

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



29 November 2024

Mr Andy Lewis  
Deputy Chief Inspector of Rail Accidents

Dear Andy,

**RAIB Report: Two signal passed at danger incidents, at Reading Westbury Line Junction and Ruscombe Junction on 28 March 2015 & 3 November 2015**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 29 September 2016.

The annex to this letter provides details of actions taken in response to the recommendation and the status decided by ORR. The status of recommendation 3 is **'Closed'**.

We do not propose to take any further action in respect of the recommendation, unless we become aware that any of the information provided has become inaccurate, in which case I will write to you again.

We will publish this response on the ORR website.

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

### Recommendation 3

*The intent of this recommendation is to improve the industry's understanding of fatigue risk through deeper analysis of available data sources, providing more intelligence on fatigue risk precursors which could feed into fatigue risk management systems (although this should not be a reason to delay the implementation of recommendation 2) and be of benefit to the wider industry.*

DB Cargo (UK) Ltd, in cooperation with other freight operating companies, should submit a research proposal to RSSB with the aim of conducting more detailed analysis on incident patterns using normalised data (eg long shifts, consecutive shifts), revisiting previous research in this area and building on recent advances in SPAD data analysis.

### ORR decision

1. Freight operating companies, cooperating through the freight risk steering group, have sought to improve understanding of fatigue across the sector through a number of different workstreams. This has included T1230 (Fatigue Friendly Rosters), T1193 (Understanding the Functional Requirements for Train Driver Attention and Alertness Monitoring Devices) and using ORR fatigue guidance to implement best practice across the sector.
2. T1230 was stopped as an agreement on how to progress could not be agreed between RSSB, the freight sector and the trade unions. In our view, there is sufficient intelligence on fatigue risk precursors and no compelling justification for significantly more research.
3. The findings of T1230 are summarised as follows:
  - The causes of fatigue among rail staff have consistently been found to include long working hours, heavy workloads, early morning or night shifts, and insufficient sleep.
  - A 'fatigue-friendly' schedule minimises circadian (body clock) disruptions and minimises the accumulating sleep loss over a single shift and a shift cycle.
  - Schedules preventing a build up of chronic sleep debt may reduce the detrimental effects of shift work.
  - There is no 'one-size-fits-all' shift pattern that would be optimal for all transport modes.
  - When assessing fatigue risk, it is important to account for all time worked, not simply what the roster states. This includes un-rostered overtime and time on call.
4. Research project T1193 is piloting an in-cab fatigue monitoring system. This research project is supported by ASLEF's National Executive and an in-service pilot

is being set-up involving c2c, LNER and DB Cargo. The pilot is expected to start by the end of 2024 and run for 12 months.

5. Together, the different workstreams have contributed to an improved understanding of fatigue risk in the freight sector in line with the intent of the recommendation.

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

- taken the recommendation into consideration; and
- has taken action to close it.

**Status: Closed.**

### **Previously reported to RAIB**

7. On 28 September 2017 ORR reported the following:

It is not clear from the DB Cargo response if a research proposal has been formally submitted to RSSB, or if alternative means were being taken to address the recommendation. ORR has written to DB Cargo asking for confirmation of what has been done and what is planned to address the recommendation.

### **Update**

8. On 9 August 2022 RSSB provided the following update:

*I have spoken to R&D and we believe the research we have in play supporting this is T1230 – Fatigue Friendly Rosters. Jeremy Mawhood (ORR) is industry sponsor and the steering group includes Michael Jackson from DB Cargo though, so it might be a plan to check with them.*

### **Project Description**

*There is a lack of alignment between the numerical values within the shift pattern design guidelines put forward by RSSB and ORR. These are in some cases significant and it has not been possible to resolve them based on a high-level review of the literature. The resolution needs input from deep specialists in fatigue, as well as modelling using a biomathematical model with a validated threshold. This project will produce recommendations to update, align and better-define shift pattern design guidelines to manage fatigue risk, and example rosters that can either be adopted by companies or used to train rostering staff.*

### **Project Update – On Hold**

*Following previous discussions with the ORR and RDG it was agreed that the project is paused until the current sensitivities around cost and industrial relations have settled, for an estimated 12-18 months (to the end of FY 2023-24). The ORR*

*acknowledges the position the industry is in and the impact this will have on this project.*

9. On 16 October 2024 RSSB provided the following update:

*Apparently Johnny Schute and Paul Leach met with Ian Prosser and Eryl Marsh last year to confirm to them that the project would not be progressing, the reason being that there was no industry agreement on how to take the project forward. The ORR has since updated its fatigue guidance and RSSB is encouraging people to focus on implementing that. Research T1230 has therefore officially been closed and the completed literature review published to the research catalogue. We have no current plans to revisit this work.*

*However, Research IMP-T1193 is currently in progress, which is a pilot of an in-cab fatigue monitoring systems that uses to monitor driver attention and awareness. It is a very similar solution that that used by Croydon Trams following the Sandilands accident. This research project is supported by ASLEF's National Executive and an in-service pilot is being set-up involving c2c, LNER and DB Cargo. While the project has had its technical challenges, we are currently on-course for the pilot to start this side of Christmas and run for 12 months. These timescales are, however, subject to change as the process has to be carefully managed before the pilot can start.*

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### ORR decision

1. It is not clear from the DB Cargo response if a research proposal has been formally submitted to RSSB, or if alternative means were being taken to address the recommendation. ORR has written to DB Cargo asking for confirmation of what has been done and what is planned to address the recommendation.
2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, DB Cargo has:
  - taken the recommendation into consideration; and
  - is taking action to implement it, but ORR has yet to be provided with a timebound plan.

**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

3. On 10 August 2017 DB Cargo provided the following initial response:
 

*Recommendation 3 is broken down into several actions:*

*Rostering rules have been developed with ASLEF as per the attached ORR guidance with notes.*

*BRP has already a number of controls built in (see attached) plus a number that have been requested and implemented following a meeting between the Safety Representatives and Management. These are highlighted in yellow. The remainder are in the process of being implemented. The Fatigue Working Group is to reconvene on 31 August preceded by a meeting of a small group of Safety Representatives and members of the resource team to establish parameters within BRP post its full introduction. DBC attends various working groups at RSSB including National Freight Safety Group (NFSG) and Rail Delivery Group (RDG) of which subworking*

*groups are looking at fatigue issues. Any key internal findings and related information will be fed back into these groups.*