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

Dear Andrew,

RAIB Report: Partial failure of a structure inside Balcombe Tunnel, West Sussex, 23 September 2011

I write to provide an update¹ on the action taken in respect of recommendation 7 addressed to ORR in the above report, published on 15 August 2013.

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 the 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 6 October 2017.

Yours sincerely,

Oliver Stewart

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

Annex A

Recommendation 7

The intention of this recommendation is to provide adequate opportunities for examination and maintenance activities.

Network Rail should review, and if necessary amend, its processes to include adequate safeguards such that sufficient track access is provided for the examination needs of all structures in a manner commensurate with the risk they pose to railway safety.

ORR decision

1. Network Rail have produced a revised standard, which includes provisions to facilitate sufficient track access to allow structures examination and maintenance activities to take place.
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

3. When we last reported to RAIB on 15 December 2015 we advised that we noted the revised completion date proposed by Network Rail but, in view of the length of time this recommendation has been open, also wrote to Network Rail requesting that the new timescale be strictly adhered to. We reported that Network Rail were taking action to implement the recommendation by 29 January 2016. See full response at Annex B.

Update

4. Following a number of timescale extensions, Network Rail provided a closure statement on 11 September 2017 containing the following information:

By reviewing and revising where necessary, Network Rail's standard ensures adequate planning and procedures to enable engineering access to Network Rail managed infrastructure to undertake inspection and maintenance activities. These completed actions prevent the further shortfalls in delivery of planned work.

Arrangements within NR/L2/NDS/202 detail the requirement for de-confliction and prioritisation reviews as well outlining as co-operative detailed planning meetings.

Supporting evidence

NR/L2/NDS/202 'Principles, Timescales and Functional Responsibilities for Engineering Work, Access and Heavy Resource Planning'

NR/L2/NDS/202 Technical standards briefing evidence

Formulation of appropriate examination timings

Presentation & Minutes of ATR reviewing intent and briefing pertinent standard details

Intent Satisfied?

- *Yes – By verifying the processes for safeguarding access for structure examination and maintenance, in addition to developing tunnel examination timings in order to formulate and promote appropriate and compliant examinations; in frequency and scope and quality.*

Success Criteria Met?

Yes – all routes have been briefed on the requirements of NR/L2/OPS/202 and the need for safeguarding of access

Requirements of acceptable length and time that should be taken for a detailed examination of a tunnel bore with the objective of obtaining data on condition to a satisfactory and acceptable level of quality have been disseminated to the Structure Route Asset Management teams.

Implemented at Working Level?

Yes – where noted, awareness and briefings have been delivered, reviews completed and revised standard is live on the Network Rail Standards intranet.

Any Further Actions Required

None

Future Test of Effectiveness

- *The effectiveness of the actions undertaken to address this recommendation will be reviewed/ monitored by the Tunnel ATR and Structures ATR group as necessary. The robustness of the confirmed process for safeguarding access for structure*

examination and maintenance should be subject to scrutiny as part of the ongoing Engineering Verification programme.

Annex B

Previously reported to RAIB

Recommendation 7

The intention of this recommendation is to provide adequate opportunities for examination and maintenance activities.

Network Rail should review, and if necessary amend, its processes to include adequate safeguards such that sufficient track access is provided for the examination needs of all structures in a manner commensurate with the risk they pose to railway safety.

ORR Decision

1. ORR notes the revised completion date proposed by Network Rail but, in view of the length of time this recommendation has been open, has written to Network Rail requesting that this new timescale be strictly adhered to.
2. 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 by 29 January 2016.

Status: *Implementation ongoing.* ORR will advise RAIB when actions to address this recommendation have been completed.

Brief summary of what was previously reported on 18 August 2014

3. ORR reported to RAIB that Network Rail had developed a methodology for the determination of appropriate tunnel examinations in accordance with Network Rail's Balcombe Tunnel Formal Investigation Recommendation A8.1. This methodology was to be reviewed and applied to structures within the scope of this recommendation, therefore the closure of this RAIB recommendation was dependent on understanding the lessons learnt from developing and applying the methodology for tunnels. The lessons learnt from the Balcombe incident had been briefed to both structures managers and examination teams. The requirements for specific management arrangements for complex ancillary structures in tunnels and guidance on determining tunnel examinations durations had been cascaded to Route Structures Teams.

Update

4. On 18 November 2014, Network Rail provided an update justifying an extension to the time scale and a change to its approach.

Original approach to closure

The original approach involved transferring the methodology for determining benchmark guidance for appropriate tunnel examination duration into other structure types. High risk structures were to be targeted first. This methodology would be used as a guide when planning access arrangements to conduct examinations on these structures.

The original approach also recognised that there would be a limitation on applying the methodology to long linear assets due to the inherent nature of the tunnel methodology. A key performance indicator would be developed to monitor both variances in the suggested time for examinations from the guidance and when examinations will have been curtailed due to compromised access arrangements.

Reasons for a change in approach

Limiting the scope of the methodology to long linear assets due to the use of the existing tunnel methodology does not address the intent of applying the methodology to high risk structures. Visibility of curtailed examinations to all structure types is more appropriate as that will allow a risk based priority based across the structure type to be developed and bespoke guidance given for these. The methodology for long linear assets will not be appropriate to all structure types due to their specific forms.

Network Rail has been working with Amey PLC to evaluate a reporting system under development by Amey that will produce the requirements of the three recommendations covered in this justification paper.

This reporting system will allow access planning personal and examiners within Amey to report on compromised or potentially compromised examinations where access arrangements are less than required in terms of duration. This will be both at the planning and examination implementation stages.

The granularity of the reporting systems attributes will allow a more purposeful root cause analysis of the reasons for curtailment to be undertaken. Corrective actions from that root cause analysis will not only provide a more appropriate action towards closing these recommendations through addressing the risk of incomplete or compromised examinations due to access arrangements, but should also aid in reducing noncompliance of examination delivery generally.

Profiles of what type of assets are affected more than others will also emerge from this method of reporting.

It is suggested that this reporting system when, fully developed, should be a regular deliverable under the CEFA [Civil Examination Framework Agreements] contract to allow more effective asset management and will fulfil the requirement of a key performance indicator under these recommendations. It is also believed that this will provide valuable and objective data that can be used in the DRAM [Director Route Asset Management] community to understand the magnitude, reasons and implications of examination curtailment and how

examination curtailment can be impacted by other asset owners within that community.

The extension of time is requested to allow for the completion of the development of this reporting system within Amey and embedment into both organisations. Network Rail will need to work closely with Amey to ensure that the reporting system allows sufficient granularity for the root cause analysis to be undertaken.

An EOT [extension of time] is requested in line with the revised delivery programme noted below:

Present- 27 March 2015

Jointly with Amey PLC, develop a reporting system will allow access planning personal and examiners to report on compromised or potentially compromised examinations where access arrangements are less than required in terms of duration at both the planning and examination implementation stages.

30 March - 30 April 2015

Reviews output of reporting system, collate information on compromised exams and undertake route cause analysis.

04 May- 29 May 2015

Disseminate Exam curtailment information to DRAM Community and Network Operations Managers.

01 June -12 June 2015

Produce Recommendation closure statement and gain TS approval of closure.

15 June- 26th June 2015

Submit closure statement to SSD for review and formal closure.

26 June 2015

Formal Closure of Recommendation.

5. On 23 April 2015 ORR wrote to Network Rail seeking confirmation that the revised implementation programme (as provided to ORR on 25 March 2015) is being adhered to and covers both Amey PLC and LNW Network Rail staff.

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

Network Rail confirms that the work to address this recommendation remains on course for closure by 25th September 2015 i.e. as noted in the revised action plan/implementation programme provided to the ORR in March 2015.

We can confirm that any amendments to the process to provide improved track access for examinations will apply to the possession planning /track access process as a whole as such will be applicable to all parties requiring access for examinations regardless of whether that relates to internal NR examiners or our specialist suppliers.

7. On 18 June 2015 ORR sought confirmation that responsibility for this recommendation had been transferred to the Network Ops team as suggested at a joint Network Rail ORR workshop held on 4 June 2015.

8. On 26 June Network Rail provided an update extending the timescale for completion to 25 September 2015 and on 28 July 2015 provided the following update:

A working group has been established by Network Operations/the DRAM community, led by a nominated lead DRAM to review and improve the process of curtailed examinations and bring about improvements to the current number of non-compliance examinations. The identified actions to address the priority afforded to structural examinations within track possessions and implement changes to the track access process are being actioned by this group in conjunction with the Balcombe rec project team. Ownership of the recommendation and the responsibility for ensuring its intent is met remains with the current progress manager Colin Sims, who should be contacted should further information be required.

The current expected completion date for this recommendation remains as per our latest EOT, the 25th September 2015.

9. On 30 September 2015 Network Rail advised ORR of a timescale extension for completion to 29 January 2016.