

Recommendation(s) Status: Investigation into runaways of Road Rail Vehicles & their trailers on Network Rail

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.

<p>1 23/05/2008 27/2009</p> <p>Investigation into runaways of RRV & their trailers on NR</p> <p>Status: Implemented</p>	<p>The intention of this recommendation is that Network Rail should manage the specification, design, operation and maintenance of RRVs acquired after the issue of this report using a systems engineering process, incorporating formal safety analysis methods.</p> <p>Network Rail should implement a process that manages the specification, design, operation and maintenance of RRVs on its network throughout their system lifecycle (paragraph 201). The process should include the following elements:</p> <ul style="list-style-type: none"> a) a high level requirements specification of the task; b) a safety requirement specification, including the application of safety analysis techniques such as Hazops, FMEA and FTA; c) specifications relating to the plant, the relevant personnel and the applicable procedures; d) RRV configuration management systems; e) verification and validation requirements; f) site inspections and audits of the arrangements; and g) a change control process. 	<p>ORR has reported that Network Rail has provided evidence that it now has a process that manages the specification, design, operation and maintenance of RRVs on its network throughout their system lifecycle which includes the specific points from the recommendation.</p> <p>The RAIB notes that Network Rail has sought to address this recommendation for third party suppliers by strengthening RIS-1530-PLT.</p>
<p>2 23/05/2008 27/2009</p> <p>Investigation into runaways of RRV & their trailers on NR</p> <p>Status: Implemented</p>	<p>Network Rail should assess the operation of existing RRVs and trailers to satisfy itself, on the basis of a process of structured safety analysis, that there are adequate technical and operational controls to prevent RRVs running away. The assessment should take account of the factors listed below and consider the reliability of the primary controls identified. It should identify any realistically possible failures of the primary controls, and where these are identified, what emergency control measures (which may be implemented through operator training) should be put in place. Network Rail should amend their processes as appropriate to implement any improved controls identified.</p> <p>The factors for consideration should include:</p> <ul style="list-style-type: none"> a) the use of trailers that are not fitted with service brakes; b) for each type of RRV, a specific procedure covering the method of on- and off-tracking; c) the operation of RRVs without braked rail wheels; d) the operation of RRVs which rely on an interface between rubber and steel for traction and braking giving rise to extended and unknown braking distances in wet/contaminated conditions and on gradients; e) the content of operator and machine controller training courses as they relate to: <ul style="list-style-type: none"> driving on wet and/or contaminated railway lines; the use of the emergency stop button; the awareness of any gradient hazard and its effect on machine operation; the recovery from runaway events; and 	<p>ORR reports that Network Rail has committed to rail wheel brakes to a significant proportion of its RRV fleet. In addition Network Rail has undertaken a safety analysis of RRVs and developed an RRV safety improvement programme. Measures that have been implemented include: service braking for trailers; improved on/off tracking procedure; improved training; improved pre use checks of RRVs; special operating restrictions and gradient information. ORR has reported that since June 2013 non-direct rail wheel braked high ride excavators have been banned from use on Network Rail's infrastructure. It is also planned that the use of non-direct rail wheel braked high ride RRVs, (of any type) be prohibited by September 2014.</p> <p>ORR has also informed RAIB of an ongoing RRV programme focused on design safety issues. This is intended to specifically address design standards/specifications and the approvals process.</p> <p>While recognising the significant safety improvements achieved by the railway industry in recent years, the RAIB remains concerned about the quality of RRV design processes following its investigation into RRV runaways at Bradford (report no 09/2013) and Glasgow Queens Street in May 2013 (report no 15/2014) \$w.</p>



the measures required to ensure that travel movements are carried out safely.

- f) the adequacy of maintenance documentation in relation to the maintenance of the rubber and steel interface, including tyre condition, tyre pressure and the correct adjustment of the rail gear;
- g) whether brake lights would reduce the likelihood of collision when RRVs undertake multiple transits in a work site;
- h) the location of RRAPs, the arrangements for possessions and work sites and their effect on RRV travel distances;
- i) the adequacy and the practicality of the system of pre-use checks of RRVs and trailers;
- j) the adequacy of planning processes which should assess the risk of RRV operation on wet and/or contaminated rails, as well as gradients, and include specifically notifying its contractors and suppliers of the possible effect on machine operation and the specific mitigation measures that may be required;
- k) the briefing of machine controllers so that they can brief operators about the gradients that RRVs will be working on, the likely effect on machine operation and any required mitigation measures; and
- l) the absence of signage at RRAPs and inclusion of information in the sectional appendix stating the gradient of the railway.

3	23/05/2008	27/2009	The intention of this recommendation is that Network Rail should reduce the amount of under-reporting of accidents and incidents involving RRVs and their trailers. Network Rail should review the system of reporting accidents and incidents involving RRVs and trailers, and make any changes that would reduce the amount of under-reporting.	Network Rail has reported that it has taken actions in response to this recommendation. Office of Rail Regulation (ORR) proposes to take no further action unless they become aware that the information provided becomes inaccurate.
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Investigation into runaways of RRV & their trailers on NR

Status: Implemented