5 confirming that:

Development of the STE01 competency framework is complete. A trial was undertaken in 2No routes. The trial was a success and now the STE01 competence framework is in the process of being handed over to Network Rail Professional Development & Training as part of its national roll out

ORR Decision

6. Having considered the STE01 competency framework ORR is of the opinion that that the work undertaken by Network Rail is sufficient to deliver the intent this recommendation. ORR also notes that, following the development of STE01, Network Rail has initiated a further project to develop similar frameworks for other competency levels. These include:

- STE02 – review the results of structures examination and recommend actions;
- STE03 – Examination of minor structures;
- STE04 – Examination of the condition of structures;
- STE05 – Examination of the condition of station structures and buildings;
- STE06 – Examine the condition of tunnels; and
- STE07 – Examine the condition of underwater structures.

ORR will continue to monitor the development of these additional frameworks, but does not consider them essential to closing out this recommendation.

7. 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
- taken action to implement it.

Status: *Implemented*

Recommendation 6

The intention of this recommendation is to improve the effectiveness of Network Rail's investigations when abnormal events are reported.

Network Rail should revise its arrangements for the briefing of staff or contractors who are sent to investigate reported defects, so that all relevant available information is provided, and correct any deficiencies found in those arrangements.

Brief summary of what was previously reported to RAIB

8. On 18 August 2014 ORR reported this recommendation as 'In progress'. Network Rail had completed the review of the processes governing the arrangements for briefing of staff and contractors that are sent to investigate reported defects.

9. Following the review and identification of the required revisions to the relevant controlling standards, a robust time bound action plan was to be implemented.

Update

10. On 11 November 2014, Network Rail provided an update justifying an extension to the timescale from 7 November 2014 to 24 April 2015:

The recommendation seeks to improve the effectiveness of Network Rail's investigation when abnormal events are reported. It was originally envisaged that the Close Call System would be used for reporting / recording of abnormal events. On more detailed review of the system and discussions with the Close Call project team it became apparent that an abnormal event would fall under 'Operational Close Call' and therefore should be reported to Local Control. This is in line with existing processes. This has highlighted an opportunity to re-brief an existing and embedded process and at the same time enhance the examination process.

The original intention remains the same but rather than utilising the Close Call System as the main repository it can be used as a supplementary method of reporting.

Work done to date

Actions 1 and 2 - development of guidance

- *Process flowcharts for reporting of abnormal events and enhancement of standard examination process developed*

Action 5 - briefing material for new process, delivery of briefing

- *Briefing material being collated and Director of Route Asset Management meeting being targeted, waiting dates from Periodic meeting's chairperson.*

Justification for extension

Network Rail has been evaluating the Close Call System and Fault Management System for use in normal detailed and visual examinations as well as rapid response examinations. The extension is required to test the robustness of the process, external structures examiners ability to access relevant information from both the Operational Close Call system and the Fault Management System. Testing of this process will serve as confirmation that the Close Call System and Fault Management System can be used in management of structure faults and examination preparation.

To ensure cross discipline embedment the owners of the Operational Close Call System and Fault Management System will need to review that the proposed process for structure management is applicable and in place across the business. An extension in time is therefore required for testing the process and dissemination into other asset types, operations and the maintenance organisation.

Work in progress towards closing the recommendation

Network Rail will review briefing material with the Technical Services' Director prior to briefing the Director of Route Asset Management community and Network Operations. The briefing strategy for examination organisations and other external suppliers is being determined.

Timescale

03 November -12 December 2014

Test process robustness and ability for examiners to access information.

08 -19 December 2014

Review briefing material with the Technical Services' Director.

22 December- 02 January 2015

Contingency for festive period.

03 January - 13 February 2015

Review by Operational Close Call System and Fault Management System owners to ensure proposed process is applicable and in place across the business

16 February - 27 March 2015

Brief the Director of Route Asset Management community and Network Operations

30 March - 10 April 2015

Produce Rec closure statement and gain TS approval of closure.

13 - 24 April 2015

Submit closure statement to SSD for review and formal closure.

24 April 2015

Formal Closure of Recommendation.

11. On 23 April 2015 ORR wrote to Network Rail seeking confirmation that this recommendation had been implemented. ORR also requested that Network Rail provide assurance that the enhancement of the Fault Management and Close Call systems had been completed as planned, and that this information has been briefed out to anyone (contactors and internal Network Rail staff) sent to investigate reported defects.

12. On 18 May 2015 Network Rail provided the following update:

The actions to address this recommendation are still being progressed by Network Rail. An extension of time (EOT) request was processed against this recommendation, which notes a current closure date of 24th July 2015.

Progress to date:

Network Rail has completed an evaluation of the existing Close Call and Fault Management Systems working with system owners to determine its suitability for use in the preparation for normal detailed and visual examinations as well as precursor actions to rapid response/emergency examinations or incident investigations. A report on the process has been completed, noting the accessibility of logged faults for asset engineers and the relevance of information from both the Operational Close Call system and the Fault Management System for use in investigating incidents/ reported defects.

To conclude the works required to address the intention of this recommendation the use of the fault management and close call systems in preparation for examinations, and the investigation of incidents/reported defects revisions will be mandated through revisions to the following NR Standards: -

NR/L3/CIV/006 Part 1D – Competency, preparation for examinations and other common requirements. Addition requirements to be added to section 4 – ‘Preparations for an Examination’

NR/L3/CIV/028 – The management of reports of Safety Related Events on Buildings and Civil Engineering Infrastructure. Additional requirements to be added to roles and responsibilities for Asset Managers & Route Asset Managers and to section 5 – ‘Background’.

To embed the above standard revisions and inform asset engineers of additional requirements when instigating incident/defect investigations or preparations for routine or emergency examinations a ‘shared learning’ notice will be issued via Safety Central and briefed at the RAM meeting of 8th July 2015.

13. On 18 June 2015 ORR requested a draft copy of a letter of instruction and associated briefing which it understood was expected to be produced by the end of July 2015. It also requested a draft copy of the Shared Learning Notice referred to in the 18 May response if this is a different document to the letter of instruction.

14. On 28 July 2015 Network Rail provided the following update:

The changes to NR/L3/CIV/006 Part 1D and NR/L3/CIV/028 have been implemented by the publication of revised standards (as oppose to issue of Letters of Instruction against those standards). Revised versions of both standards are included. These were published via the NR Standards Intranet on 24th July 2015 and are available for use as a preview in advance of formal publication in September.



rec 6 - NRL3CIV028
Issue 5.pdf



rec 6 - NRL3CIV006
Part 1D Issue 2.pdf

The ‘Shared learning Notice’ referred to in the response of 18 May 2015 is a separate document, published via Network Rail’s safety central intranet site, and specifically used to highlight the standard changes in the context of the Balcombe incident to embed closure actions taken. A draft copy of this document is attached, together with a recently published example of a shared learning document which highlights the format of these documents when published.



rec 6 - Shared
Learning NRL14-04 de

15. On 31 July 2015 Network Rail submitted the following closure statement for recommendation 6:

In accordance with EOT submitted in April 2015, to address the intent of the recommendation, Network Rail has revised the arrangements for the briefing of staff sent to investigate reported defects via the CIV28 incident reporting or rapid response examination processes.

An evaluation of the existing Operational Close Call (OCCS) and Fault Management Systems (FMS) working with system owners was completed to determine its suitability for use as precursor actions to rapid response/emergency examinations or incident investigations. A report on the process was completed, noting the accessibility of logged faults for asset engineers and the relevance of information from both the OCCS and the FMS for use in investigating incidents / reported defects. The RAIB report into the Balcombe incident noted that several previous faults raised at Balcombe weren't considered when structural examiners were finally sent to the tunnel to investigate a reported defect.

It was concluded that when initiating the investigation of a reported defect or structures related safety event, as well as all existing information available to the asset engineer (Such as previous scheduled examinations, historic rapid responses, assessment reports, construction materials and structure form and details of existing works recommendations/open defects) asset engineers should consult the OCCS and FMS as it could hold pertinent information in relation to the geographical area which would improve the effectiveness of Network Rail's investigation.

The use of the fault management and operational close call systems in preparation for rapid response examinations and the investigation of incidents/reported defects has been mandated through revisions to the following NR Standards: -

NR/L3/CIV/006 Part 1D - Competency, preparation for examinations and other common requirements. Addition requirements to be added to section 4

'Preparations for an Examination' NR/L3/CIV/028 - The management of reports of Safety Related Events on Buildings and Civil Engineering Infrastructure. Additional requirements to be added to roles and responsibilities for Asset Managers & Route Asset Managers and to section 5 - "Background".

To embed the above standard revisions and info asset engineers of additional requirements when instigating incident / defect investigations or preparations for routine or emergency examinations a 'shared learning' notice have been briefed at the RAM Community meeting of 8th July 2015. (Note these embedment actions have been undertaken in addition to the completed stakeholder review process undertaken in advance of publication of the above standard revisions).

ORR Decision

16. ORR considers that Network Rail's amendment of standard NR/L3/CIV/006 Part 1D to include a mandate for anyone who examines a fault of this nature to consult the output of FMS and OCCS – alongside the review and re-briefing of those processes – is sufficient to meet the intent of this recommendation.

17. 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
- taken action to implement it.

Status: *Implemented*