

Recommendation(s) Status: Derailment near Liverpool Central underground station

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 26/10/2005 14/2006</p> <p>Derailment near Liverpool Central underground station</p> <p>Status: Implemented</p>	<p>For the Liverpool Loop, Network Rail supported by Merseyrail should carry out a risk assessment of the compatibility between the rolling stock and the infrastructure and create an appropriate maintenance regime that may require going beyond current maintenance standards applicable to the track and to the trains. The risk assessment should consider parameters relating to track and trains, the operation of trains and the environment such as speed including TSRs, curvature and stiffness. It should also consider how these elements interact at the wheel-rail interface. Network Rail should also extend this study to see if the effect of lowered speed restrictions increasing gauge spreading forces could exist elsewhere on their system.</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation.</p> <p>ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>2 26/10/2005 14/2006</p> <p>Derailment near Liverpool Central underground station</p> <p>Status: Implemented</p>	<p>Network Rail should review and change the competence assurance system covering the staff that maintain the track in the Liverpool Loop tunnel to ensure that it is appropriate to the special features of its construction.</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation.</p> <p>ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>3 26/10/2005 14/2006</p> <p>Derailment near Liverpool Central underground station</p> <p>Status: Implemented</p>	<p>Network Rail should review and enhance, where appropriate, its current instructions on the use of tie-bars in order to clarify under what circumstances their use is appropriate and to prevent situations (as occurred on the Loop) where an over-reliance on their use may occur at the expense of carrying out more permanent repairs.</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation.</p> <p>ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>4 26/10/2005 14/2006</p> <p>Derailment near Liverpool Central underground station</p> <p>Status: Implemented</p>	<p>Network Rail should require that any dispensations on the six months timescale applying to the use of tie-bars should be justified by risk assessment and formally authorised at Territory level.</p>	<p>Network Rail has reported that it has taken actions in response to this recommendation.</p> <p>ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.</p>
<p>5 26/10/2005 14/2006</p> <p>Derailment near Liverpool Central underground station</p> <p>Status: Non-implementation</p>	<p>Network Rail should carry out studies to predict the fatigue life of tie-bars indifferent applications and ensure consistency with standards and practice to deliver tie-bars that are fit-for-purpose for all situations.</p>	<p>Network Rail has reported to the ORR that it sees no value in a general study into the fatigue life of stretcher bars.</p> <p>ORR has informed the RAIB that it accepted Network Rail's view that improving track maintenance arrangements tackled the root of the problem and that a fatigue life study of the tie bars was of limited value. ORR also accepted that the risk of a tie bar failing due to fatigue is reduced by following Network Rail instructions and guidance 'How to install and maintain a tie bar'. The ORR has therefore concluded that Network Rail has complied with their legal obligations in respect of this recommendation.</p> <p>The RAIB is concerned that basic research into the fatigue life of</p>

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Safety Recommendation

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from the relevant safety authority or public body)**

tie-bars has still to be undertaken because there are no controls over the number of times a tie bar can be re-used.

6 26/10/2005 14/2006

Derailment near Liverpool Central
underground station

Status: Implemented

Taking the outcome of the work in Recommendation 1 above, Network Rail should review the level of resources - both staff and supervision - available to the Merseyrail Track Maintenance Engineer and ensure enough are provided to implement and then sustain the appropriate maintenance regime required for the Liverpool Loop.

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.
ORR has closed the recommendation.

7 26/10/2005 14/2006

Derailment near Liverpool Central
underground station

Status: Implemented

Network Rail should implement a system to regularly clean the track bed of the Liverpool Loop Tunnel so that the build up of corrosive contaminants is minimised.

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.
ORR has closed the recommendation.

8 26/10/2005 14/2006

Derailment near Liverpool Central
underground station

Status: Implemented

Merseyrail should implement improvements to the emergency lighting system fitted to the class 507 and 508 trains to increase the duration for which it is effective in an emergency.

Merseyrail 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.