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

Dear Andrew,

**RAIB Report: Fatal accident at Mexico footpath crossing (near Penzance) on 3 October 2011**

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 20 June 2012.

The annex to this letter provides details of the action taken regarding the recommendation. The status of recommendation 3 is '**Implemented**'.

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 on 16 April 2020.

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 for Network Rail to undertake a project to develop and implement a national approach to the location and marking of decision points and the measuring of sighting distances at level crossings. This work should be expedited and undertaken as a discrete exercise rather than as part of the three-yearly crossing risk assessment cycle and take account of the emerging findings from RSSB research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions' where relevant.*

Network Rail, in conjunction with RSSB where appropriate, should undertake a project to develop a standard national approach to:

- identifying the optimum decision point at each footpath and user worked crossing used by pedestrians;
- marking and signing the optimum decision point at each crossing;
- using that decision point in estimates of sighting distance at footpath and other crossings; and
- briefing staff involved in crossing risk assessment with regard to the approach.

When addressing issues in relation to the marking of decision points, Network Rail should liaise with RSSB on emerging findings from research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions', and give consideration to the need to draw upon relevant elements of that research project to inform the development of the national approach. In this context RSSB should prioritise those elements of research project T984 that deal specifically with the marking of decision points, so that they are completed at an early stage in the programme. Once the approach has been developed, Network Rail should implement a programme to review and modify crossings.

### ORR decision

1. Network Rail have recently published their level crossing strategy<sup>2</sup>. It refers to the use of 'danger zone' markings on level crossings based on the findings of RSSB research paper T984 (p. 26), which suggested this was more helpful for crossing users than focusing on 'decision points' as referenced in the recommendation.
2. Network Rail have informed us these markings will be considered as part of the solution at crossings, but will not be used at every crossing. This is due to trials indicating that some crossings are not suitable as the yellow paint wears out and/or gets dirty too quickly.
3. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

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<sup>2</sup> <https://www.networkrail.co.uk/running-the-railway/looking-after-the-railway/level-crossings>.

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

**Status: Implemented.**

### **Previously reported to RAIB**

4. On 12 August 2014 ORR reported the following:

*Network Rail will not be managing the risk using ‘decision points’, as suggested by RAIB, as the key preliminary findings from the RSSB research (T984) was that level crossing users do not understand or adhere to the concept of decision points. We understand that the final report, expected to be published before the end of the year, will recommend marking ‘the danger zone’ instead.*

*Network Rail will be trialling marking the danger zone at footpath or bridleway crossings instead to address the risk by alternative means. The decision to cross should be made before reaching this area and the danger zone should prompt pedestrians that they are entering an area where they are at risk of being struck by trains.*

*Network Rail will continue to use the methodology of identifying decision points to support safety design purposes.*

*Initial findings from the T984 research indicate that:*

- *Members of the public do not understand the concept of decision points*
- *It is not appropriate to mark the optimum decision point at each crossing as there could not be a single decision point; as it dependent on the characteristics of the level crossing and the individual;*
- *Members of the public carry out a dynamic assessment as they approach the crossing;*
- *Most people looked at the ground to avoid falling over rather than looking for trains; and*
- *A high percentage of people did not look for a train at all.*

*ORR is in support of the initial findings of the T984 project and Network Rail’s subsequent proposed work to address the risk by alternative means. ORR will continue to monitor Network Rail’s actions to develop and implement a national approach to effectively manage pedestrian crossing risks.*

*ORR await further information from Network Rail to show how it intends to implement alternative measures to address this risk and anticipate being able to provide a further update to RAIB by 30 January 2015.*

### **Update**

5. Network Rail provided a closure statement on 13 May 2014 which stated the following:

*Network Rail along with other industry partners such as the ORR, have been working collaboratively with the RSSB (under RSSB research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions') in order to develop a standard national approach to;*

- *Identify the optimum decision point at footpath and user worked crossings used by pedestrians*
- *Marking and signing the optimum decision point*

*The RSSB research project prioritised those elements of T984 that deal specifically with the marking of decision points.*

*The outputs of this element of the research projects are attached. The key findings from the research is that level crossing users do not understand or adhere to the concept of decision points and instead, the report recommends marking the danger zone instead. The publication of the report closes out these elements of the recommendation.*

## Previously reported to RAIB

### Recommendation 3

*The intent of this recommendation is for Network Rail to undertake a project to develop and implement a national approach to the location and marking of decision points and the measuring of sighting distances at level crossings. This work should be expedited and undertaken as a discrete exercise rather than as part of the three-yearly crossing risk assessment cycle and take account of the emerging findings from RSSB research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions' where relevant.*

Network Rail, in conjunction with RSSB where appropriate, should undertake a project to develop a standard national approach to:

- identifying the optimum decision point at each footpath and user worked crossing used by pedestrians;
- marking and signing the optimum decision point at each crossing;
- using that decision point in estimates of sighting distance at footpath and other crossings; and
- briefing staff involved in crossing risk assessment with regard to the approach.

When addressing issues in relation to the marking of decision points, Network Rail should liaise with RSSB on emerging findings from research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions', and give consideration to the need to draw upon relevant elements of that research project to inform the development of the national approach. In this context RSSB should prioritise those elements of research project T984 that deal specifically with the marking of decision points, so that they are completed at an early stage in the programme. Once the approach has been developed, Network Rail should implement a programme to review and modify crossings.

### Brief Summary on what was previously reported to RAIB on 17 October 2013

*The initial finding relating specifically to decision points were expected from RSSB in April 2013. This date was then amended to June 2013 but by October the report had still not been produced. However a briefing meeting was held in April 2014 at which ORR and RAIB were present where the outline findings were discussed.*

1. ORR concluded that: The Network Rail actions to address the issue will not be easy or straightforward, as the research concluded that:
  - members of the public do not understand the concept of decision points;
  - there could not be a single decision point as it very much depended on the characteristics of the level crossing and the individual;
  - members of the public carry out a dynamic assessment as they approached the crossing;
  - most people looked at the ground to avoid falling over rather than looking for trains; and
  - a high percentage of people did not look for trains at all.

### Update

2. RSSB published the interim research brief and report on decision points at the end of 2013.

3. On 13 January 2014 ORR wrote to Network Rail asking for details on how it intends to implement the findings of the report. On 13 May 2014, Network Rail provided ORR with a copy of its 'Recommendation Owners' Form' which stated: *Network Rail along with other industry partners, such as the ORR, has been working collaboratively with the RSSB (under RSSB research project T984 'Research into the causes of pedestrian accidents at level crossings and potential solutions') in order to develop a standard national approach to;*

- *Identify the optimum decision point at footpath and user worked crossings used by pedestrians; and*
- *Marking and signing the optimum decision point.*

*The RSSB research project prioritised those elements of T984 that deal specifically with the marking of decision points.*

*The key finding from the research is that level crossing users do not understand or adhere to the concept of decision points and instead, the report recommends marking the danger zone instead. The publication of the report closes out these elements of the recommendation.*

*The only remaining open element of the recommendation is for Network Rail to implement a programme to review and modify crossings accordingly i.e. identify and mark the optimum decision point. However, this goes against the conclusions of the RSSB research paper.*

*It is proposed that Network Rail carry out a trial of marking the danger zone at footpath or bridleway crossings instead and report the results to the Level Crossing Strategy Group (LCSG), including associated costs, for the LCSG to decide on the way forward. The aim is to report back to the LCSG on 27 March 2014.*

*Network Rail will continue to use the methodology of identifying decision points to support safety design purposes i.e. in order to provide sufficient sighting distances at passive level crossings, allowing users to safely traverse the level crossing.*

4. On 20 March 2014, ORR wrote to Network Rail asking it for a strategy on how it proposes to implement improvements to passive crossings? On 5 June 2014 Network Rail stated that:

*ORR and Network Rail have discussed this recommendation [along with recommendation 2 of the RAIB report of a collision between an articulated tractor and a passenger train at Sewage Works lane user worked crossing]. The outcome of the discussion is for Network Rail to provide ORR with a strategy on implementing improvements to passive level crossings.*

*Completion of the strategy will involve long term activity, relating to several recommendations, and will aim to rectify legacy issues at passive level crossings. Potentially, works that take place under the strategy will not be completed until later control periods.*

*Discussions have taken place with the ORR concerning our joint long term aspirations to address legacy issues at passive level crossings. The ORR has raised the need for Network Rail to have a joined up long term strategy for these issues.*

*Network Rail has committed to develop the strategy. Once it has been consulted and agreed, the ORR has indicated that they will be willing to accept closure of this and other related recommendations. Network Rail will then report progress on implementing the strategy which will be tracked via regular liaison with ORR.*

*An extension has already been sought to Mexico recommendation 5 until 30 November 2014 to allow time for the development of and consultation on the strategy. The strategy also links to recommendations Sewage Works Lane 2 and Mexico 3. Therefore, it is anticipated that updates on these recommendations will also be available at the end of November 2014.*

### **ORR Decision**

8. Network Rail will not be managing the risk using 'decision points', as suggested by RAIB, as the key preliminary findings from the RSSB research (T984) was that level crossing users do not understand or adhere to the concept of decision points. We understand that the final report, expected to be published before the end of the year, will recommend marking 'the danger zone' instead.

9. Network Rail will be trialling marking the danger zone at footpath or bridleway crossings instead to address the risk by alternative means. The decision to cross should be made before reaching this area and the danger zone should prompt pedestrians that they are entering an area where they are at risk of being struck by trains.

10. Network Rail will continue to use the methodology of identifying decision points to support safety design purposes.

11. Initial findings from the T984 research indicate that:

- Members of the public do not understand the concept of decision points
- It is not appropriate to mark the optimum decision point at each crossing as there could not be a single decision point; as it dependent on the characteristics of the level crossing and the individual;
- Members of the public carry out a dynamic assessment as they approach the crossing;
- Most people looked at the ground to avoid falling over rather than looking for trains; and
- A high percentage of people did not look for a train at all.

12. ORR is in support of the initial findings of the T984 project and Network Rail's subsequent proposed work to address the risk by alternative means. ORR will continue to monitor Network Rail's actions to develop and implement a national approach to effectively manage pedestrian crossing risks.

13. ORR await further information from Network Rail to show how it intends to implement alternative measures to address this risk and anticipate being able to provide a further update to RAIB by 30 January 2015.

**Status: In-progress by alternative means.** ORR will update RAIB by 30 January 2015. (Non-implementation of decision points)

