




Recommendation(s) Status: Fatal accident at Motts Lane level crossing, Witham, Essex

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 ORR's report to RAIB)
<p>1 28/06/2012 08/2014</p> <p>Class investigation into landslips affecting NR infrastructure</p> <p>Status: Implementation ongoing</p>	<p>The intent of this recommendation is that Network Rail revises its processes for managing earthwork and drainage risk associated with neighbouring land so that the processes are accurately documented, proportionate, reflect practical limitations and take account of benefits offered by new technology such as aerial sensing and the use of computers to process large amounts of data.</p> <p>Network Rail should review and improve its processes for managing earthworks related risk arising from neighbouring land, including associated drainage issues. This should provide a documented process which takes account of the extent to which it is practical and proportionate for Network Rail to review and/or rely on land management activities undertaken by neighbours. The new process should, where reasonably practicable:</p> <p>I obtain relevant information from other sources where it cannot be collected by earthwork examiners (eg where examiners are unable to view areas due to access constraints, fences, etc);</p> <p>I take advantage of opportunities offered by current technology to assess areas at risk from ground movement and areas where ground movements are occurring;</p> <p>I provide a robust process for identifying, and responding appropriately, to activities on neighbouring land which have the potential to significantly increase risk to the railway between routine earthwork examinations; and</p> <p>I take advantage of opportunities offered by real-time rainfall monitoring to issue alerts identifying heavy rainfall when this has not been forecast.</p>	<p>ORR reports that Network Rail (NR) is carrying out a national study to identify the locations where third party land could potentially pose a hazard to the safe operation of the railway. Once defined, each location will be reviewed for adequateness of control measures currently employed. In parallel, the Remote Condition Monitoring (RCM) development work into the potential uses of technology in the earthworks discipline is underway, much of which would be transferable to Outside Party Slopes. NR will also undertake a review of the current Asset Protection process and arrangements and consider appropriate enhancements. ORR will continue to monitor implementation of this recommendation.</p>
<p>2 28/06/2012 08/2014</p> <p>Class investigation into landslips affecting NR infrastructure</p> <p>Status: Implementation ongoing</p>	<p>The intent of this recommendation is to ensure that Network Rail takes account of all safety related information contained in reports for slopes that have been categorised as marginal or serviceable by the SSHI and RSHI algorithms (ie reports which, at present, are not necessarily reviewed by Network Rail's geotechnical staff).</p> <p>Network Rail should review and improve its processes so that due consideration is given to all safety related information provided by earthwork examiners and earthwork engineers, including safety related information associated with slopes categorised as marginal or serviceable by the SSHI and RSHI</p>	<p>ORR has reported that Network Rail has outlined the actions to be taken in response to the recommendation. ORR will continue to monitor implementation of this recommendation.</p>

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<p>3 28/06/2012 08/2014</p> <p>Class investigation into landslips affecting NR infrastructure</p> <p>Status: Implemented</p>	<p>algorithms.</p> <p>The intent of this recommendation is to increase the likelihood that appropriate Network Rail staff are aware of landslip risk due to adverse rainfall conditions which have not been forecast or detected by Network Rail's formal rainfall monitoring processes.</p> <p>Network Rail should implement a process for real-time collection (and appropriate use of) intelligence about very unusual rainfall or flooding conditions. Development of this process should take into account the differing risk levels on different parts of the infrastructure and should consider using the following information sources:</p> <ul style="list-style-type: none"> I emergency service control centres; I other organisations involved in the provision and management of rail and non-rail transport; I reports (encouraged by appropriate railway industry publicity) from on-duty and off-duty railway industry staff including those employed by train operating and maintenance companies; and I rain gauge and other types of weather sensor capable of providing data in real time. 	<p>ORR has reported that 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>4 28/06/2012 08/2014</p> <p>Class investigation into landslips affecting NR infrastructure</p> <p>Status: In-progress</p>	<p>The intent of this recommendation is for Network Rail to formalise the processes already being developed and introduced with the intent of improving management of earthworks during adverse weather, and for these processes to include timely updating of the 'at risk' register.</p> <p>Network Rail should complete initial development of its modified adverse weather earthwork management system. It should then alter its standards and, if necessary, other formal documentation to reflect the modified system. The updated documentation should include a process for the rapid updating of the 'at risk' register when significant risks become apparent.</p>	<p>ORR has reported that Network Rail has outlined the actions to be taken in response to the recommendation. ORR is seeking further information. Update 28/08/15.</p>
<p>5 28/06/2012 08/2014</p> <p>Class investigation into landslips affecting NR infrastructure</p> <p>Status: Implemented</p>	<p>The intent of this recommendation is for Network Rail to formalise the process for dealing with the rare circumstances when the mitigation normally provided in response to a red warning would be inadequate. This requires consideration of additional mitigation for locations on the 'at risk' register and consideration of mitigation for locations which are not normally</p>	<p>ORR reports that Network Rail has yet to provide evidence of completion of its review or implementation of changes to its process for mitigation of very extreme rainfall conditions. The RAIB is concerned that Network Rail believe the recommendation relates only to real time monitoring. The wording is deliberately wider and includes forecast events of</p>

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considered to be at risk during extreme weather conditions.

Network Rail should formalise the process for implementing additional mitigation if very extreme rainfall conditions mean that the mitigation normally provided in response to a red warning is inadequate for earthworks on the 'at risk' register and/or there is a significant likelihood of landslips at locations not included on this register.

Summary of current status (based on ORR's report to RAIB)

very extreme events. ORR is seeking further information.
Update 28/08/15.