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

Dear Andrew,

Partial collapse of a wall onto open railway lines, Liverpool, 28 February 2017

I write to report¹ on the consideration given and action taken in respect of the two recommendations addressed to ORR in the above report, published on 30 November 2017.

The annex to this letter provides details in respect of each recommendation. The status of recommendation 1 is '**implementation on-going**'; and recommendation 2 is '**progressing**'.

We will publish this response on the ORR website on 22 November 2018.

Yours sincerely,

Oliver Stewart

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

Initial consideration by ORR

1. Both recommendations were addressed to ORR when the report was published on 30 November 2017.
2. After considering the recommendations ORR passed both recommendations to Network Rail asking them to consider and where appropriate act upon them and advise ORR of its conclusions. The consideration given to each recommendation is included below.
3. ORR also brought both recommendations and the learning point to the attention of other Infrastructure Managers and Light Rail operators as it was concluded that there are equally important lessons for them. ORR did not ask these organisations to provide a reply.
4. This annex identifies the correspondence with end implementers on which ORR's decision has been based.

Recommendation 1

The intent of this recommendation is that Network Rail is aware of which of its walls have a potentially high safety consequence (eg derailment or significant damage to passing trains) in the event of failure, so that the scope and depth of examinations can be set appropriately to minimise risk to the railway.

Network Rail should review its wall assets and identify those which have a potentially high safety consequence should they fail (eg train derailment, or large amounts of debris falling on to trains). These should be clearly identified in its database of assets (paragraph 91a).

ORR decision

5. Network Rail provided ORR with a phased plan of the actions they were taking to identify walls with a potentially high safety consequence in the event of failure and once identified, how they would enhance their management of them. ORR accepts that phase 1 of the Network Rail plan meets the requirement of recommendation 1. Network Rail expect to complete this initial phase of the work by December 2018.
6. 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
 - is taking action to implement it by 31 December 2018.

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

Information in support of ORR decision

7. On 19 June 2018 Network Rail provided the following initial response:

Network Rail's walls are currently managed on condition and this has demonstrated itself to be a subjective process.

Work has been completed to define an operating model that is part of Network Rail's strategic asset management system and process change to the CSAMS), this includes designs for a Retaining Walls Condition Marking Index (RWCMI) and Risk Prioritisation (RWRP) process.

This work encompasses the intent of recommendation 2 from the RAIB report.

Given the learnings from recent 'wall' incidents including this one, Network Rail is undertaking additional work to refine these design models including providing interim solutions for routes as the CSAMS programme is delayed.

The work is divided into two phases.

Phase 1 involves establishing a panel of experts to review the work done to date, initiate cleansing and reconciliation of core data between a number of systems – earthworks, CARRS and Elipse - and developing relevant metrics for the asset population. Where gaps in core data are established and subject to endorsement by the panel of experts the timeframe for establishing the data for implementation of RWCMI and RWRP may involve data capture over a cycle of examination.

Phase one is due for completion by December 2018 and this will allow a refined cut of high risk assets. An update to the Network Rail standard CIV/006 will be published to guide more focused management actions for these assets and a feedback loop for testing the process will be implemented via the panel of experts.

Phase two consists of the development of likelihood and consequence metrics to allow a refined understanding of which assets are likely to need enhanced management. Associated asset management guidance and rules will be established including trialling across one route and prioritisation tools will be integrated within CSAMS or the interim system as required.

Phase 2 will complete by December 2019.

A third phase is under consideration and if required will involve development of third party metrics and feedback loops to refine the work done in phase 2. It is expected that by December 2020 this work will be refined again.

This work will result in the complete alignment of earthworks and structures management metrics and standards by April 2021.

Recommendation 2

The intent of this recommendation is that for those walls identified (from Recommendation 1) as having a potentially high safety consequence in the event of failure, Network Rail enhances its wall examination and assessment processes to mitigate the additional risk.

Network Rail should review its structures examination and assessment procedures for its walls that have a high potential safety consequence in the event of failure (identified in response to Recommendation 1 above). This review should include:

- a) The level of detail in the information (including photographs) that is currently being collected in both detailed and visual examinations and the sufficiency of this information to allow subsequent examiners and reviewers to make thorough assessments on both condition and changes in loading;
- b) The need for additional checks to be done in examinations, including, but not limited to:
 - detailed inspections from the tops of cuttings and the non-railway side of walls;
 - checks for relevant changes in adjacent land use; and
 - potential additional surcharge (eg using photographs and physical markers).
- c) The potential for greater use of open source data (eg Google images) and Network Rail's aerial images, to facilitate comparisons between examination reports, where changes in adjacent land use may have an adverse impact on a wall.
- d) Provision of information to examiners pertaining to railway boundaries, to enable them to monitor encroachments into Network Rail property. Network Rail should then take steps to implement the identified improvements to its wall examination and assessment procedures.

ORR decision

8. We have asked Network Rail to provide more detail about phase 2 of their action plan to show that it meets the specific requirements of the recommendation, particularly around examination and assessment procedures (neither of which are specifically mentioned in the response). We have also asked if there is scope for elements of the phase 2 work to start earlier and run in parallel to stage 1 as it is not dependent on the output from it.

9. The response recognises that there are delays in the delivery of CSAMS. Our interpretation is that implementation will not be delayed due to any delays with CSAMS and that, in that event, implementation will be achieved by other means, although Network Rail have made clear that the plan is to deliver the improvements through CSAMS, and there are no credible alternatives at this stage.

10. 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
- is taking action to implement it, but ORR has yet to be provided with a response that fully address all areas of the recommendation and a time-bound plan for that work.

***Status: Progressing.* ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.**

Information in support of ORR decision

11. On 19 June 2018 Network Rail provided an initial response – see para 7.