

Recommendation(s) Status: Derailment near Moy, Inverness-shire

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 26/11/2005 22/2006</p> <p>Derailment near Moy, Inverness-shire</p> <p>Status: Implemented</p>	<p>Network Rail should take actions either to prevent infiltration of water through the Parking Area or to install an engineered drainage system capable of managing the water which is expected to run on to it. The capacity of any drainage shall take into account the changes in surface condition due to the development activity on the surrounding land (paragraph 184).</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 26/11/2005 22/2006</p> <p>Derailment near Moy, Inverness-shire</p> <p>Status: Implemented</p>	<p>Network Rail should repair the blocked and leaking crest drain and ensure that it is fully functional (paragraph 181).</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>3 26/11/2005 22/2006</p> <p>Derailment near Moy, Inverness-shire</p> <p>Status: Implemented</p>	<p>Network Rail should review their procedures to address the issues identified below and implement the resulting changes to their operations:</p> <ul style="list-style-type: none"> a) water infiltration risks on land adjacent and above cutting slopes. Ensure that these risks, which will include issues such as areas of permeable and semi-permeable land on which surface run-off could collect, are identified and managed (paragraph 278); b) introduction of new works by Network Rail alongside the railway or change of use of existing works, both of which may import risk with respect to earthwork stability (either during construction, transition, or subsequently). The TEDE should be consulted and should determine any mitigating action and ensure its implementation. For example, relevant risks could be those associated with a detrimental change in ground loading or drainage conditions (paragraph 202); c) unknown active or dormant surface extraction activities on land above the level of any track and within the boundary Network Rail have assessed may import risk. Ensure there are no such unknown activities that may import risk (paragraph 199); d) lack of definition and process break-down in the earthworks Evaluation process that may lead to problems in determining which of the candidate earthworks identified by the Examination process are physically at risk of failure and in need of action. Ensure the review defines the key process stages and gives sufficient guidance to a suitably competent engineer (for example with regard to the information to be considered and decision criteria to be used) to ensure the objective, consistent and repeatable identification of such earthworks (paragraph 236); e) lack of a formal process and guidance that leads to problems in identifying the earthworks to be inspected when adverse or 	<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>

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extreme weather is forecast. The review needs to consider the weather forecasting arrangements (for example, the geographical area to which any forecast applies), the reporting and communication process, and the actions to be taken to ensure the safe operation of trains. It should ensure an integrated response by operations and infrastructure controls, and should be adopted nationwide (paragraph 258);
f) the lack of guidance in classifying earthworks for inclusion in the 'at-risk' list for adverse or extreme weather warnings. The guidance should, on a regular basis, import the latest knowledge from the earthworks management process into the 'at-risk' classification process. The guidance should also enforce regular review and update of the 'at-risk' list. Appropriate consideration should be given to earthworks, which are prone to failure due to water infiltration during intense rainstorms (paragraph 250).

4 26/11/2005 22/2006
Derailment near Moy, Inverness-shire
Status: Implemented

The Scottish Executive and the Department for Communities and Local Government in England and Wales should ensure that Network Rail becomes a statutory consultee for planning applications for developments in the vicinity of the railway (paragraph 199).

The RAIB is aware that this recommendation has now been implemented in Scotland and England by means of new legislation requiring local planning authorities to inform infrastructure managers of any applications for planning permission within 10 yards of railway land.
•The Town and County Planning (developmental management procedure) (England) Order 2015.
•The Town and County Planning (developmental management procedures) (Scotland) Order 2013.
The RAIB is seeking to understand the proposed changes to planning law in Wales.

5 26/11/2005 22/2006
Derailment near Moy, Inverness-shire
Status: Implemented

Network Rail should review their existing internal processes and ensure that the TEDE is included in statutory consultations for planning applications for surface extraction developments in the vicinity of the railway (paragraph 199). The output of this recommendation is dependent on any actions arising from recommendation 4 above.

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.

6 26/11/2005 22/2006
Derailment near Moy, Inverness-shire
Status: Implemented

Network Rail should review the risks and benefits of undertaking earthworks Cyclical Examinations by aerial survey compared to foot surveys. The review should identify the mitigating actions needed to control any risks identified.
If Network Rail intend to extend their use of aerial surveys to general use, conditions for this should be included in NR/SP/CIV/065. Their review should recognise the impact of aerial surveys, irrespective of specific or general use, on downstream process steps in NR/SP/CIV/065 and assess any mitigation measures necessary to ensure fitness for purpose.

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.

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For example, SSHI weightings might need to be different if data collection is by aerial survey (paragraph 232).

7 26/11/2005 22/2006

Derailment near Moy, Inverness-shire

Status: Implemented

Network Rail Scotland should ensure that processes are in place to assure that NR/SP/CIV/065 is fully adopted for undertaking earthworks Cyclical Examinations. This should include:
•full compliance with the SSHI analysis process (paragraph 234); justification for using aerial surveys and definition of attendant risk mitigation (paragraph 232).

Network Rail Scotland 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 26/11/2005 22/2006

Derailment near Moy, Inverness-shire

Status: Implemented

Bombardier should identify all vehicles manufactured with a similar method of secondary retention to that of unit 170431 and inform relevant train owners and operators of the risk of failure identified in this report (paragraph 272 and 274).
Bombardier should modify all new rolling stock under manufacture, and the design for future rolling stock, to mitigate this risk.

Bombardier 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.

9 26/11/2005 22/2006

Derailment near Moy, Inverness-shire

Status: Implemented



All rolling stock owners should identify rolling stock in their ownership with a similar method of secondary retention to that of unit 170431 and carry out modifications to mitigate the risk identified in this report (paragraph 272 and 274).

Rolling stock owners 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.
The investigation into a derailment at Falls of Cruachan in June 2011 (report 11/2011) revealed that some trains with similar methods of secondary retention have still to be modified. \$

10 26/11/2005 22/2006

Derailment near Moy, Inverness-shire

Status: Implemented

As part of their research into 'Whole train dynamic behavior in collisions and improving crashworthiness' (project T188), RSSB should consider the practicability of design elements on the bogie that limit the degree of deviation from the track following derailments (paragraph 267).

RSSB has carried out a preliminary review in response to this recommendation. At this time they propose no further action. The RAIB is concerned that the full potential of this proposal has still to be explored. Subsequent events (Oubeck in 2005, Barrow-on-Soar in 2008 and Claborough in 2012) have again illustrated the potential of installing design elements on the bogie to limit deviation. The RAIB continues to urge further technical analysis related to this topic.