

Oliver Stewart
RAIB Recommendation Handling Manager



21 October 2022

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

Dear Andy,

RAIB Report: Overspeeding trains between Laurencekirk and Portlethen on 4 December 2020

I write to provide an update¹ on the action taken in respect of recommendations 1 & 2 addressed to ORR in the above report, published on 15 November 2021.

The annex to this letter provides details of actions taken in response to the recommendations and the status decided by ORR. The status of recommendation 1 is '**Progressing**' and the status of recommendation 2 is '**Implementation on-going**'.

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 24 October 2022.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Oliver Stewart', written in a cursive style.

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 15 November 2021.
2. After considering the 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 its conclusions. The consideration given to each recommendation is included below.
3. This annex identifies the correspondence with end implementers on which ORR's decision has been based.

Recommendation 1

The intent of this recommendation is to provide a complete and easily understood template to advise drivers and signallers of emergency speed restrictions. The basis of such a document is currently included within NR/L3/OPS/045/3.19 issue 2.

Network Rail should review and improve the content and layout of the example Emergency and Blanket Emergency Speed Restriction form. This should include consideration of:

- identification of key information for drivers, other information which should be included and existing content which is unnecessary;
- applying human factors best practice relating to the effective communication of critical information displayed in late notice cases; and
- including a simple diagrammatic representation of the restriction to aid comprehension and make it easier to remember.

ORR decision

4. Network Rail has worked with relevant stakeholders through the Train Accident Risk Group (TARG) to revise the form for notifying train drivers of blanket emergency speed restrictions (F3.19A Notice to Train Crews -Emergency Restriction of speed). We have asked Network Rail to confirm if the form is now in use and what briefing has been done as part of any roll out.
5. Network Rail has confirmed National Operating Procedure 3.19 is being finalised and roll out to stakeholders is expected to start on 15 December 2022, with the new form expected to be in use from this point.
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

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

7. On 31 January 2022 Network Rail provided the following action plan:

Action Plan

Please provide milestones with dates

1. Review National Operating Procedure 3.19 Speed Restrictions in relation to the improvisation of Blanket Emergency Speed restrictions (BESR) and the associated forms F3.19A Notice to Train Crews -Emergency Restriction of speed.
Intent. To provide a new revised complete and easily understood template notice to be completed by NR Route controls to advise drivers of emergency speed restrictions.
Target Completion 30 June 2022
2. National Operations Team to engage with national contacts at ASLEF, RDG & RSSB Overspeed Management T&F Group.
Intent. To engage with Key Stakeholders to ensure that the proposed draft form F3.19A is fit for purpose to give improved display visibility to end users and include simple diagrammatic representation of the speed restriction / location to aid comprehension and make the BESR detail easier to remember by the driver.
Target Completion 30 April 2022
3. National Operation's Team to engage with RSSB/RDG/RAIB Human Factors
Intent. To ensure that the new template form conforms to human factors best practice relating to the effective communication of safety critical information.
Target Completion 30 April 2022
4. National Operation's Team to engage with RSSB/RDG & Network Rail Regions to brief the changes to the form and NOP 3.19.
Intent. To ensure that the new template form and NOP are consistently implemented across industry to provide the vital information to a Driver in a more user friendly format.
Target Completion 30 September 2022

Evidence required to support closure of recommendation

New national Operating Procedure 3.19
New BESR Form F3.19A Notice to Train Crews -Emergency Restriction of speed
Industry briefing material

Recommendation 2

The intent of this recommendation is to develop reliable and easily understood methods of implementing blanket emergency speed restrictions (precautionary speed restrictions that are imposed over a wide area without the installation of speed restriction warning signs). Implementation of this recommendation may be assisted by work currently being undertaken by RSSB and TARG in response to RAIB recommendations relating to the Sandy South Junction investigation.

RSSB, in consultation with RDG and Network Rail, should review the methods of implementing blanket emergency speed restrictions. This review should include consideration of how safety critical information can be more reliably disseminated to train drivers, how they can best be helped to remember this information when needed and future alternatives to reliance on the driver's memory. Its scope should include:

- a critical evaluation of all methods that are currently used to disseminate safety critical information to train drivers;
- human factors best practice relating to the effective communication of critical information;
- the capability of existing railway technology (such as GSM-R radio) as an aid to notifying or reminding drivers of blanket emergency speed restrictions systems, and the potential of future technological developments; and
- the longer-term potential of modern digital train control systems, such as the European Train Control System, to provide a reliable means of slowing down trains on a section of route when required.

The findings of this review, and the solutions identified, should then be communicated to train operators and infrastructure managers in the form of published guidance and recommendations for changes to standards and/or technological systems.

ORR decision

8. In recognition of the cross industry nature of this recommendation and to fully understand the action being taken we have held two meetings with Network Rail, RDG and RSSB.

9. RSSB has held workshops with Network Rail Control, TOCs and supplier to discuss existing arrangements for how BSERs are communicated and implemented. The work has identified variations across the sector.

10. In Scotland acknowledged broadcasts are used rather than advisory broadcast. RSSB has planned further research on the effectiveness of acknowledged broadcasts, including the impact on signallers.

11. RSSB is planning to report the findings of the work by March 2023. We will consider the findings of the review and how they are taken forward and provide an update to RAIB.

12. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RSSB has:

- taken the recommendation into consideration; and
- is taking action to implement it

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

Information in support of ORR decision

13. On 21 June 2022 RSSB provided the following initial response:

I am pleased to report that the recommendation has been accepted and that a plan of work to address it has been agreed with the Overspeed Task and Finish Group (OTFG). The OLTFG is a sub-group of the Train Accident Risk Group (TARG) and has representatives from across the industry, including Network Rail, Colas, LNER, GWR, CrossCountry, RDG and GBRailfreight. The group also has representation from the RSSB Human Factors and Operations teams, whose inputs will be considered throughout. The proposed plan to address this recommendation includes a number of work-packages with the aim to complete by the end of March 2023. This includes:

1. *Evaluating the current process and critical risks. This will include:*
 - a. *Mapping current process against current standards and rules*
 - b. *Identification of critical risk interfaces through a human HAZOP*
 - c. *Identification of variations in nationwide application and potential risks*
 - d. *Clarification of definition of BESR / BSR and other variations*
2. *Define communication flow using the above mapping to:*
 - a. *Define criticality of information and current delivery*
 - b. *Evaluate effectiveness of current delivery methods*
3. *Explore alternative methods of implementation:*
 - a. *Utilising the above two workstream outputs evaluate alternative options / methodologies to implement blanket speeds*
4. *Output report covering:*
 - a. *Summary of findings from the above workstreams*
 - b. *Purpose improvements to the BESR process*

We will keep ORR informed of updates each month, in the usual manner.

14. On 16 September 2022 RSSB provided the following update:

Since submitting the plan for this recommendation, the first piece of work has commenced, under the guidance of the newly formed over-speed sub-group to TARG, with the work being lead by RSSB and Rail Partners. A review of the documentation which prescribes the imposition of blanket speeds been review (Rule Book SP6, M3 and the NOPs 045 3.19 and 3.17 along with other local instructions). The provided a basis for mapping out a flow chart of the process (to be sent once finalised) showing the communications and decisions between those involved in the process (NR Control, TOC/FOC/Supplier Control, Signallers, Depot, Drivers).

Two further workshops have been held with industry representatives (NR Control, TOC's, Supplier) to validate and expand on the content, specifying the technology or medium by which the communication is sent, and doing an early identification of the potential issues with the process which can result in a risk of the blanket speed not being communicated or understood. This has also helped to identify and map out national variations in the way in which the process is implemented and also the

terms by which the process is referred to. Due to industrial action / leave / operation London Bridge, some further work with industry is required as we could not get a full cross-section of TOC / FOC's at the workshop.

Following work packages include completing the process chart, extrapolation and quantification of the risks, undertaking a human HAZOP on the process, feeding into the re-write of the NOPs (being led by NR) and then a more detailed analysis of the potential use of GSMr acknowledged broadcasts to communicate this information. The second workshop revealed that similar work is underway in Scotland on expanding the use of GSMr so the aim is for this work to align with that, to ensure there is no duplication and to share learning. This may have an impact on the timescales / end data for this work, but this is not clear yet. I will communicate any potential impact on timescales once I have this. Otherwise we are still planning on completing this work by end March 2023.