

**Oliver Stewart**  
**RAIB Recommendation Handling Manager**



6 October 2023

Mr Andy Lewis  
Deputy Chief Inspector of Rail Accidents

Dear Andy,

**RAIB Report: Collision between a train and a hand trolley at Challow, Oxfordshire on 21 October 2021**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendations addressed to ORR in the above report, published on 13 October 2022.

The annex to this letter provides details of actions taken in response to the recommendations and the status decided by ORR. The status of recommendations 1, 2, 4 & 5 is '**Open**'. The status of recommendation 3 is '**Closed**'.

ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.

We will publish this response on the ORR website on 9 October 2023.

Yours sincerely,

Oliver Stewart

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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. All 5 recommendations were addressed to ORR when the report was published on 13 October 2022.
2. After considering the recommendations ORR passed all 5 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 all 5 recommendations to the attention of Rail for London and Amey Infrastructure Wales (AIW). Recommendations 1, 2, 4 & 5 were brought to the attention of HS1 Ltd, LUL and Tyne & Wear Metro as it was concluded that that there are equally important lessons for them. ORR did not ask these organisations to provide a reply.

### Recommendation 1

*The intent of this recommendation is to make shorter-term changes to the existing line clear verification process to reduce the likelihood of vehicles such as hand trolleys or rail skates being left on the track when the line is handed back after engineering work.*

Network Rail should examine the safeguards and controls in the existing line clear verification process to establish what improvements could be made. This should build on any relevant existing work that has already been undertaken by Network Rail and should specifically consider:

- why the current vehicle management forms are not being used by some hand trolley and rail skate users
- whether the overall risk of using hand trolleys and rail skates could be reduced through a consistent application of an improved line clear verification process across its infrastructure, rather than limiting its use to only those areas that use axle counters for train detection
- if the line clear verification process should be integrated with the planning processes for managing the safety of people working on or near the line.

Network Rail should then implement any changes identified to create a revised line clear verification process, clearly define when and where the revised process should be applied on its infrastructure, and brief staff on any changes that are made

### ORR decision

4. The first part of the Network Rail plan to address the recommendation is a revision of NR/L3/OPS/O84 (Line Clear Verification Process), which following a timescale extension, is expected by December 2023. The revision has been delayed in part to consider the impact of LCV across all types of train detection, not just axle counters. We support the approach being taken by Network Rail and will review the revised standard when it becomes available. We have also asked Network Rail if the requirements of the revised LCV standard will still be paper based or if will it be incorporated into Rail Hub.

5. 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 close it

**Status: Open.**

### Information in support of ORR decision

6. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

The intention of this action plan is to close out the recommendation 1 from Challow (RAIB) and recommendation 13 from Twickenham (COLAS). Further consideration to the long term recommendation shall also be given.

It is clear a re-write of the 084 standard is required. This shall be completed in a working group with invites to industry and subject matter experts while also including representatives from the end users to ensure a breadth of knowledge and understanding is represented.

- Re-write of the standard to consider the points made in the recommendation.
- Proposal to apply LCV process to every possession, regardless of signalling methodology used.
- Clearer briefing material
- Assurance of briefing material
- Review how the LCV process is linked into the planning standards for work and possessions
- Review feedback on the VMFs and amend accordingly.

December 2022 - Submit remit for NR/L3/OPS/084 – Line clear verification process

January 2022 – Formulate LCV working group. Include recommendations to related standards (019, NR/L3/OPS/202 & 303)

March 2023 – Submit draft NR/L3/OPS/084 for stakeholder review

May 2023 – Finalise standard NR/L3/OPS/084 and submit for publication

June 2023 – Publication of revised NR/L3/OPS/084 with compliance date of July 2023

##### Evidence required to support closure of recommendation

7. On 16 May 2023 Network Rail provided the following timescale extension to 1 December 2023:



Challow  
recommendation 1 Exte

## Recommendation 2

*The intent of this recommendation is to consider longer-term changes to the line clear verification process which incorporates technology to reduce the risk of vehicles such as hand trolleys or rail skates being left on the track when the line is handed back after engineering work.*

Network Rail should investigate what technology could be used to support the line clear verification process and minimise the influence of predictable limitations of human performance. This should build on the existing work that has already been undertaken by Network Rail and the Infrastructure Safety Leadership Group to look at potential solutions which use technology. Network Rail should then implement any changes identified to:

- create a revised line clear verification process that is supported by technology
- clearly define what equipment is needed
- provide the equipment to allow the use of the revised process on its infrastructure
- brief and/or train staff on the changes that are made to the process and the equipment that is introduced

## ORR decision

8. Network Rail have taken the recommendation into consideration by reviewing systems for tracking and monitoring assets. In parallel, RSSB is reviewing the application of Geofencing for marking the boundaries of a worksite. The finding of these workstreams will inform the wider review of LCV process and standard.

9. 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 close it

**Status: Open.**

## Information in support of ORR decision

10. On 29 November 2022 Network Rail provided the following initial response:

### Action Plan

Please provide milestones with dates

**Action 1 – LCV process**

1 – AD Little are undertaking an activity to recommend high-level decision-making flow diagram as the basis for our short / medium- and long-term strategy. This is expected from AD Little in March 2023

2 – System Operator are running a standard working group to review and update the LCV process/standard. (This includes whether it should apply to all possessions). Deadlines haven't yet been set. Expected Summer 23.

**Action 2 – Technology review**

1 – RSSB are reviewing the application of Geofencing technology, this review is intended to create industry recommendations regarding the most effective application (cost / benefit / human factors).

2 – Network Rail is evaluating Matrix iQ at Bristol DU, Technical Authority is evaluating Masternaut Photo APP solution and Southern is evaluating OnWave. Each of these projects combined with the work from AD Little and RSSB will help shape a long-term application of technology. Expected Nov 23

**Evidence required to support closure of recommendation**

Change plan to be supported by:

- AD Little report
- Findings from the evaluation of Matrix iQ, Masternaut Photo APP solution and OnWave

Once the implementation strategy has been finalised, the implementation activity will see:

- Documentation (above) to define the plan
- Updated standard (LCV process / implementation & referencing minimum technology)
- Identified technology solution been made available (demonstration)
- Briefing activity evidenced

**Recommendation 3**

*The intent of this recommendation is to remove the risk of hand trolleys with red flags not being seen by staff during darkness and subsequently left on the track.*

Network Rail, following the prescribed industry processes, should propose an amendment to Rule Book Handbook 10, GE/RT8000/HB10, so that hand trolleys are required to display an illuminated red light in both directions, at all times when on the track, and that the existing reference to the red flag is completely removed.

**ORR decision**

11. Network Rail made a proposal to RSSB for a change to Rule Book Handbook 10, GE/RT8000/HB10 to mandate the use of red lights, rather than red flags, on hand trolleys. The revision to the Rule Book will be published in December 2023.

12. 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 close it

**Status: Closed.**

### Information in support of ORR decision

13. On 29 November 2022 Network Rail provided the following initial response:

Action Plan
<b>Please provide milestones with dates</b>
<p>Review the availability of product approved red lights to confirm a realistic date for the Rule Book change to come into force. (30 November 2022)</p> <p>Issue a Safety Alert informing all Network Rail users of Trolleys on the line that red lights must be used from a specific date. (15 December 2022)</p> <p>Submit a Request for help to the RSSB outlining the problem statement and requesting a piece of work to review this element of the Rule Book. (31 December 2022)</p> <p>Present the Request for Help at the first available Operations Principles Group and TOM SC to agree the correct priority for the project. (31 March 2023)</p> <p>Publication of the Rule Book requirement for red lights with the flag removed. (December 2023)</p>
<b>Evidence required to support closure of recommendation</b>
<p>Request for help document. Updated Rule Book GERT8000 Handbook 10.</p>

14. On 3 October 2023 Network Rail provided the following closure statement and supporting documents:



### Recommendation 4

*The intent of this recommendation is to reduce the risk of hand trolleys not being seen by staff during the hours of darkness and subsequently left on the track.*

Network Rail should develop and implement processes to ensure that any hand trolley placed on its track has illuminated red lights displayed in both directions at all times. These processes should include pre-use equipment checks, provision of spare parts, availability of alternative equipment should a red light fail or break, and a mechanism to report and rectify faults before the hand trolley is used again

### ORR decision

15. Network Rail is conducting a revision of standard *NR/L2/RMVP/0200/P514 - Hand Controlled Trolleys* to mandate that any hand trolley placed on Network Rail infrastructure has illuminated red lights displayed in both directions at all times. We have asked Network Rail to confirm the latest position with this work.

16. 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 close it

**Status: Open.**

### Information in support of ORR decision

17. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

1. Submit a standard remit to the PT&RS Standards Steering Group (SSG) to revise NR/L2/RMVP/0200/P514 **(by 16 Dec 2022)**
2. Set up a working group to revise NR/L2/RMVP/0200/P514. Forward a draft for stakeholder review and PT&RS SSG sign off. **(by 31 Mar 2023)**
3. Publication and briefing of revised NR/L2/RMVP/0200/P514 by the PT&RS SSG. **(by 30 Jun 2023)**
4. Implementation of the revised NR/L2/RMVP/0200/P514 by the PT&RS SSG in conjunction with the launch of the Sentinel OTP Core and trolley user competence (Twickenham Rec 17) and associated training material on the Training Toolkit. **(by 03 Sept 2023)**
5. Submit a proposed closure statement and evidence to the Network Technical Head of Plant for review and approval. **(by 10 Oct 2023)**

##### Evidence required to support closure of recommendation

Revised issue 6 of NR/L2/RMVP/0200/P514 – Hand Controlled Trolleys

### Recommendation 5

*The intent of this recommendation is to reduce the risk of hand trolleys or rail skates being used in an unsafe way and left on the track when the line is handed back after engineering work.*

Network Rail should review the effectiveness of its safety assurance activities relating to the use of hand trolleys. It should address any deficiencies that are identified so that the associated risks are better controlled.

### ORR decision

18. We have arranged a meeting with Network Rail on 28 September 2023 to discuss closure of the recommendation.

19. 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 close it

**Status: Open.**

### Information in support of ORR decision

20. On 29 November 2022 Network Rail provided the following initial response:

#### Action Plan

##### Please provide milestones with dates

1. Produce a remit of all assurance activities within scope of this recommendation, covering both maintenance and operations standards and processes. 10<sup>th</sup> Dec 22
2. Conduct a review of the current use of the above assurance activities, and the quality of that assurance. 30<sup>th</sup> April 23
3. Produce a report including any improvements/recommendations. 30<sup>th</sup> May 23

Timescales needed to deliver any improvements will be determined with the report.

Noting that the assurance within the LCV standard will change over the coming months as the standard is being amended.

##### Evidence required to support closure of recommendation

Review report  
Governance of any improvement / recommendations