



OFFICE OF RAIL REGULATION

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17 June 2013

Ms Carolyn Griffiths
Chief Inspector of Rail Accidents
Rail Accident Investigation Branch
Block A, 2nd Floor
Dukes Court
Dukes Street
Woking GU21 5BH

Dear Carolyn

Near miss incident at Ufton Automatic Half Barrier Crossing, Berkshire, 4 September 2011

I write to report¹ on the consideration given and action taken in respect of the recommendations addressed to ORR in the above report, published on 20 December 2012.

The annex to this letter provides details of the consideration given/action taken in respect of each recommendation where recommendations 1 to 5 are in progress²; recommendation 6 has been implemented³ and recommendation 7 is being implemented².

ORR will monitor Network Rail's progress to implement recommendations 5 and 6 and will only provide RAIB with further information if we become aware that any of the information provided becomes inaccurate, in which case I will write to you again⁴.

We expect to update you on progress with recommendations 1 to 5 by 31 December 2013.

We expect to publish this response on the ORR website on 2 July 2013.

Yours Sincerely

Chris O'Doherty



INVESTOR IN PEOPLE

¹ In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

² In accordance with Regulation 12(2)(b)(ii)

³ In accordance with Regulation 12(2)(b)(i)

⁴ In accordance with Regulation 12(2)(c)

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Initial Consideration by ORR

All 7 recommendations contained in the report were addressed to ORR when RAIB published its report on 20 December 2012.

After considering the report / recommendations, on 28 January 2013, ORR passed all 7 Recommendations to Network Rail asking it to consider and where appropriate act upon them.

Details of consideration given and any action taken, in respect of these recommendations are provided below.

ORR also brought this report to the attention of tram operators as it was concluded 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 ensure that signallers can see appropriate information on the VDU screen when considering whether to remove reminders from signals and points using controls on IECC workstation VDUs. These include reminders on signals that are used to protect an automatic crossing under local control.

Network Rail should identify, and provide a time bound plan to eliminate, all IECC VDU controls which permit a signal or point reminder to be removed in situations where the signaller cannot see sufficient on-screen messages and indications to inform the decision whether to remove the reminder.

Details of steps taken or being taken to implement the recommendation

1. Network Rail in its response on 19 March 2013 advised that:

A study will be carried out in order to identify all of the cases of IECC signal/point reminder controls being applied to protect access to level crossings, track sections etc. where the requirement to protect the section is shown by an on-screen message or indication. This will then feed into a survey of all current IECC maps to identify where the item of infrastructure and the protecting signal (or set of points) are presented on different screen maps.

With the number of maps identified, the cost of modifying the maps to ensure that the signal is on the same map can then be estimated, allowing for any opportunities afforded by planned infrastructure upgrades or re-controls. To quantify the benefits, this cost of making the change will then be compared against the potential safety benefits. This will form part of the same work programme and risk assessment study as Recommendation 2 and the results will be presented in a single consolidated cost-benefit risk assessment report.

Timescale: 30 November 2013 for cost-benefit assessment report

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2. After reviewing information received from Network Rail, 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.

ORR will update RAIB by end of December 2013 on action being taken to address this recommendation

Status: *In-progress*

Recommendation 2

The intent of this recommendation is to provide an interface which reduces the likelihood of IECC signallers setting a route over an automatic half barrier level crossing under local control without advising the level crossing attendant and cautioning the train driver.

The intent will be satisfied if a similar message is displayed in other crossing failure conditions and/or if the interface is provided within IECC software in a manner which provides a lower safety integrity level than required for some other signalling applications.

In respect of automatic half barrier level crossings supervised from IECC installations, Network Rail should consider interfacing information about level crossing status with signal controls to reduce the risk of signallers permitting a train to pass over the crossing without applying the rules applicable to local control.

Network Rail should include consideration of a warning or reminder which must be acknowledged on each occasion that a signaller attempts to set a route over a level crossing under local control. If found practical, Network Rail should modify standards and specifications to require this feature in future IECC upgrades and new installations.

Details of steps taken or being taken to implement the recommendation

3. Network Rail in its response on 19 March 2013 advised that:

A study will be carried out in order to develop and investigate options for software changes to IECC workstations that either; prevents a signaller from removing a protecting reminder; or which prompts the signaller each time they override a protecting reminder at a level crossing, reminding the signaller that the crossing is under local control.

The cost of making the changes to IECC for future applications can then be estimated, including any additional design and testing costs that will add to the on-going scheme design. To quantify the benefits, this cost of making the changes will then be compared against the potential safety benefits. This will form part of the same work programme and risk assessment study as Recommendation 1 and the results will be presented in a single consolidated cost-benefit risk assessment report.

Timescale: 30 November 2013 for cost-benefit assessment report

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ORR Decision

4. After reviewing information received from Network Rail, 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.

ORR will update RAIB by end of December 2013 on action being taken to address this recommendation.

Status: *In-progress*

Recommendation 3

The intent of this recommendation is to ensure that, when automatic half barrier level crossings are under local control, IECC displays provide conspicuous warnings compatible with Network Rail's IECC control and indication specification.

Network Rail should review the local control indications displayed in respect of automatic half barrier level crossings on the Thames Valley Signalling Centre (TVSC) VDUs to identify any inconsistencies with the associated Network Rail specification requirements. If any of these inconsistencies have the potential to have a significant adverse effect on safety, Network Rail should amend the indications displayed at TVSC and/or the Network Rail IECC control and indication specification so that appropriately positioned conspicuous indications are displayed on all IECC VDUs.

Details of steps taken or being taken to implement the recommendation

5. Network Rail in its response on 19 March 2013 advised that:

Ufton Crossing is the only AHBC currently under the control of Thames Valley Signalling Centre. A review of the nature of the position and message provided and the risk that this poses for the operation took place on 7 March 2013. The review took into account the prominence of the indication and (given that it is recognised that the indication does not conform to section 23.2.2 of NR/SP/SIG/17504) the wording.

At the review it was agreed that there is an opportunity to make alterations to the signallers display when the relocking works take place for this section of line in September 2014. Making alterations at this point would have minimal impact on the other works in this area.

It should be noted that Western Route has committed to close Ufton crossing and this is in the early stages of development with an expected completion in the first year of CP5 [Control Period 5 2014 – 2019], but the timescale is yet to be confirmed.

Timescale: 30 September 2014

ORR Decision

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6. After reviewing information received from Network Rail, 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.

ORR will update RAIB by end of December 2013 on action being taken to address this recommendation

Status: In-progress

Recommendation 4

The intent of this recommendation is to ensure that the planned arrangements for: setting up, alteration and handing back of possessions, and any planned signalling input to associated activities, does not cause an excessive workload for any signaller.

Network Rail should examine and implement ways in which the workload of signallers can be kept within reasonable levels during engineering possessions, particularly those involving multiple changes to possession limits. This work should aim to avoid, where practical, situations in which signallers must delay engineering work or train services in order to avoid excessive workload.

Details of steps taken or being taken to implement the recommendation

7. Network Rail in its response on 19 March 2013 advised that:

Network Rail has identified that the workload of a signaller has increased not only due to engineering requests but also in the number of requests for Line Blockages.

The Line Blockage tool is the first of a number of tools to identify and recommend limitations on the workload of Signallers. It is hoped that the line blockage tools will be fully in place by March 2013 with a review and feedback event planned for June 2013 to feedback in to the National Line Blockage Group.

The next step is to look at Engineers Possessions and to understand the planning process so the workload can be managed at this stage rather than when it gets to the signaller.

At Scunthorpe and Birmingham New Street, when the operations team are aware of a heavy work load they resource additional signallers for the identified shifts on an ad hoc basis. During the research and data collection, visits to these two locations will take place to better understand the frame work they have adopted.

Action Plan:

1. *Ergonomic team to carry out a series of data collection events looking at the working arrangements and relevant workloads at the different signalling locations.*

By 1 June 2013

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2. *Ergonomic team to carry out a series data collection events to understand the planning arrangements associated with engineering possessions.*

By 1 June 2013

3. *Ergonomic team supported by the National Operations Team to produce a workload tool for planners to identify when a high workload engineers possession is planned.*

By 1 December 2013

4. *Ergonomic team supported by the National Operations Team to produce a workload tool for the signalling teams to use to identify when additional resources may be required to support a high workload associated with engineer's possessions.*

By 1 December 2013

5. *Safety Improvement Specialist and Principal Occupational Psychologist to review the output of the current workload tool associated with Line Blockages to identify how this has changed signaller workload associated with all types of line blockages, including Engineers Possessions.*

By 1 June 2013

6. *Safety Improvement Specialist and Principal Occupational Psychologist to complete roll-out of phase 2 of the Line blockage tool. Following initial roll-out it was identified that the tool gave differing results for lower graded (under grade 5) signal boxes. The new tool will take in to account differing types of signalling locations, panels, frames and smaller VDU style locations. This will be briefed at the Operations Manager group on 13 and 14 February 2013.*

By 1 March 2013

Timescale: 1 December 2013

On 25 April 2013 ORR sought clarity from Network Rail on what was meant by '*...different signalling locations...*'

8. Network in its response on 15 May 2013 advised that:

The locations will include a number of signalling locations across the network; these will be IECC, Westcad, NX panels and Lever frames. It is planned to look at locations in a number of routes that have third rail and OHLE to see if there are any fundamental differences and workloads.

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9. After reviewing information received from Network Rail, 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: *In-progress*

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ORR will update RAIB by end of December 2013 on action being taken to address this recommendation

Recommendation 5

The intent of this recommendation is to assist incident investigation and competence management of signallers by recording, and facilitating playback of, all signallers' actions during their work at workstations included in future IECC projects.

Network Rail should modify appropriate standards and specifications so that future IECC installations include a system to fully record signaller's actions. Information recorded should include:

- reminder appliance override;
- signaller's selection of VDU view; and
- the view used when controls are operated using a VDU view.

Where practical, the system should incorporate a playback feature.

Details of steps taken or being taken to implement the recommendation

10. Network Rail in its response on 19 March 2013 advised that:

A specification will be generated for data that can be logged on signaller actions when operating an IECC workstation. The technical feasibility and options for logging the data (with both current IECC architectures) will be explored and alternative solutions such as video capture of screen interactions will also be considered. Estimated costs for adding this functionality for future upgrades and on new IECC workstations will then be established.

A survey will also be carried out, amongst Local Operations Managers and Incident Investigators, in order to review and estimate the benefits of the changes against the costs. Modifications of the standards will be made based on the outcome of the cost-benefit review.

Note: it is not considered feasible to quantify the benefits in terms of potential future lives saved.

Timescale: 30 November 2013

ORR Decision

11. After reviewing information received from Network Rail, 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.

ORR will update RAIB by end of December 2013 on action being taken to address this recommendation

Status: In-progress

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Recommendation 6

The intent of this recommendation is to provide consistent and appropriate instructions to level crossing attendants about the positioning of red lamps and flags used when level crossings are under local control.

Network Rail should review the existing requirements concerning the number of red flags or lights to be placed on each side of a level crossing under local control. Network Rail, if necessary in co-operation with the RSSB, should then take appropriate action to ensure that the correct, clear and consistent information is included in training, instructions and rules applicable to level crossing attendants.

Details of steps taken or being taken to implement the recommendation

12. Network Rail in its response on 19 March 2013 advised that:

Network Rail will review the existing requirements concerning the number of red flags or lights to be placed on each side of a level crossing under local control, in conjunction with RSSB.

Additionally, Network Rail Operations will review with Professional Development & Training (PD&T) whether the level crossing attendant training instructions and rules need to be enhanced in order to confirm the requirements regarding the number of red flags or lights.

Timescale: 31 March 2013

13. On 25 April 2013 ORR requested Network Rail to provide a brief summary of the findings of the reviews and any actions it will be taking.

Network in its response on 15 May 2013 advised that:

Following a review in conjunction with RSSB into the existing requirements concerning the number of red flags or lights to be placed on each side of a level crossing under local control, Network Operations and the RSSB do not believe that a proposal for rules change would be necessary in this case. It is believed that the issue would be more appropriately dealt with within the content of Network Rail's key-point booklet and associated training material.

The current rules require a red/flag lamp to be placed either side of the crossing so as to be visible to the driver of any train that may approach. The attendant therefore requires two flags/lamps which on a double line railway are placed in the 6 foot, either side of the crossing and apply to any movement that approaches in either direction on either line. This arrangement has worked successfully for 20 years, until recently when some confusion appears to have arisen following the introduction of the key-point card.

In addition to this, evidence would suggest that the red flags are being used in an irregular way by Engineering Supervisors to subdivide worksites, which was mentioned in the RAIB report, where it was stated that Network Rail (as Engineering Supervisors) were instructing attendants to remove red flags (which had been placed in the 4 foot on each line) when the work site was to be given up, even though the crossing was still on local control.

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Taken literally the key-point card could be interpreted as requiring 8 flags/lamps at each crossing as it states 'Two red flags/lamps to be placed in the 4 foot on each immediate approach to the crossing'. If the key-point card and training were to be amended in accordance with the intentions of the Rule Book; and if associated training for Engineering Supervisors were to be amended as such, there would be no need for any change to the rules as all would be in accord. It is believed this would be the most effective way to deal with any inconsistencies.

Network Rail's Training and Design Project Manager is currently in the process of having the key-point cards amended in order to remove any ambiguity in relation to this recommendation, this work is due to be completed by 31 July 2013.

14. On 13 June 2013 Network Rail provided ORR with a copy of its 'Closure Statement':

Extract:

Network Rail in conjunction with the RSSB has reviewed the existing requirements concerning the number of red flags or lights to be placed on each side of a level crossing under local control.

Network Rail and the RSSB both agreed that the current Rule Book is fit for purpose and does not require to be amended.

In order to remove ambiguity Network Rail and the RSSB made changes to Network Rail trainer's notes for 'Level Crossing Attendant – Auxiliary Operating Duties'.

In addition to these amendments Network Rail has also made amendments to the 'Keypoint Cards' training aid and the new version is currently being produced.

Network Rail provided ORR with a copy of:

- AOD Level Crossing Attendant Trainer's Notes; Issue 19 – June 2013;
- Keypoint Card; Level Crossing Attendant (AOD LXA); Issue 8 – June 13; and
- RSSB response to Ufton Recommendation 6

RSSB Response:

RSSB does not believe that a proposal for rules change would be necessary in this case; this is because RSSB believes that the issue would be more appropriately dealt with within the content of Network Rail's 'Keypoint' booklet and associated training material (which RSSB has not been able to study).

To explain a little further, the current rules require a red/flag lamp to be placed either side of the crossing so as to be visible to the driver of any train that may approach. The attendant therefore requires two flags/lamps which on a double line railway are placed in the 6 foot either side of the crossing and apply to any movement that approaches in either direction on either line.

This arrangement has worked successfully for 20 years until recently when some confusion appears to have arisen following the introduction of the 'Keypoint' card.

In addition to this evidence would suggest that the red flags are being used in an irregular way by Engineering Supervisors to subdivide worksites (this was mentioned in the RAIB report, where it was stated that Network Rail as Engineering Supervisors

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were instructing 'Attendants' to remove red flags (which had been placed in the 4 foot on each line) when the work site was to be given up even though the crossing was still on local control.

Taken literally the 'Keypoint' card could mean you actually need 8 flags/lamps at each crossing as it states: 'two red flags/lamps to be placed in the four foot on each immediate approach to the crossing'.

If the 'Keypoint' card and training were to be changed to accord with the intentions of the Rule Book, and with associated training for Engineering Supervisors amended as such then there would be no need for any change to the rules and all would be in accord. This would also probably be the quickest and easiest way to deal with any inconsistency.

ORR Decision

15. After reviewing information received from Network Rail, 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.

ORR will monitor Network Rail's progress to implement this recommendation and will write to RAIB if it becomes aware that the information above becomes inaccurate.

Status: Implemented by alternative means

Recommendation 7

The intent of this recommendation is to correct a misunderstanding among some engineering supervisors concerning the requirement for red lights or flags to be displayed at level crossings at all times when they are under local control unless the barriers are lowered.

Network Rail should re-brief staff that level crossing attendants' red lamps/ flags must never be removed when level crossings are under local control and the barriers are raised or the gates are open.

Details of steps taken or being taken to implement the recommendation

16. Network Rail in its response on 19 March 2013 advised that:

A Briefing event is to be cascaded through NCCA Sentinel to all those holding ES [Engineering Supervisor] or AUX LXA [Auxiliary Operating Duties - Level Crossing Attendant] Competences – to provide details of the above incident and act as a reminder of the requirements for red lamps/flags at level crossings under local control.

This will be distributed via an email alert to all sponsors in June 2013, with a timescale of three months to complete the briefing process. Briefing events are to be logged on NCCA Sentinel website.

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Timescale: 30 September 2013

ORR Decision

17. After reviewing information received from Network Rail, 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.

ORR will monitor Network Rail's progress to implement this recommendation and will write to RAIB if it becomes aware that the information above becomes inaccurate.

Status: Network Rail has advised ORR that it is taking action to address the recommendation