

**Andrew Eyles**  
**RAIB Relationship and Recommendation Handling**  
**Manager**

Telephone 020 7282 2026

E-mail [andrew.eyles@orr.gsi.gov.uk](mailto:andrew.eyles@orr.gsi.gov.uk)

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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: Train driver receiving a sever electric shock at Sutton Weaver, Cheshire**

I write to report<sup>1</sup> on the consideration given and action taken in respect of the recommendations addressed to ORR in the above report, published on 24 June 2015.

The annex to this letter provides details of the consideration given/action taken in respect of these recommendations. The status of recommendations 1 and 2 is '**Progressing**'. ORR will advise RAIB when further information is available regarding actions being taken to fully address these recommendations.

We will publish this response on the ORR website on 27 April 2016.

Yours sincerely,

**Andrew Eyles**

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<sup>1</sup> 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 24 June 2015.
2. After considering the report and recommendations ORR passed recommendation 1 to Network Rail and recommendation 2 to RSSB asking them to consider and where appropriate act upon them and advise ORR of their conclusions. The consideration given to each recommendation is included below.

### Recommendation 1

*The intent of this recommendation is to minimise the occurrence of broken auxiliary wires on Mk 1 compound catenary OLE to reduce the potential for people to receive electric shocks.*

Network Rail should revise its work instructions so that inspection staff are aware of what to look for, including possible fatigue damage precursors as found during the metallurgical examinations of this investigation, and during the inspections Network Rail has already carried out (paragraph 99a).

It should produce a plan for the extension of its current detailed examinations of auxiliary wires close to, and within, protective sleeves to identify and rectify broken and damaged wire strands and protective sleeves on all of its Mk 1 compound catenary. Following this, its routine inspections should include this additional examination.

### ORR Decision

3. ORR notes Network Rail's plan to improve its work instructions for high level inspection of OLE. However, whilst Network Rail has indicated that work to implement this recommendation will be completed by 31 December 2016 no detailed plan has yet been provided in support of this expectation. ORR has asked Network Rail to provide more details about prospective timescales.
4. After reviewing all the information received from Network Rail, ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, it has:
  - taken the recommendation into consideration; and
  - is taking action to implement it, although a timebound implementation plan is yet to be provided.

**Status: *Progressing*. ORR will provide a further update to RAIB when the status of this recommendation changes.**

### Information in support of ORR decision

5. In its initial response dated 14 January 2016 Network Rail reported the following:

*Progressive steps have been taken over the past 12 months on London North West Route (LNW) (where the majority of auxiliary catenary is located) to remove auxiliary catenary. On LNW South all the auxiliary catenary has been removed. LNW North proactively initiated high level inspections of auxiliary catenary immediately following this incident and have prioritised the removal in public accessible areas.*

*To address the finding of this investigation and the intent of the recommendation Network Rail will improve the OLE work instructions for high level inspection of OLE, NR/L3/ELP/27237 module B10, to include an enhanced inspection of auxiliary catenary. In the first instance this change to the standard will be instructed via a Letter of Instruction and the modifications to the standard will be captured as part of the planned on-going update to the instructions.*

*A stakeholder review group will be convened to consider updating the OLE campaign change standard, NR/L2/ELP/27009, to include the removal of auxiliary catenary. The cost and practicality of the complete removal of auxiliary wire through the network will be assessed against the improvements in safety and reliability. If this is deemed a credible campaign change then the standard will be updated and the removal work completed.*

6. Network Rail has reported that this work will be completed by 31 December 2016.

## **Recommendation 2**

*The intent of this recommendation is to minimise the risk to train crew following an incident involving the OLE.*

RSSB should review Module AC of the Rule Book (GE/RT8000/AC) and appropriately clarify the actions that train crew should take if they are required to leave their train in situations where the OLE is electrically live, and may possibly be damaged.

## **ORR decision**

7. Although RSSB's response indicates that work has commenced to address this recommendation and amend the Rule Book (GE/RT8000/AC), RSSB has not yet provide an indication of when this work will be completed.

8. After reviewing all the information received from RSSB, ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, it has:

- taken the recommendation into consideration; and
- is taking action to implement it but has yet to provide an indication of when this will be complete.

**Status: Progressing. ORR will provide a further update to RAIB when the status of this recommendation changes.**

## Information in support of ORR decision

9. On 13 August 2015 RSSB provided the following information in respect of this recommendation:

*The recommendation was discussed at the November 2014 meeting of the TOM Standards Committee (TOM SC), after which RSSB produced a paper to consider the recommendation and its implications. This was presented to the TOM SC on 22 July 2015. The paper presented the background to the incident and suggested options for how the Rule Book might be changed. TOM SC decided that RSSB should liaise with Network Rail, amending the paper accordingly and presenting back to TOM SC as soon as practicable. The discussion process has begun. Though the ORR is present at TOM SC in an observer capacity, we will keep ORR informed of progress.*

10. On 16 February 2016 RSSB provided the following update:

*RSSB met with Network Rail on 11 November 2015, the results of the discussion being presented to TOM SC on 17 November 2015. This led to an action on RSSB to produce a 'proposal to change' for the committee to consider. This proposal was duly drafted and shared with Network Rail for comment. A revised version was then submitted to TOM SC.*

*In brief, it is suggested that clause 12.6 of Module AC be amended to stipulate that drivers should not detrain unless they have been assured that the electricity has been switched off, either by the signaller or in combination with their own actions. In taking this proposal forward, however, consideration will be given to issues including differences between new electrification schemes and old, and the possibilities around in-cab earthing devices on some traction types.*

*On 2 February 2016, TOM SC approved said proposal and the continuation of the work therein. The timescales for completion are to be confirmed, pending an update from Network Rail as to the timescales of a risk assessment that must be carried out before changes can be made to the relevant documentation.*

11. On 11 April 2016 RSSB provided the following further update:

*Following general discussion between RSSB technical experts and Network Rail technical experts, a number of amendments to Rule Book module AC HB 16 have been proposed, including the stipulation that staff should not leave a train unless it is electrically safe to do so. This will be raised at the TOM SC.*