

Recommendation(s) Status: Investigation into pedestrian crossings initiated by Elsenham fatality

This report is based on information provided to the RAIB by the relevant safety authority or public body.

The status of implementation of the recommendations, as reported to us, has been divided into six categories:

Key to Recommendation Status

Implemented:	All actions to deliver the recommendation have been completed.
Implemented by alternative means:	The intent of the recommendation has been satisfied in a way that was not identified by the RAIB during the investigation.
Implementation ongoing:	Work to deliver the intent of the recommendation has been agreed and is in the process of being delivered.
In-progress:	The relevant safety authority has yet to be satisfied that an appropriate plan, with timescales, is in place to implement the recommendation; and work is in progress to provide this.
Non-implementation:	Regulation 12(2)(b)(iii) = recommendation considered and no implementation action to be taken.
Awaiting response:	Awaiting initial report from the relevant safety authority or public body on the status of the recommendation.

RAIB concerns on actions taken by organisations in response to recommendations are reflected in this report and are indicated by one of the following.

-  The red triangle shows recommendations where the RAIB has concerns that no actions have been taken in response to a recommendation.
-  The blue triangle shows recommendations where the RAIB has concerns that the actions taken, or proposed, are inappropriate or insufficient to address the risk identified during the investigation.
-  The white triangle shows recommendations where the RAIB notes substantive actions have been reported, but the RAIB still has concerns.

Note: The tables which follow, report the status of recommendations on 31 December 2015. In some other cases the end implementer has already sent information to the relevant safety authority about the actions it has taken, or proposes to take and the safety authority is considering whether it is satisfied that those actions and the associated timescales are accepted.

Number/ Date/ Report No/ Inv Title / Current Status	Safety Recommendation	Summary of current status (based on latest report from the relevant safety authority or public body)
<p>1 03/12/2005 23/2006</p> <p>Investigation into pedestrian crossings initiated by Elsenham fatality</p> <p>Status: Implemented</p>	<p>Network Rail to establish standard definitions and terminology to cover the various types of foot crossings at stations and to prepare a validated list of all station pedestrian crossings on its network (paragraph 364).</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>2 03/12/2005 23/2006</p> <p>Investigation into pedestrian crossings initiated by Elsenham fatality</p> <p>Status: Implemented</p>	<p>Network Rail in consultation with Station Operators to ensure that a suitable quantified risk assessment is conducted for each station pedestrian crossing. In conjunction with these risk assessments Network Rail should develop and implement a programme to address each of the following:</p> <ul style="list-style-type: none"> •the upgrading of all station pedestrian crossings at which the individual risk to the most exposed user is assessed as being above the upper limit of tolerability (paragraph 361); and •the implementation of improved safety measures, where shown to be necessary, commensurate with the level of risk at each station pedestrian crossing (paragraph 362). <p>Any risk assessments undertaken in furtherance of this recommendation should take into account local factors such as the number of school aged children and elderly persons using the crossings.</p>	<p>Network Rail has since implemented a risk assessment / management process that incorporates a computer-based tool known as the All Level Crossing Risk Model (ALCRM). This process and the ALCRM tool have been applied at all level crossings, including those at stations. The process takes into account the number and type of users. The RAIB has expressed concerns in a number of its investigation reports and Annual Reports about the way data that is to be input to ALCRM is collected and the adequacy of the associated management processes.</p>
<p>3 03/12/2005 23/2006</p> <p>Investigation into pedestrian crossings initiated by Elsenham fatality</p> <p>Status: Implemented</p>	<p>Network Rail to review its management system to ensure the competence of the persons carrying out risk assessments at station pedestrian crossings (paragraph 391). Design standards and guidance.</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate. RAIB has identified a number of concerns about the adequacy of level crossing data collection and risk assessment during recent investigations.</p>
<p>4 03/12/2005 23/2006</p> <p>Investigation into pedestrian crossings initiated by Elsenham fatality</p> <p>Status: Implemented </p>	<p>ORR, in consultation with Network Rail and DfT, to undertake a comprehensive review of existing guidance relating to the design of station pedestrian crossings. This should include a review of current technologies and the modern understanding of human factors. This review should include each of the following:</p> <ol style="list-style-type: none"> a. Use of fencing to direct passengers to approach the crossing by the route that best enables them to observe the approach of trains whilst drawing their attention to any associated signs or stop lights (paragraph 369). b. An assessment of the safety benefits and disbenefits of providing pedestrian gates on the final approach to station pedestrian crossings (paragraph 162). c. Research into the technical feasibility and safety benefit of providing an additional set of stop lights on the far side of the crossing from an approaching user to repeat the indication of the 	<p>ORR has agreed with RSSB that they should commission this research. The findings have fed into a comprehensive review of the Railway Safety of Principles guidance. ORR has closed the recommendation. It is unclear to RAIB how the findings of this research have been reflected in design principles for level crossings. Item c of this recommendation is addressed in the RAIB investigation into a fatal accident at Johnsons crossing in January 2012 (report 27/2012). \$</p>

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lights on the near side ('back-to-back' lights) (paragraph 169).
d. Research into the most effective means of providing users with an active warning to alert them of the approach of a second train. This should encompass research into the effectiveness of visual displays and/or voice messages as a means of alerting users (paragraph 376).

5 03/12/2005 23/2006
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Network Rail, to carry out the necessary research, tests and trials to inform a review its own designs and operating policies for station pedestrian crossings and as an input to the review of guidance to be undertaken by ORR in line with Recommendation 4.

Network Rail has reported that it has taken actions in response to this recommendation. RSSB has issued a research report into safety at station pedestrian crossings (see also recommendation 4). It is unclear to RAIB how the the findings of this research have been reflected in design principles for level crossings.
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate. \$

6 03/12/2005 23/2006
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Network Rail to seek approval from ORR (HMRI) for the installation of fixed signage at station pedestrian crossings that cross more than one running line to remind users of the risk from a second train (paragraph 367).

After consideration Network Rail is proposing to take no action in response to this recommendation.
The ORR has informed the RAIB that it has given consideration to the recommendation, and Network Rail's response, and concluded that it does not believe implementation to be justified.
The RAIB is concerned that this measure is not being taken forward. The RAIB has not seen any evidence to support the contention that additional signage would not be read by users.

7 03/12/2005 23/2006
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Network Rail to expedite its programme for the installation of LED stop lights at all station pedestrian crossings that are currently equipped with miniature stop lights and to revise its Company Standards accordingly (paragraph 375).

Network Rail has reported that it has taken actions in response to this recommendation.
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.

8 03/12/2005 23/2006
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Station operators to identify those locations where intending passengers are required to use a station pedestrian crossing in order to use the station facilities (e.g. booking offices, ticket machines, waiting rooms or toilets). In all such locations train operators should, where it is reasonably practicable to do so, install suitable facilities (e.g. another ticket issuing machine) to reduce the need for passengers to cross the line (paragraph 382).

A number of Station Operators have reported that they have taken actions in response to this recommendation.
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.

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9 03/12/2005 23/2006
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Network Rail, in consultation with the station operator and representatives of the local community, to adjust the operation of the station pedestrian crossing by requiring that the pedestrian gates be locked in the closed position before signals can be cleared for the approach of trains (paragraphs 372, 392 & 398).

Network Rail has reported that it has taken actions in response to this recommendation.
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.

10 03/12/2005 23/2006
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If necessary for the avoidance of delays, and subsequent misuse by intending passengers, a stepped footbridge should be constructed to provide an alternative route (mobility impaired users will be able to use the existing crossing in safety at all times when the gates are open to the highway) (paragraph 372).

Network Rail has reported that it has taken actions in response to this recommendation.
ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.