

Recommendation(s) Status: Pushchair trapped in tram doors and dragged, Nottingham, 15 December 2017




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 eight 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.
Insufficient response:	The end implementer has failed to provide a response; or has provided a response that does not adequately satisfy ORR that sufficient action is being taken to properly consider and address a recommendation.
Progressing:	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.
Other Public Body or Authority	The recommendation is also addressed to another public body or authority.
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.

1	15/12/2017	15/2018	<p>This recommendation is intended to reduce trap and drag risk.</p> <p>Nottingham Trams Limited should review and improve arrangements intended to manage the risk of trap and drag during tram dispatch on its network. The review should consider equipment, operating practices and the interaction between these. Areas in which improvements should be considered include:</p> <p>I ensuring that tram drivers have the equipment needed for an effective final visual door check of all doors after interlock is achieved;</p> <p>I CCTV modifications to ensure a good view during the final visual door check of all areas where items could be trapped in closed and locked doors;</p> <p>I investigating possible door seal modifications to reduce the risk of trapping items and, if appropriate, developing a programme for installation of improved door seals (eg during planned major overhauls);</p> <p>I the initial training, refresher training and monitoring needed to ensure that drivers comply with tram stop procedures and understand the importance of undertaking an effective visual check of all doors after interlock is achieved; and</p> <p>I the initial training, refresher training and monitoring needed to ensure that travel officers:</p> <ul style="list-style-type: none">o apply appropriate procedures when removing passengers from trams;o understand trap and drag risk and how this affects their work; ando appreciate what should be considered as emergency situations and how they should respond to these. <p>This recommendation may apply to other tramways (paragraphs 98, 99 and 101).</p>	<p>ORR has reported that Nottingham Trams Limited is taking suitable actions to address the recommendation although an accurate plan for full implementation has not been formulated. ORR will advise when the status of this recommendation changes.</p>
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**Number/ Date/ Report No/
Inv Title / Current Status**

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Pushchair trapped in tram doors and dragged,
Nottingham

Status: In-progress

Safety Recommendation

This recommendation is intended to increase Nottingham Trams' understanding of tram risk and the effectiveness of the mitigation measures on which it relies. It is possible that increased understanding of risk from low frequency, high consequence events could be assisted by Nottingham Trams working with the light rail industry body being set up in response to the RAIB's recommendation arising from the Sandilands accident (paragraph 107).

Nottingham Trams Limited should review its risk assessment process with a view to:

I improving the means by which it considers learning from other parts of the tramway and railway industries;

I giving explicit and detailed consideration of the ways in which identified mitigation measures can fail, and the consequences when this happens; and

I effectively evaluating the safety impact of changes to design and/or operational procedures.

Nottingham Trams should then implement the identified changes and update its existing tram operation risk assessments in accordance with the enhanced procedures (paragraphs 98, 99 and 101).

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

ORR has reported that Nottingham Trams Limited is taking suitable actions to address the recommendation although an accurate plan for full implementation has not been formulated. ORR will advise when the status of this recommendation changes.