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21 August 2018



Mr Andrew Hall  
Deputy Chief Inspector of Rail Accidents  
Cullen House  
Berkshire Copse Rd  
Aldershot  
Hampshire GU11 2HP

Dear Andrew,

**RAIB Report: Trains struck platform at Moston, Manchester, 28 January 2015**

I write to provide an update<sup>1</sup> on the action taken in respect of recommendation 2 addressed to ORR in the above report, published on 7 October 2015.

The annex to this letter provides details of the action taken regarding the recommendation, the status of which is now '**Implemented**'. We do not propose to take any further action in respect of the recommendation, unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 22 August 2018.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Oliver Stewart', written over a horizontal line.

Oliver Stewart

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<sup>1</sup> In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

## Recommendation 2

*The intent of this recommendation is to provide Network Rail staff with clear guidance, and practical methodologies, for recognising long term reductions in clearances at platforms. Where clearances are managed by comparison to a reference datum (eg the position of a platform in January 2009), the process should facilitate this comparison. Documents referenced in Network Rail standard NR/L2/TRK/3201 should be checked to ensure that the current version does not have a potential to mislead staff involved in management of clearances at platforms.*

Network Rail should review and improve its process for managing clearances at platforms so that:

- it provides an effective means for identifying long term adverse movement trends, including an effective means of comparing movement data with any relevant datum information; and
- documentation directly related to managing clearances is more clearly presented.

### ORR decision

1. Network Rail have developed a solution for providing staff a method of recognizing long-term reductions in clearance at platforms, which is different to what was described in the recommendation.
2. Network Rail have developed a tool to provide more comprehensive clearance data to track staff than they previously had access to. The relevant Track Engineering Form (TEF3050) has been updated to reflect the improved information now available, as well as to more closely align it to existing standards.
3. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:
  - taken the recommendation into consideration; and
  - taken action to implement the intent of the recommendation, but not by the method RAIB identified.

**Status: *Implemented by alternative means.***

### Previously reported to RAIB

4. On 6 October 2016 ORR reported that we were content with the response from Network Rail and would continue to liaise with them to ensure that it was progressing to stated timescales. ORR considered that, when completed, the status of the recommendation could be reported as 'Implemented by alternative means' as Network Rail's chosen method to address the intent of the recommendation did not rely on the further development or use of datum plates, an explicit element of the first bullet point of the recommendation.

## Update

5. Following timescale extensions, Network Rail provided a closure statement on 29 May 2018 which included the following summary:

*Network Rail, in conjunction with Balfour Beatty Rail, has developed a new tool called Rolling Stock Clearance Insight (RSC Insight) which gives much more comprehensive clearance data (including clearance, cant, curvature, vehicle gauge etc.) which when combined can be used to give the worst case scenario. It also has a wider benefit of being able to record and provide historic trending data. This tool was rolled out in April 2016. This tool can be used to locate any specific structure and identify survey date, age and method. It can also provide historical assessment of clearances and the trending chart from RSC Insight and the relevant underlying data are included in Appendix A.*

### 3.2 Documentation directly related to managing clearances is more clearly presented

*Network Rail has improved Track Engineering Form (TEF) TEF3050 to more clearly align with current standards and has improved the information available. The following changes have been made to the form:*

- *amended territory field to route, area field to DU and depot field to TME and updated Route options to correspond with current organisation and Titled;*
- *added clearance category field, so that the Track Maintenance Engineer (TME) can judge significant movement on review of the form;*
- *added upper/lower sector field to incorporate maintenance tolerances from NR/L2/TRK/001/mod12 into conditional formatting of the form;*
- *added red/green block field so that reviewers are aware whether the datum information corresponds to a design or just a previous position of the track;*
- *added a column for 'six-foot' data - to be mandatory at least for all anomaly structures that are not platforms, so that engineers have an idea of whether they might be able to rectify the clearance without necessarily having to arrange another site visit. Platforms already have this information;*
- *added a vertical comparison column to be consistent with how horizontal movement is monitored; and*
- *removed existing conditional formatting and added new formatting in columns N to P to highlight when maintenance tolerances in NR/L2/TRK/001/mod 12, R/L2/TRK/2102 for high fixity / slab track or GI/RT7073 have been breached (where there are differences in the standards, the worst case has been used and for tolerances of 0mm, disparities up to +/-2mm have been highlighted amber to allow tolerance for measurement inaccuracies).*

*TEF 3050 issue 3 was published on 05/12/2015 and briefed at the Quarterly Track & Lineside Governance and Safety Briefing on 03/12/2015.*

*This closure statement is submitted by Network Rail on the basis that the roll-out of RSC Insight and the updated TEF3050 form constitute 'implementation by other means'.*

### **Conclusion**

*Network Rail, Chief Track & Lineside Engineer, has addressed the intent of this recommendation by taking the following steps to improve its process for managing clearances at platforms:*

- development and roll-out of a new tool called Rolling Stock Clearance Insight which gives much more comprehensive clearance data, including expanded trending functionality; and*
- improvements to TEF3050.*

*Therefore, it is considered that the intent of this recommendation has been addressed by 'implementation by other means' and can therefore be CLOSED.*

## Previously reported to RAIB

### Recommendation 2

*The intent of this recommendation is to provide Network Rail staff with clear guidance, and practical methodologies, for recognising long term reductions in clearances at platforms. Where clearances are managed by comparison to a reference datum (eg the position of a platform in January 2009), the process should facilitate this comparison. Documents referenced in Network Rail standard NR/L2/TRK/3201 should be checked to ensure that the current version does not have a potential to mislead staff involved in management of clearances at platforms.*

Network Rail should review and improve its process for managing clearances at platforms so that:

- it provides an effective means for identifying long term adverse movement trends, including an effective means of comparing movement data with any relevant datum information; and
- documentation directly related to managing clearances is more clearly presented.

### ORR decision

1. ORR is content with the response and will continue to liaise with Network Rail to ensure that it is progressing to stated timescales. ORR considers that, when completed, the status of the recommendation can be reported as 'Implemented by alternative means' as Network Rail's chosen method to address the intent of the recommendation does not rely on the further development or use of datum plates, an explicit element of the first bullet point of the recommendation.

2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail has:

- taken the recommendation into consideration; and
- is taking action to implement it by 2 September 2016.

**Status: Implementation ongoing. ORR will advise RAIB when actions to address this recommendation have been completed.**

### Information in support of ORR decision

3. On 3 February 2016 Network Rail provided the following initial response:

*Network Rail has supported RAIB throughout their investigation of this incident including detailed discussions in respect of the intent of this recommendation.*

*On publication of the investigation report Network Rail opened discussions with the ORR to agree an action plan to address the intent of Recommendation 2 by*

*alternative means; a joint meeting was held on 10 December 2015 Network Rail.*

*At the meeting Network Rail stated that it does not agree that trending of datum plate data is the most appropriate method of considering change in risk. Datum plate data records the relative position of the adjacent rail and a datum plate 'block'. This relationship is not sensitive to changes outside of that relationship which may adversely affect clearances and therefore the risk of a strike. Examples of such movements include platform coping stone movement and 'bulging' in tunnels – both of these movements may be independent of the relative position of track and datum plate.*

*Furthermore, datum plate monitoring is a costly exercise which involves putting staff on track and does not align with our safety by design aspirations. Changes to Railway Group Standards now allow the 'Infrastructure Manager' to manage tight clearances without datum plate monitoring and Network Rail proposes to focus upon other control measures where these are appropriate.*

*Addressing the specific recommendation bullet points:*

- *provide an effective means for identifying long term adverse movement trends, including an effective means of comparing movement data with any relevant datum information*

*Network Rail currently trend clearances for 'Critical Structures' using the 'TiCleD' system which is provided to Route teams to assist them in managing clearances and specifying work.*

*Network Rail currently compares the measurements being taken with the previous TiCleD data or the original design parameters. This therefore, does not readily provide a 'historic trend' as any older TiCleD data is not routinely provided although it is stored/available.*

*Nonetheless, Network Rail is, in conjunction with Balfour Beatty Rail, currently developing a new tool called Rolling Stock Clearance (RSC) which gives much more comprehensive clearance data (incl. clearance, cant, curvature, vehicle gauge etc) which when combined can be used to give the worst case scenario. It also has a wider benefit of being able to record and provide historic trending data.*

*This tool is currently on programme to be rolled out by the end of April 2016 although in closing this aspect of the recommendation a post implementation period is considered appropriate.*

### **Completion 1 June 2016**

- *documentation directly related to managing clearances is more clearly presented*

Track Engineering Form TEF3050, Datum Monitoring Sheet

*Network Rail has improved TEF3050 to more clearly align with current standards and have improved the information available; Issue 3 of the form was published on 5<sup>th</sup> December 2015 and is available on CONNECT.*

BowTie for 'Management of Gauging'

*Network Rail is developing a BowTie diagram mapping out the process and controls for the management of gauging risk. It is intended that the Bowtie diagram will be developed, peer reviewed and approved by 2<sup>nd</sup> September 2016.*

**Completion 2 September 2016**

*It was concluded that fulfilling these actions will combine to present clearance management information more clearly.*



MON /15/008



## MISCELLANEOUS OPERATING NOTICE

### Train Preparation Outward rotating Spigots

Your attention is drawn to a recent occurrence where substantial damage was sustained to line side infrastructure due to an outward rotating spigot assembly being left in an 'out of gauge' position in transit.

It is believed this condition was overlooked during train preparation, resulting in the vehicle entering the network in an unsafe condition.

Spigot Recess



Outward rotating spigots are being painted on the underside to enhance visibility of any rotated spigots. Please ensure during train preparation of these vehicles, that spigots not in use are either stowed in position on the bed of the vehicle (in the spigot pocket) or rotated outward and stowed adjacent to a spigot recess to ensure the spigot is then not out of gauge.

All staff are reminded to be extra vigilant during train preparation and departure roll by checks.

This instruction remains in force until further notice.



