Tracy Phillips
Safety Regulation Manager
Telephone: 020 7282 3868
Email: tracy.phillips@orr.gsi.gov.uk

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

Dear Andrew,

RAIB Report: Freight train derailment at Heworth, Tyne and Wear

I write to report[1] on the consideration given and action taken in respect of recommendations 1 to 5 addressed to ORR in the above report, published on 24 September 2015.

The annex to this letter provides details of the consideration given/action taken in respect of these recommendations, where:

- recommendation 1 is reported as '**Implemented**' and we do not propose to take any further action in respect of this recommendation, unless we become aware that any of the information provided becomes inaccurate, in which case I will write to you again; and
- recommendations 2 to 5 are reported as **'Insufficient response'** and we will advise you when further information is available regarding actions being taken to fully implement these recommendations.

We will publish this response on the ORR website on 5 August 2016.

Yours sincerely,

Tracy Phillips

[1] In accordance with Regulation 12(2)(b) of the Railways (Accident Investigation and Reporting) Regulations 2005

Initial consideration by ORR

1. All 5 recommendations were addressed to ORR when the report was published on 24 September 2015.

2. After considering the recommendations ORR passed recommendation 1 to Freightliner and recommendations 2 to 5 to Network Rail asking them to consider and where appropriate act upon them and advise ORR of its conclusions. The consideration given to each recommendation is included below.

3. This annex identifies the correspondence with end implementers on which ORR's decision has been based.

Recommendation 1

The intent of this recommendation is to reduce the risk of a PCA wagon's ride performance being degraded by a loss of damping within its suspension due to a damper pad which is worn beyond its maintenance limit.

Freightliner should amend its vehicle maintenance instructions for its fleet of PCA wagons so that each damper pad is removed and measured during the VIBT examination to identify those wagons which have had levels of damper pad wear (on any corner) that exceed the permitted wear limit since the last VIBT examination. For each wagon identified, Freightliner should implement measures to prevent it being used in service with a damper pad that could wear beyond the permitted wear limit before its next VIBT examination. These measures could include:

- additional monitoring or checks for that wagon in between VIBT examinations;
- replacing damper pads on that wagon at an earlier interval; or
- carrying out work to identify and address the reasons why that wagon has had a high level of damper pad wear, such as pedestal or wheelset alignment

ORR decision

4. ORR is content that Freightliner has taken action to fully address the intent of the recommendation. ORR considered that it was important to satisfy itself that other freight operators and entities in charge of maintenance (ECMs) are engaging with the Gloucester pedestal suspension working group to manage the identified risks. The Gloucester Pedestal incident is therefore on the agenda for discussion at each ECM surveillance meeting. Recent meetings have included: Wabtec; Channel Commercials; Davis Wagons; Colas Rail; Nacco; and Plasmor. ORR inspectors are also discussing this issue with DB Cargo and DRS.

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

- taken the recommendation into consideration; and
- taken action to implement it.

Status: Implemented.

Information in support of ORR decision

6. On 20 November 2015 Freightliner provided the following initial response:

Freightliner has made a number of changes to its procedures as a result of the RAIB's and its own investigations into the accident. These actions are summarised below:

1. *Shortly after the incident Freightliner implemented an urgent special check of the entire PCA MK2 pedestal suspension fleet (124 wagons) for which Freightliner is the Entity in Charge of Maintenance (ECM). This check was completed before the end of November. The check identified 4 wagons with suspect damping were identified and removed from service. Of these 2 were found to have worn damper pads and were subject to further checks - see point (4) below.*

2. *Early in the investigation it became obvious that the suspension damping had been compromised as a result of a badly worm damper pad. The cause of this excessive wear was not immediately clear. An immediate change of inspection policy was implemented to mandate the removal and measurement of the damper pad at the annual Vehicle Inspection and Brake Test (VIBT) Examination. The measured dimensions are recorded and are subject to regular review by Freightliner Engineers. These recorded measurements have not identified any further badly worn damper pads suggesting that the excessive wear is not widespread.*

3. *During the investigation into the incident a selection of new and worn damper pads were subject to metallurgical examination. This investigation revealed that the surface hardening treatment applied at manufacture extended to approximately 4 mm depth. The original manufacturer recommendation for replacement of this component was at 65mm i.e. when the surface treatment was potentially fully worn risking potential for accelerated wear. Freightliner has amended the change out criteria to increase the minimum change out limit to 67mm.*

4. *Following the identification of a small number of wagons with worn damper pads in the fleet check, Freightliner commissioned an engineering consultancy organisation to undertake some checks on pedestal alignment. These checks were completed however the wagons checked were found to be compliant with the Gloucester Carriage and Wagon (OEM) specification for pedestal alignment.*

5. *A comprehensive review of the Maintenance Plan for the PCA fleet has been undertaken using both internal and external resources. This included a full review of the criteria for inspecting the suspension at both 6 monthly Planned Preventative Maintenance (PPM) and annual Vehicle Inspection and Brake test (VIBT) events. The VIBT requires*

mandatory lift, wheelset removal and measurement of wearing components. Before the incident Freightliner understood that the level of intervention specified within its maintenance plan was at least equal to the industry best practice. Freightliner believes that the revised policy now exceeds the industry norm for this inspection and can therefore be considered as best practice. The revised Maintenance Plan was issued in November however the improved inspection of suspension components had been introduced earlier in 2015. This exercise has been accompanied by staff briefing to greatly increase awareness of the inspection criteria required.

6. *Work is continuing to improve Freightliner's understanding of the design and operation of the Gloucester Pedestal Suspension. Freightliner is a member of the Network Rail Engineering Service Provision Agreement (ESPA) Pedestal Suspension Working Group, and as such is sharing our experience with other ECMs.*

Freightliner is therefore satisfied that the actions taken since the incident have further strengthened its maintenance policy for this fleet to prevent excessive wear of critical suspension components occurring between maintenance events.

Recommendation 2

The intent of this recommendation is to reduce the possibility of new track defects developing at Heworth, which could cause a derailment.

Network Rail should investigate why water is not draining from the track bed in the vicinity of where the train derailed (between 99 miles 220 yards and 99 miles 264 yards on the Down Sunderland line between Pelaw and Newcastle) and implement measures to control the risk of excess water affecting the track's vertical geometry. Such measures could include ballast cleaning, remedial work to improve the effectiveness of the installed track drainage, through to a renewal of the track.

Recommendation 3

The intent of this recommendation is to reduce the risk of derailment in the Newcastle Track Section Manager area due to track defects that are not repaired after being found by the inspection regime.

Network Rail should review the condition of the track assets in the area covered by the Newcastle Track Section Manager against the records on its system for maintaining its track assets (Ellipse). The aim of the review should be to identify track defects requiring maintenance action which are either not recorded on Ellipse, do not have a planned date for repair, or have not been correctly prioritised for repair. Once identified, these defects should be recorded on Ellipse, prioritised and given a date for repair.

Recommendation 4

The intent of this recommendation is to reduce the risk of derailment due to track assets not being maintained by better understanding the reasons for the problems found in this investigation.

Network Rail should investigate why its track assets within the area covered by the Newcastle Track Maintenance Engineer consistently have the highest numbers of reportable track geometry defects and sections of track in the super-red category on LNE Route. The investigation should include consideration of:

- the number of staff needed to maintain the track assets in the Newcastle Track Section Manager area, so that both reactive and planned volumes of preventative maintenance activities are delivered;
- the effect that changes to safe systems of work used by the track maintenance teams has had on the time spent working on the track;
- the effect that the introduction of PLPR within the track inspection regime has had on increasing the track maintenance workload;
- the types and numbers of track assets in the Newcastle Track Maintenance Engineer's area, their age, and their condition, in comparison to the other Track Maintenance Engineer areas on LNE Route; and
- the effect that any other factors have had in contributing to the high number of track asset defects.

Based on the findings of the above investigation, Network Rail should determine what the appropriate target values are for the numbers of reportable track geometry defects and sections of track in the super-red category in the Newcastle Track Maintenance Engineer area. Network Rail should then take action to improve the maintenance of the track assets in this area to a level that allows these targets to be met.

Recommendation 5

The intent of this recommendation is to reduce the risk of derailment due to track assets not being maintained by better management through auditing and monitoring procedures.

Network Rail should investigate why its management arrangements allowed non-compliances to processes for track asset maintenance to go undetected in the area covered by the Newcastle Track Maintenance Engineer, which correspondingly had the highest numbers of reportable track geometry defects and eighth of a mile sections of track in the super-red category when compared to other areas. The investigation should include consideration of:

- why its audit and self-assurance framework did not identify the full extent of the non-compliances to processes found by the RAIB;
- why its reporting and monitoring processes did not trigger earlier action by senior management within the Route to resolve the persistent problems

affecting the track assets in the Newcastle Track Maintenance Engineer area; and

- whether there are other Track Maintenance Engineer areas, like the one at Newcastle, with persistent non-compliances to processes that are affecting the maintenance of its track assets.

Based on the findings of its investigation, Network Rail should take action to improve the management arrangements at Route level that audit, monitor and review the performance of a local area to highlight non-compliances which are resulting in persistent deficiencies with the maintenance of its track assets.

ORR decision

7. ORR wrote to Network Rail on 22 October 2015 requesting that it provide details of its response to all recommendations by 4 December 2015.

8. No formal response to this request has been received to date. However, having escalated the issue within Network Rail, the most recent update received by ORR (31 May 2016) indicated that ORR would be unlikely to receive a response until w/c 25 July 2016 at the earliest – no response has been received as at 4 August 2016.

9. As Network Rail has not provided a response to these recommendations, ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, it has:

- not taken the recommendations into consideration; and
- has not set out how or whether the recommendations will be addressed.

***Status: Insufficient response*. ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.**