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27 May 2021

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

Dear Andrew,

**RAIB Report: Near miss between a train and a level crossing user at Dock Lane, Melton, Suffolk On 14 June 2016**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendations 1 & 2 addressed to ORR in the above report, published on 3 May 2017.

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 is '**Implemented**'.

We do not propose to take any further action in respect of the recommendations, 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 on 1 June 2021.

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 1

*The intent of this recommendation is to ensure that all elements of human error by signallers are accounted for when assessing the risks to users at telephone equipped level crossings and when considering options to reduce the level crossing risk.*

Network Rail should review, and revise as necessary, its risk management processes so that the risk of signallers making errors when controlling telephone operated level crossings is taken into account when identifying appropriate improvement options. This should include consideration of factors that affect:

- the probability of signallers making errors; and
- the number of crossing decisions that signallers are required to make.

Network Rail should also clearly identify who is responsible for assessing the risk associated with signallers making such errors

### ORR decision

1. Networks Rail has issued an updated standard Provision and Risk Management of Level Crossings (NR/L2/XNG/001). Section 4.2 of the standard is specifically about the signaller interface and gives more detailed guidance to those undertaking risk assessments, including reference to workload and ergonomic risk assessments.

2. 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 implement it

**Status: Implemented.**

### Previously reported to RAIB

3. On 3 May 2018, ORR reported that no formal response to the recommendation had been provided.

### Update

4. On 19 June 2018, Network Rail provided the following initial response:

*Actions:*

1. *The review criteria for the recommendation will include:*
  - a. *Investigate, develop and propose, potential solution(s);*
    - i. *decision making processes, linked to;*
    - ii. *how many calls a signaller takes;*
    - iii. *error rates proportionate to risk;*
    - iv. *potential internal and external factors that lead to errors.*

- b. *Liaise and consult with appropriate stakeholders from RSSB, NR Ergonomics, Level Crossing Team, Route Businesses, Head of Operations Principles and Standards, Operations Delivery Manager(s) / HoRSHE'(s) / Operations Manager(s) / Signaller(s) effected / Trade Union Health and Safety Representative(s);*
2. *Evaluate the proposal(s) and the need to trial them with stakeholders or go live as appropriate.*
- a. *Develop one solution that is appropriate that conforms to ALARP;*  
 b. *Develop a risk based criteria with appropriate measures of success;*  
 c. *Trial or go live as agreed;*  
 d. *Monitor and review the solution.*
3. *A report making reference to the findings and evidence will be produced to close out the recommendation. This will include as appropriate recommendations for change to the Rule Book industry and Network Rail standards or other actions as appropriate.*

*Note: After each stage an update will be provided. Any changes to the actions or review criteria will be noted with the reasons for this.*

*Note: This work will run alongside to RAIB report, Collision between a train and tractor at Hockham Road user worked crossing, near Thetford 10 April 2016 recommendation 1. The intention is to collaborate on similar issues to help reach solutions for both recommendations.*

*Timescales:*

1. *The proposals for the actions will be followed by the end of April 2018;*  
 2. *Evaluate the proposal(s), agree one to take forward and the need to trial or go live with stakeholders by the end of June 2018;*  
 3. *All actions and close out report to be completed by the end of October 2018.*
5. *On 12 April 2021 Network Rail provided the following update: Please find attached the L2 standard for the Provision and Risk Management of Level Crossings. It was published on the 5<sup>th</sup> December 2020 and had a compliance date of 6<sup>th</sup> March 2021 for all future risk assessments.*



NR\_L2\_XNG\_001.pdf

*Section 11.1 (below) highlights the requirement for the LCM to gain an understanding of signaller workload, and other factors that could cause signaller error when identifying hazards associated with a level crossing as part of the Narrative Risk Assessment process.*

## 11 Stakeholder engagement

### 11.1 Operations

Operations shall work collaboratively with Level Crossing Managers as part of assessing the safety of level crossings (as appropriate).

Narrative risk assessments shall include content relating to:

1. Signaller workload and the risks of human error;
2. Signal box ergonomics, incorporating displays and long signal sections;
3. Cross-referenced checks with occurrence books;
4. Notes on voice communication checks undertaken with or by the Local Operations Manager (or nominated deputy);
5. Notes on operational irregularities relating to the level crossing.

**NOTE:** further details are contained within Appendix B, section 4.2

## Recommendation 2

*The intent of this recommendation is to ensure that Network Rail fully understands the demand rate and work complexity for the signaller at Saxmundham signal box in dealing with telephone calls from user worked crossings, as well as other signalling activities.*

Network Rail should reassess the risks associated with the work demand on the signaller at Saxmundham signal box, using all the relevant assessment tools that it has available, to ensure that the number of permissions to cross given when it is not safe to cross is being managed to an acceptable level. This should include consideration of:

- the complexity of the tasks that the signaller needs to undertake;
- the number of user worked crossing calls that are dealt with by the signaller; and
- potential measures to reduce the number of user worked crossing calls that the signaller has to deal with.

It should produce a time-bound plan for implementation of any identified improvements

## ORR decision

6. Network Rail have assessed the workload of signallers at Saxmundham signal box and introduced a number of controls including the closure of some crossings and the upgrade of others. The actions taken have significantly reduced the number of occasions on which the signaller is required to respond to requests to use crossings. Further improvements are planned for later in 2021, but are not required to demonstrate that the intent of the recommendation has been met.

7. 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 implement it

**Status: Implemented.**

## Previously reported to RAIB

8. On 3 May 2018, ORR reported that no formal response to the recommendation had been provided.

## Update

9. On 19 June 2018, Network Rail provided the following initial response:

*Network Rail has reassessed the risks associated with the work demand on the signaller at Saxmundham signal box, using a new questionnaire which was developed between the Route and the central Ergonomics team. The new questionnaire was completed at the signal box by an ergonomics specialist and the results evaluated by a panel within the Route to identify the actions to address to points raised. This is to ensure that the number of permissions to cross is being managed to an acceptable level.*

*This assessment included consideration of:*

- *the complexity of the tasks that the signaller needs to undertake;*
- *the number of user worked crossing calls that are dealt with by the signaller; and*
- *potential measures to reduce the number of user worked crossing calls that the signaller has to deal with.*

*A time-bound plan for implementation of the identified improvements with immediate, short term and long term actions has been produced which has actions through to March 2021.*

10. On 21 April 2021 Network Rail provided the following update:

*Network Rail has addressed this recommendation by undertaking an assessment of Saxmundham signal box using an existing workload calculation tool, an Ergonomic assessment and used expert judgement. In relation to the workload and the signaller dealing with User Worked Crossing calls and other signalling activities, we have undertaken a full risk assessment taking into account:*

- *Signallers workload and potential for fatigue*
- *Task design and complexity*
- *Ease of interface with equipment*
- *Job demands and possible distractions*

*This assessment was undertaken in 2017 and shared with the ORR as part of the closure of Improvement Notice DTHM/30/03/17.*

*To address the risks at Saxmundham signal box, in 2017 we committed to:*

*Upgrade Dock Lane with an overlay MSL plus divert and close Bloss Level Crossing to address the long section and to remove 40% calls (including peaks) thus remove need to call the Signaller. This will also contribute to addressing the call queuing risk from high use crossings and distraction during other tasks.*

*These locations also have known poor behaviour evidence so will reduce the risk of distraction during perturbation.*

*Pursue closure of Jetty Avenue via diversion, however if this was not viable we will upgrade with technology to remove the need to call the signaller. This will remove the next highest call volume to the Signaller. This will also again contribute to addressing the call queuing risk from high use crossings and distraction during other tasks. This location also has known poor behaviour evidence so will reduce the risk of distraction during perturbation.*

*Upgrade Hubbards level crossing with technology to remove the need to call the signaller. This will remove the distraction due to known poor behaviour evidence.*

*Add additional axle counters for the south interlocking to assist the signaller in knowing the train location. We committed to undertake a cost benefit review following the Grip 3 study and indicative pricing. If more viable we will install technology eg MSL options to remove the calls to the signaller.*

*Review the common locations where signallers call drivers to check their location and will install local signage for drivers to establish their location and/or provide improved crossing diagrams for in cab use.*

*The agreed dates with the ORR for the above was all by 31/3/2021. The key actions were tracked as part of an improvement Notice which is currently in force (DTHM/23012018) and this has been extended to complete some outstanding actions.*

*In addition, we also planned to further reduce call volumes in Saxmundham Signal Box by providing Overlay MSL systems at Maltings Level Crossing, Melton Sewage Level Crossing, Barhams Level Crossing, Fieldens Level Crossing, Wadehall Old Dam Level Crossing, Worlingham Level Crossing and North Cove Level Crossing.*

### **In terms of Completed works**

*We had been progressing plans to close Bloss Level Crossing within the Notice period via a diversionary route over Dock Lane Level Crossing. While we had obtained approval in principle from the landowners involved, which led us to place reliance on these plans, the landowner consent was subsequently withdrawn. This meant we were unable to progress the closure of Bloss Level Crossing as intended.*

*In accordance with the Notice, as it is not currently reasonably practicable to close Bloss crossing, we have implemented the following improvements elsewhere. We installed an OMSL at Wright crossing in March 2020. We are using this as an alternative means of managing the risks at Bloss Level Crossing by removing the calls from Wrights Crossing from the signaller at Saxmundham.*

*Due the nature of the use of Jetty Avenue Level Crossing, we have been unable to establish a suitable diversionary route to allow the legal closure of the crossing. As it is not currently reasonably practicable to close the crossing, we installed technology*

*in the form of an integrated miniature stop light system at Jetty Avenue Level Crossing on the 8th March 2021.*

*We have provided additional information on the signallers' screens to break down the previous long signal sections on the Saxmundham signallers' display. This approach fulfils the requirement to add additional axle counters on the north and south interlocking.*

*We have also reviewed the common locations where signallers may call train drivers to check their location and installed local signage to assist the drivers in establishing their location. We installed 14 signs.*

### **Remaining actions**

*We have not yet completed the installation of technology at Dock Lane, Hubbard's Level Crossings or the additional Overlay MSL sites.*

*Dock Lane Level Crossing is planned to have an OMSL system installed, this has been delayed by an interfacing project at Woodbridge. The Woodbridge project includes installing two Manually Controlled Barrier crossings and the speed change required for Dock Lane changes the strike in points for the two Woodbridge crossings when trains are approaching in the up direction. It was decided the best approach was for Dock Lane to be commissioned after the Woodbridge project to ensure both projects could be delivered successfully. The crossing is now due to commission on the 6th May 2021.*

*Hubbards Level Crossing vehicular section is planned for closure, by providing a new alternative road on the authorised user's land. The closure was delayed while significant discussions were held with the authorised user of this crossing, regarding the direction of the new road. The authorised user preferred a route to the South of his house, however this land was outside of his ownership and was currently in probate. We eventually managed to agree a route to the North, which is solely on the authorised user's land, this is currently being progressed and is due to be open on the 22nd September 2021.*

*In terms of the additional overlay MSL systems these are due to commission as follows:*

*Maltings Level Crossing is due to commission by 12<sup>th</sup> May 2021*

*Melton Sewage Level Crossing is due to commission by 13<sup>th</sup> May 2021*

*Barhams Level Crossing is due to commission by 10<sup>th</sup> July 2021*

*Fieldens Level Crossing is due to commission by 3<sup>rd</sup> July 2021*

*Wadehall Old Dam Level Crossing is due to commission by 30<sup>th</sup> April 2021*

*Worlingham Level Crossing is due to commission by 28<sup>th</sup> April 2021*

*North Cove Level Crossing is due to commission by 29<sup>th</sup> April 2021*

*Closure to be submitted Aug 21*

11. On 6 May 2021: Network Rail provided the following update:

*An updated on the previous information on Dock Lane closure, the 3 crossing below were all commissioned as planned.*

*Wadehall Old Dam Level Crossing is due to commission by 30th April 2021*

*Worlingham Level Crossing is due to commission by 28th April 2021*

*North Cove Level Crossing is due to commission by 29th April 2021*



## Previously reported to RAIB

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- the number of crossing decisions that signallers are required to make.

Network Rail should also clearly identify who is responsible for assessing the risk associated with signallers making such errors

### ORR decision

12. Network Rail has not provided a formal response to this recommendation.

13. ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- has not provided a response setting out how the recommendation will be delivered.

**Status: Insufficient response. ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.**

### Information in support of ORR decision

14. No formal response to the recommendations has been provided.

### Recommendation 2

*The intent of this recommendation is to ensure that Network Rail fully understands the demand rate and work complexity for the signaller at Saxmundham signal box in dealing with telephone calls from user worked crossings, as well as other signalling activities.*

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### **ORR decision**

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- has not provided a response setting out how the recommendation will be delivered.

***Status: Insufficient response.* ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.**

### **Information in support of ORR decision**

17. No formal response to the recommendations has been provided.