

Recommendation Status Report: Class investigation into landslips affecting Network Rail infrastructure

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

The status of the recommendation(s), as reported to us, are described by the following categories:

Key to Recommendation Status

Open (replaces Progressing and Implementation On-going)	Actions to address the recommendation are ongoing.
Closed (replaces Implemented, Implemented by alternative means, and Non-implementation)	ORR consider the recommendation to have been taken into consideration by an end implementer and evidence provided to show action taken or justification for no action taken.
Insufficient response:	The end implementer has not provided sufficient evidence that the recommendation has been taken into consideration, or if it has, the action proposed does not address the recommendation, or there is insufficient evidence to support no action being taken.
Superseded:	The recommendation has been superseded either by a newer recommendation or actions have subsequently been taken by the end implementer that have superseded the recommendation.
Awaiting response:	Awaiting initial report from the relevant safety authority or public body on the status of the recommendation.

RAIB concern over the way that an organisation has responded to a recommendation are indicated by one of the following:

Red – RAIB has concerns that no actions have been taken in response to a recommendation.

Blue – RAIB has concerns that the actions taken, or proposed, are inappropriate or insufficient to address the risk identified during the investigation.

White – RAIB notes substantive actions have been reported, but the RAIB still has concerns.

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Report Title	Class investigation into landslips affecting Network Rail infrastructure
Report Number	08/2014
Date of Incident	28/06/2012

Rec No.	Status	RAIB Concern	Recommendation	RAIB Summary of current status
08/2014/04	Closed - I	None	<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 reported that it has completed actions taken in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
08/2014/05	Closed - I	None	<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 considered to be at risk during extreme weather conditions.</p> <p>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.</p>	<p>ORR has reported that Network Rail has reported that it has completed actions taken in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>

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08/2014/01	Closed - I	None	<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 has reported that Network Rail has reported that it has completed actions taken in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
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08/2014/02	Closed - I	None	<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 algorithms.</p>	<p>ORR has reported that Network Rail has reported that it has completed actions taken in response to this recommendation. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
08/2014/03	Closed - I	None	<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 	<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>

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			<p>operating and maintenance companies; and</p> <p>I rain gauge and other types of weather sensor capable of providing data in real time.</p>	
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