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Ms Carolyn Griffiths
Chief Inspector of Rail Accidents
Cullen House
Berkshire Copse Rd
Aldershot
Hampshire GU11 2HP

Dear Carolyn,

**RAIB Report: Fatal accident at Athelney level crossing, near Taunton,
Somerset, 21 March 2013**

I write to report¹ on the consideration given and action being taken in respect of the recommendations addressed to ORR in the above report, published on 24 February 2014.

The annex to this letter provides details of the action being taken in respect of each recommendation where the status of:

- Recommendations 1 and 3 is '**Implementation on-going**'; and
- Recommendations 2 and 4 is '**Implemented**'².

ORR will advise RAIB when actions being taken to address recommendations 1 and 3 have been completed.

We do not propose to take any further action in respect of recommendations 2 and 4 unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again³.

We will publish this response on the ORR website on 13 March 2015.

Yours sincerely,

Russell J Keir

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)(i)

³ In accordance with Regulation 12(2)(c)

Initial consideration by ORR

1. All 4 recommendations were addressed to ORR when the report was published on 24 February 2014.
2. After considering the recommendations ORR passed recommendations 1, 2 & 4 to Network Rail asking it to consider and where appropriate act upon them and advise ORR of its conclusions.
3. Recommendation 3 was directed at the Office of Rail Regulation.
4. The consideration given to each of the 4 recommendations is included below.

Recommendation 1

The intent of this recommendation is to reduce the risk resulting from extended waiting times at automatic level crossings, due to delays caused by the controls being 'out of synchronisation', which may encourage motorists to violate warnings.

Network Rail should introduce measures to reduce the risk from extended operating times of automatic crossings caused by operation of a strike-in treadle by a train travelling away from the level crossing. This might include issuing suitable operating instructions to signallers for those crossings that might be affected or the installation of directional treadles. An engineered solution should be installed where reasonably practicable.

Steps taken or being taken to address the recommendation

5. In its response of 15 May 2014, Network Rail provided the following information:

General summary

Network Rail will carry out a review of all automatic crossings that have the potential to be affected by extended opening times as the result of the operation of strike in treadles by trains travelling away from the level crossing. Those that are identified will be reviewed to agree and then install an appropriate engineered solution where this is reasonably practicable. The review will include the suitability of operational instructions for Signallers contained in signal box instructions, which will be updated where improvements are identified.

Action plan

The action plan for Athelney recommendation 1 will be achieved in two phases:

Phase 1:

- a) *the issuing of a Special Instruction Notice (SIN) to Route Signalling & Telecoms teams (by 31 May 2014)*
- b) *The SIN will require Route Signalling & Telecoms teams to:*
 - *Identify affected automatic crossings that do not have bi-directional control;*

- *Work with local operations managers to agree the engineered solution to be implemented where practicable and to identify any changes to be made to signal box instructions*
- *Respond to HQ providing details of all affected crossings and the agreed action to address the risk. This is to identify which crossings will have an engineered solution*

To provide directional controls installed and which will have signal box instruction updates made (by 31 July 2014)

Phase 2:

Routes installing the selected solutions identified in their response to the SIN. This will be achieved by:

- The installation of selected engineering solutions to provide directional control.*
- Updating signal box instructions to implement changes to operational instructions.*
- Implement interim mitigation measures as appropriate.*

Indicative timescales for part 2 of the action plan will be provided by the end of August 2014. Timescale for completion is 30 September 2015.

6. On 14 October 2014 Network Rail provided the update below:

- *The issue of a SIN has been delayed; activity has taken place to gather as much information as possible informally. The information gathered is not detailed enough in all cases to replace the need for a SIN.*
- *The responses to the informal request for information indicate that there are 61 crossings that fall into scope, see below. The results have led to an estimate of three months for receipt of returns on a SIN, whose issue will now follow briefing at the SAMG meeting on 21 October 2014. The achievability of the SIN return date will be checked at this meeting.*

The SIN will mandate identification of the scope, and selection of one of two actions (technical or procedural). To support this the intention is to append a typical Box Instruction detailing the requirement to man the crossing with an attendant whilst wrong direction moves are in place and who will check the crossing returns to fully functioning order after the move has taken place.

Route	Number of affected AHB Crossings	Notes
<i>Anglia</i>	<i>0</i>	
<i>East Midlands</i>	<i>2</i>	<i>Names, detailed</i>
<i>Kent</i>	<i>3</i>	<i>Names, detailed (one DBS owned)</i>
<i>LNE</i>	<i>8</i>	<i>Names, detailed</i>
<i>LNW (North)</i>	<i>0</i>	<i>Detailed</i>
<i>LNW (South)</i>	<i>0</i>	<i>Names, detailed</i>
<i>Scotland</i>	<i>3</i>	<i>Names, detailed</i>
<i>Sussex</i>	<i>15</i>	<i>Number, Approx.</i>
<i>Wales</i>	<i>4</i>	<i>Names, detailed</i>
<i>Wessex</i>	<i>18</i>	<i>Names, Approx.</i>
<i>Western</i>	<i>8</i>	<i>Names, detailed</i>

Route	Number of affected AHB Crossings	Notes
Final Total	61	

7. On 11 February 2015 Network Rail provided an update stating:

Network Rail acknowledges that the update given in October 2014 did not demonstrate how other types of automatic crossings in addition to AHBs are being addressed.

Since developing the action plan for the recommendation, Network Rail's understanding of the most appropriate means to address the recommendation has evolved. The action plan did not take account of the best means of delivery, including taking account of other existing or new recommendations which might result in similar work for RAM teams. This is further explained below.

Recognising the potential for catastrophic risk that exists at AHB crossings due to the high road traffic moment and crossing protection present, SIN 141 (restricted to AHB crossings) was issued to give greater focus and expedite delivery of risk controls for this core type. SIN 141 will identify and result in measures being applied to AHB crossings at which extended operating times can be caused by controls being out of synchronisation.

Identification of other automatic crossing types at which this risk exists is being accrued through data being collected as part of other recommendations. Network Rail recognised that the returns from SIN 137 would provide this information and avoid duplication of effort by RAM teams and lead to greater efficiencies.

SIN 137 has been issued as part of the action to address Motts Lane Recommendation 1 and 2, and will result in the identification of other automatic crossing types i.e. ABCL, AOCL, AOCL +B, and MSLs that do not have bi-directional controls. This data will be available by May 2015. In the meantime the following activity will take place:

An additional SIN will be drafted to mandate changes to the operational instructions for affected MSL crossings (the scope of which will be obtained from SIN 137). The intention to issue this SIN is to be briefed to the Signalling RAMs at the next SAMG meeting scheduled for 10th March 2015. This will be issued once the returns from SIN 137 have been received. Network Rail anticipates the actions resulting from this SIN will be complete by 30th September 2015.

Network Rail is currently assessing the merits of any practicable risk control measures that can be applied to locally monitored automatic crossings that better control collision risk than the Driver's Crossing Indicator and Rule Book instructions. This will result in a safety related decision being taken as to whether any practicable risk reduction can be achieved.

ORR decision

8. ORR in reviewing the responses provided by Network Rail has concluded that in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

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

Status: Implementation On-going: ORR will advise RAIB when all actions being taken to address this recommendation have been completed.

ORR will seek the outcome of Network Rail's assessment of any practicable risk control measures that can be applied to locally monitored automatic crossings that better control collision risk than the Driver's Crossing Indicator and Rule Book instructions.

Recommendation 2

The intent of this recommendation is to identify how to improve public awareness of the availability of telephones to contact the signaller in non-emergency situations.

Network Rail in conjunction with RSSB should:

- Review past and current research into level crossing signage and emergency communication with signallers and;
- Consider means of improving the presentation of public emergency telephones for non-emergency use at automatic level crossings. This might include changes to signage or to the location of telephones, and should take account of Rule 34 of the Highway Code.

Steps taken or being taken to address the recommendation

9. In its response of 15 May 2014, Network Rail provided the following information:

Network Rail will write to RSSB to obtain agreement to initiate an RSSB working group with a view to:

- *Identifying existing requirements and research work with respect to level crossing communication requirements and associated signage;*
- *Identifying key stakeholders that would need to be involved and obtain support for a working group to be set-up;*
- *Agreeing whether further research projects are required to formulate a cross-industry response;*
- *Formulating signage for improving the presentation of public telephones for non-emergency use at automatic level crossings.*

Following the output of the working group, amendments to ORR Level Crossing Guidance, Railway Group Standards and Network Rail standards shall be identified and briefed to all parties

Network Rail will then review the implications of the proposed industry solution and carry out cost benefit analysis and business case developments.

If the output of the working group is for the level crossing signage to be changed, a trial installation will be undertaken. Following the trial, the results will be used to determine its effectiveness and a review of the cost benefit analysis and business case undertaken, prior to an implementation decision. Timescale: 30 January 2015.

10. Network Rail provided the update below on 29 October 2014:

The RSSB/Industry working group was identified and a meeting was held on 3 June 2014, where all previous research projects were discussed and analysed against the requirement for non-emergency use of the telephone by the public.

The outcome of the meeting was deliberated by RSSB and is detailed below

The review concluded that the industry needs to consider ways in which it can better communicate non-emergency use of telephones at crossings to members of the public without it leading to abuse or misuse of the service or diluting the need to make the public aware of a facility to contact the railway in an emergency. It became clear that the good work undertaken in Project T818 'Optimising Public Communication with Signallers in Emergencies at Level Crossings', which has only recently begun to be implemented, could potentially cause confusion by the use of the letters SOS on the outside of the telephone cabinets at certain types of level crossing, in particular automatic half barrier crossings. The difficulty is that any warning signs or script designed to draw the attention of users to the existence, functions and availability of the telephones need to cater for three different (and potentially conflicting) eventualities: (a) non-emergency (as in the situation at Athelney); (b) emergency; and (c) routine use by drivers of long, low or heavy vehicles. It is difficult to see how these differing needs can be reconciled, and the issue has not been considered in any detail in the more recent research, now coming to fruition, T756 'Research into traffic signs and signals at public road level crossings'.

The conclusion is that, as a minimum, further analysis or research should be undertaken to ascertain if adding SOS to telephone cabinets will deter members of the public from using the phones in non-emergency cases, and if so, how that could be mitigated. In addition (or instead) a further, wider, review of communications between users at level crossings and those controlling or supervising the crossings might also be considered.

Network Rail is to set up an internal meeting between National Level Crossing Team and Human Factors to review other initiatives within Network Rail around level crossing safety/signage to align work streams (if any exist). This will be arranged for mid-November [2014].

Network Operations and Route Level Crossing Managers to assess the call frequency and usage of those level crossing telephones that have been updated in line with T818, with the addition of an SOS sign on the telephone. This will hopefully analyse if the usage of the telephone has increased or decreased. This will be arranged for the end of November [2014].

Following the outcome of the above two work streams Network Rail to conclude, in conjunction with RSSB whether a further Research project will be required and what the terms of reference for this work should include.

11. ORR sought further clarification about the sequence of actions detailed in the Network Rail response. On 9 June 2014 Network Rail advised that the sequences would be:

- *Understand and review implications proposed by industry, carry out cost benefit analysis and business case*

- *Following the output of the working group, amendments to ORR Level Crossing Guidance, Railway Group Standards and Network Rail Standards shall be identified and briefed to all parties.*

12. On 20 January 2015, Network Rail further advised that:

As a minimum, further analysis or research should be undertaken to ascertain if adding SOS to telephone cabinets will deter members of the public from using the phones in non-emergency cases, and if so, how that could be mitigated. In addition (or instead) a further, wider, review of communications between users at level crossings and those controlling or supervising the crossings might also be considered.

13. On 11 February 2015 Network Rail provided an update stating:

Network Rail in conjunction with RSSB has reviewed the past and current research projects into level crossing signage and emergency communication with signallers. Network Rail has also reviewed previous accident investigation recommendations to determine the requirements and purpose of the telephones at level crossings

It has been determined that for AHB's the telephone provides an emergency means of communication and also a means of communication for long, wide, low or slow vehicles to obtain permission to cross.

Network Rail has concluded that to change the use or signage to include for non-emergency could add confusion to the general public, add to signaller workload or potentially detract from the call priority. It could also potentially increase risk to car drivers if they used the telephone for non-emergency situations as the telephone is located on the opposite side of the road.

Also, taking into account the work being proposed by signalling under recommendation 1, this will significantly reduce the likelihood of extended barrier down time, a key factor in the events at Athelney.

ORR decision

14. ORR in reviewing the responses provided by Network Rail has concluded that in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

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

Status: Implemented.

Recommendation 3

The intent of this recommendation is to improve public awareness of the availability of level crossing telephones for contacting the signaller in non-emergency situations.

If the RSSB research into improving the presentation of public emergency telephones for non-emergency use at automatic level crossings (Recommendation 1) identifies that reasonably practicable improvements can be made, the Office of Rail Regulation should incorporate these into the level crossing guidance it publishes.

Steps taken or being taken to address the recommendation

ORR is reviewing Railway Safety Principles and Guidance (RSPG), Part 2E, Level Crossings and in doing so will take account of Network Rail's response to recommendation 2.

Timescale: March 2016

Status: *Implementation on-going*

Recommendation 4

The intent of this recommendation is to improve public awareness of the availability of the level crossing telephones at Athelney level crossing.

Network Rail Western Route should modify the location of the pedestrian stop lines at Athelney level crossing as required to make these conform to the current guidance published by the Office of Rail Regulation.

Steps taken or being taken to address the recommendation

In its response of 15 May 2014, Network Rail provided the following information:

Arrangements will be made to secure a suitable possession and road closure and the modifications will be made to the stop lines to meet the current guidance published by the Office of Rail Regulation. The Delivery Unit off-Track Manager and Level Crossing Manager are currently planning the works with the local Council for completion by 31 July 2014.

15. On 31 July 2014, Network Rail confirmed that its Western Route had completed works to modify the location of the pedestrian stop lines at this crossing to comply with the current ORR guidance and to improve public awareness of the availability of telephones at the crossing.

ORR decision

16. ORR in reviewing the responses provided by Network Rail has concluded that in accordance with the Railway (Accident Investigation and Reporting) Regulations 2005, it has:

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

Status: *Implemented*