Oliver Stewart
RAIB Recommendation Handling Manager

11 July 2023

Mr Andy Lewis
Deputy Chief Inspector of Rail Accidents

Dear Andy,

RAIB Report: Signal passed at danger and near miss at Sileby Junction, Leicestershire on 5 May 2021

I write to provide an update[1] on the action taken in respect of recommendations addressed to ORR in the above report, published on 11 July 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 recommendation 1 is **'Closed'** and the status of recommendation 2 is **'Open'.**

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 14 July 2023

Yours sincerely,

[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 11 July 2022.

2. After considering the recommendations ORR passed recommendation 1 to Colas Rail and recommendation 2 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 passed recommendation 1 to other FOCs and on-track machine operators as a learning point as it was concluded that that there are equally important lessons for them. ORR did not ask these organisations to provide a reply.

4. Recommendation 1 was also passed to Network Rail, and they were asked who else this recommendation applies to as a learning point and also asking them how they are making sure that information from their new fatigue management standard is getting out to all companies likely to access their infrastructure.

5. 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 reduce the risk of fatigue affecting the performance of safety-critical staff at Colas.

Colas Rail UK should review and update its current fatigue risk management system for staff who undertake safety-critical tasks, making any changes as necessary to confirm that it meets relevant industry guidance and good practice. This review should be based on an assessment of work activities and their associated risks and available risk controls. The review should consider relevant law, guidance and current good practice

ORR decision

6. In response to the recommendation, Colas have reviewed and made improvements to their Fatigue Risk Management System (FRMS) by applying the ORR's Fatigue Factors good practice guidelines.

7. The Colas rostering team have been trained on the Fatigue Factors Guidelines, so avoid the Fatigue Factors, where reasonably practicable. Where fatigue factors do apply, Colas staff are now trained to follow the process stipulated in the guidance, which is to justify why the fatigue factor cannot be avoided, minimise the fatigue factor, risk assess, apply controls and document the reasons for their decision.

8. Although the Fatigue Factors have not been applied in their entirety, KPIs have been set where if there are exceedances of Fatigue Factors in rostering, this will trigger an enquiry by senior managers into the reasons and action taken to reduce exceedances.

9. The measures taken by Colas are consistent with industry guidance and good practice, thus meeting the requirement of the recommendation.

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

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

***Status: Closed*.**

Information in support of ORR decision

11. On 4 November 2022 Colas Rail provided the following initial response:

The Sileby Junction RAIB report once received was circulated internally to all relevant personnel including those at senior management and director level in advance of a planned meeting to enable a thorough understanding of the issues to be absorbed paying specific attention to the recommendation, learning points and causal factors leading to the SPAD incident. As a result of planned meetings being held attended by occupationally competent persons at senior management level and conversations held, a number of remedial actions and checks were initiated that required addressing with each agreed action having an allocated action owner with the action details stated below. The series of meetings were all noted with minutes of the meetings taken for reference purposes and to measure the progress of actions allocated.

The process followed both those actions that could be undertaken immediately and those measures that could be introduced as soon as reasonably practical to address the RAIB report's findings and strengthen the fatigue arrangements currently in place.

Colas Rail has a written policy of "Free to be Safe" that is fully supported by the company CEO with copies of the policy and posters on prominent display at all Colas Rail locations. This policy applies to all members of staff without exception whereby staff that have any concerns relating to safety can freely voice these concerns through line management and can, if deemed necessary, escalate higher within the company.

1. Introduction

Summary of actions undertaken by Rail Services in response to recommendation 1 of the RAIB Sileby Junction report to address the report's recommendation with immediate measures taken and details of on-going measures to implement the recommendation in full.

A number of high-level meetings have been held with senior managers and directors within the wider Colas Rail business for the purposes of identifying areas of risk or failure of processes that could lead to staff fatigue and any resultant incident where fatigue could be a causal factor or factor in an incident. A draft mapping process has been developed internally for the purposes of

reviewing the process of identifying where fatigue could be a factor, and how to mitigate the likelihood of fatigue among staff, has been initiated and is currently on-going. The objective of the proposed fatigue mapping process is to simplify and strengthen existing arrangements in place thereby ensuring that it meets Rail Services current and future operational freight and on track machine requirements.

Rail Services currently uses a fatigue management assessment system titled OTMS (on track machine system) for establishing fatigue scores for all rostered staff in advance of planned shifts and immediately before the shift to ensure that any areas of risk identified have been mitigated. As a result of the Sileby Junction incident the OTMS system was reviewed and a system coding change made. Subsequent to the system change it has been established that the OTMS fatigue scoring data is identical to that of the HSE 2.2 calculator. (Section 3 of this response contains the salient details)

The post of Fatigue Manager is now fully established with the position of a dedicated fatigue co-ordinator providing support and undertaking associated fatigue management duties. The freight and on track machine shift planners (those who produce the rostered staff working hours) are in regular communication with the Fatigue Team thereby enabling the Fatigue Team to check all allocated fatigue scores. Where an unacceptable risk score has been identified, risk mitigation measures are implemented to address those risks identified. Those shifts that are late notice shifts are monitored for fatigue following the same process as longer planned rostered duties.

The Rail Services Fatigue Team issues a monthly fatigue brief to all staff that includes information concerning fatigue, industry news related to fatigue and general advice on how to prevent and manage fatigue. Staff are encouraged to contact the Fatigue Team on any topics they would like to see included in the brief.

The Fatigue Brief includes the names of all the fatigue champions who represent the disciplines of freight and on track machine operations for all Rail Services areas of operation. The fatigue champions are primarily made up of train drivers and operators and those staff who are able to contribute by way of constructive dialogue and input into the group’s activities.

All Rail Services rostered staff including train drivers, operators and ground crew (shunting duties etc.) that undertake both safety critical and non-safety critical duties are measured for fatigue before the planned work activity shift is due to commence.

The different types of fatigue and related issues contained within the monthly brief including details on the following types of fatigue:

• Chronic illness fatigue.

• Mental fatigue.

• Physical fatigue.

• Pain fatigue, and

• Emotional fatigue.

In the event of an accident or incident involving Rail Services, including travel on the public highway, the affected person's fatigue scores are analysed with the fatigue score ratings sent to the company's appointed incident investigating officer for scrutiny to check if fatigue may have been a contributory factor.

Fatigue initiatives currently being progressed includes: • Fatigue process analysis (implementation of a simplified OTMS process system with less data repetition).

• Review and preparedness for new Network Rail Standard and OTMS review covering:

- Data input
- Data output
- Data management

• Management / manager responsibilities.

• Increased awareness of the OTMS system.

• Increased mitigation activity to eliminate staff fatigue.

All rostered staff receive their following week's programmed rostered shift which details the operational shift from booking-on to booking-off and locations of work from the planning and rostering teams. An example of a planned on track machine 08 4x4 Unimat tamper shift is detailed below: (Note: staff member name erased for GDPR purposes). (See figure 1)

12. Colas forwarded their latest updated FRMS document following a meeting with ORR dated April 2023:

Final Version
HS-A3-011 Issue 5 Ap

Recommendation 2

The intent of this recommendation is to address weaknesses in the rail industry's existing control of overrun risks associated with operating non-standard trains on Network Rail managed infrastructure.

Network Rail, working together with relevant transport undertakings, should develop and implement a process which identifies and accounts for the residual overrun risk associated with the operation of vehicles (such as some freight trains and on-track machines) which have braking rates lower than those assumed when the effectiveness of TPWS is assessed.

ORR decision

13. Network Rail has formed a joint working group with other industry parties to consider the effectiveness of TPWS, in response to the Sileby SPAD on 5 May 2021 and a number of other incidents where TPWS was either not present or not effective.

14. 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

15. On 4 October 2022 Network rail provided the following initial response:

Action Plan
Please provide milestones with dates
A joint working group with industry partners will be formed to consider the intent of the recommendation. The joint working group will, for provisions made for vehicles whose braking rates are lower than considered in TPWS effectiveness. • *Review the current processes for assessment of signal overrun risk.* • *Review the industry tolerability levels.* • *Consider the likelihood of funding provision for expected mitigation measures that could be applied.* • *Consider what reasonable mitigations could be provided to reduce signal overrun risk of these trains.*
Evidence required to support closure of recommendation
Minutes of meetings recording the reviews and considerations.

16. On 17 May 2023 Network Rail provided the following update:

The progress has been a little slow on this one, and the thrust of the query has been given to the train protection steering group, albeit that was quite recent and we are waiting for the minutes of the meeting to be published.

The SORA process has been reviewed, and has concluded that, as the train running for these vehicles is rarely timetabled, to include would be aspirational and inaccurate. This has also fed into the SORA review on levels of accuracy for consequence modelling versus what is done for likelihood modelling.

The question of risk tolerability levels is tied to effectiveness of train protection and I understand this was discussed at TPSG on 10-5-2023.

Similarly the question of funding provision is a TPSG question, and given the recent decision for OTTO, is taken as having a poor business case.

The mitigations considered are:-

- *Enhanced TPWS protection, which is not considered reasonable, given the expected cost of application and the expected system life versus the risk reduction delivered.*
- *Provision of speed supervision, which is reasonable and is planned in the ETCS rollout. Interim solutions proposed under OTTO are deferred at this time, so is not considered reasonable in the short term.*
- *Introduction of vehicle speed restriction proportionate to braking capability is thought to be excessively restrictive and will only manage part of the risk.*
- *Expansion of operating rules to apply "special working" controls for specified trains, again this is thought to be excessively restrictive and will only manage part of the risk.*

This brings us to a conclusion that the operational risk of these vehicles is understood, and given the low frequency of operational use and hence the related frequency of hazardous events the risk is still tolerable, and the opportunity to reduce the risk is tied to provision of speed supervision through ETCS rollout.

Hope this gives a fairly clear indication of progress to action plan and where we think we will end up.