

## Recommendation(s) Status: Derailment of a train at Croxton Level Crossing

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

<b>Implemented:</b>	All actions to deliver the recommendation have been completed.
<b>Implemented by alternative means:</b>	The intent of the recommendation has been satisfied in a way that was not identified by the RAIB during the investigation.
<b>Implementation ongoing:</b>	Work to deliver the intent of the recommendation has been agreed and is in the process of being delivered.
<b>In-progress:</b>	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.
<b>Non-implementation:</b>	Regulation 12(2)(b)(iii) = recommendation considered and no implementation action to be taken.
<b>Awaiting response:</b>	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)
1 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should assess the sleeper spacings and panel length of all HoldFast crossings until the rate of shrinkage is understood, and take such steps as are necessary so that no panel end is left unsupported by a sleeper. At the same time they should ensure that legged base plates are installed as specified by HoldFast Level Crossings Ltd (paragraphs 415a, 415b and 419).	After reviewing all the information received ORR has concluded that Network Rail has evaluated panel lengths of selected HoldFast crossings in areas considered to be at risk and has concluded that: shrinkage is within the design limits set within the Level Crossing Surface System standards. Manufacturer's tolerances additionally support the findings of this analysis. The Office of Rail Regulation (ORR) proposes to take no further action unless they become aware that the information provided becomes inaccurate.
2 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should review the information that they provide to their level crossing teams, so that the requirements of their standards, the risks of particular crossings using panel surfaces and the installation, inspection and maintenance actions that they expect are clearly communicated to front-line staff in a way that is useful and comprehensible to them (paragraph 416b and 417a).	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.
3 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented by alternative means	HoldFast Level Crossings Ltd. should define the performance limits of their level crossing panels in consideration of the loads and layouts to which they are exposed (paragraphs 416c and 416d). It is suggested that HoldFast seek assistance from Rosehill Polymers and Network Rail in this task.	HoldFast Level Crossings Ltd 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.
4 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should arrange a complete generic risk assessment of the HoldFast level crossing system by an appropriately technically qualified person, once the service environment of level crossings and the limits of performance of panels have been assessed. This should involve Holdfast Level Crossings Ltd. and Rosehill Polymers Ltd. appropriately in accordance with Network Rail's Engineering Safety Management System definition of 'system supplier'. This assessment should review the risks associated with the design, manufacture, installation and maintenance of the system, and should be supported by a wide review of in-service experience. The principles of Network Rail's Engineering Safety Management System should be adopted for guidance. The generic assessment should then be used to develop a site-specific assessment methodology for all locations where HoldFast crossings are to be used (paragraph 416c and 416d).	ORR has concluded that it is not for Network Rail to carry the risk assessment as envisaged by the recommendation, ORR states that Network Rail has suitable inspection and audit arrangements which are sufficient to ensure that crossing decks remain safe. The RAIB has observed that this is an entirely reactive approach. The intention of the recommendation was that problems should be identified in advance by the application of a structured risk assessment (ie an application of the principles outlined in the yellow book). This intention appears not to have been addressed.\$

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5 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should update specification NR/SP/TRK/040 to include any revisions or clarifications of load parameters and assurance measures necessary to better define the performance requirements of level crossing panel systems (paragraph 417b).	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 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should review how it controls any application and design change associated with level crossing panel systems, including working with suppliers, manufacturers and front-line staff (paragraph 417c). This should take account of the findings in paragraphs 397 to 402 of this report.	Network Rail has reported that its processes and requirements for new or change product proposals had not been clear at the time that Croxton level crossing was installed. However, actions already taken had addressed the issues already raised by the RAIB. ORR proposes to take no further action unless they become aware that the information provided becomes inaccurate.
7 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should ensure that HoldFast Level Crossings Ltd. have applied for and received product acceptance of their current base plate design (paragraph 417c).	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.
8 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should review their processes for approval of level crossing panels and consider adopting the principles of hazard identification and mitigation within their Engineering Safety Management System (paragraph 418).	Network Rail has reported that the actions it has already taken have addressed the issues raised by this recommendation.
9 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	Network Rail should review all their public highway crossings fitted with panel surfaces to identify any that do not comply with the normal operating conditions defined in NR/SP/TRK/040 or those outside of their limit of application. Any crossings identified as such, should be listed and the risks associated with operating them outside of these conditions assessed and reasonable steps taken to mitigate them (paragraph 418).	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.
10 12/09/2006 11/2008 Derailment of a train at Croxton Level Crossing Status: Implemented	HoldFast Level Crossings Ltd should amend their panel designs so that the manufacturing configuration of all panels supplied in the future is uniquely and indelibly marked on the panel, so as to be visible when the panel is in-situ in a level crossing (paragraph 420).	Holdfast Level Crossings Ltd 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.

**Number/ Date/ Report No/  
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**Safety Recommendation**

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the relevant safety authority or public body)**

11            12/09/2006    11/2008  
Derailment of a train at Croxton Level Crossing  
Status: Implemented

HoldFast Level Crossings Ltd and Rosehill Polymers Ltd should put in place processes so that any lessons learned during the addressing of the recommendations of this report to other users of their level crossing surface system (paragraph 421).

ORR has reported that actions were taken in response to this recommendation. However, the RAIB has not been provided with information about these actions and is unable to judge whether the intent of the recommendation has been met.