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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: Derailment at Primrose Hill / Camden Road West Junction on 15 October 2013

I write to provide an update¹ on the action taken in respect of recommendation 3 addressed to ORR in the above report, published on 14 October 2014.

The annex to this letter provides details of the action taken regarding the recommendation. The status of recommendation 3 is '**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 has become inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 4 December 2019.

Yours sincerely,

Oliver Stewart

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

Recommendation 3

The intent of this recommendation is to clarify the requirements for the design and acceptance of freight wagons, taking account of the possibility of asymmetric loading.

RSSB should amend Railway Group Standard 'Resistance of Railway Vehicles to Derailment and Roll-Over', GM/RT2141 to refer specifically to asymmetric loading, including possible combinations of longitudinal and lateral load imbalance.

ORR decision

1. RSSB have amended the Railway Group Standard *Permissible Track Forces and Resistance to Derailment and Roll-Over of Railway Vehicles* (GM/RT2141) so it now refers to asymmetric loading, but does not include defined limits or boundaries.
2. In taking forward the revised standard, the Cross Industry Freight Derailment Implementation Group (XIFDIG) has completed its work regarding flatbed wagons and is now considering the issue of lateral unloading in bulk hopper wagons.
3. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RSSB has:
 - taken the recommendation into consideration; and
 - has taken action to implement it.

Status: Implemented.

Previously reported to RAIB

4. On 13 October 2015, ORR reported the implementation of recommendation 3 was being taken forward by the RSSB cross industry working group, although they had not yet produced a time-bound plan for amending GM/RT 2141.

Update

5. On 1 July 2019 RSSB provided the following update:

*Issue 4 of GMRT2141 ([Permissible track forces and resistance to derailment and roll-over of railway vehicles, published on 1 June 2019](#)) now notes that '[t]he conditions under which the vehicle assessments are carried out [as defined and recorded in the test report – Appendix A] include taking into account the effects of: [...] b) **In-built vehicle design asymmetry (either longitudinal or lateral)** [...]' (3.1.1).*

Furthermore (3.3.1), '[f]or ISO container carrying vehicles, an additional assessment of safety against derailment on twisted track (BS EN 14363:2016, section 6.1) shall be carried out to demonstrate that the vehicle still meets the relevant limit value for the method selected with the container having an offset load'. Indeed (3.3.11), '[t]he orientation of the offset loading on the vehicle is [...] important to consider, so that the worst case scenario can be assessed. For

example, longitudinal asymmetry of the wagon could determine which end requires the heaviest load, particularly if different spring stiffnesses are used'.

Taking the above into consideration, RSSB considers the recommendation to be closed.

Previously reported to RAIB

Recommendation 3

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Steps taken or being taken to address the recommendation

1. As detailed in the response to recommendation 2, RSSB has established a cross industry working group to consider issues around freight vehicle/ track condition derailments. The work of the group will include deliberating the changes that will need to be made to the Railway Group Standard GM/Rt 2141 to accommodate longitudinal and lateral asymmetric loading. The ORR representative produced the following update following the cross industry working group held on 23 July 2015:

- *With respect to recommendation 3 and the amendment of GM/Rt 2141 to accommodate longitudinal and lateral asymmetric loading, the XIWG will deliberate what they believe will be the elements that will contribute to closing out this requirement.*
- *GM/Rt 2141 also applies to passenger vehicles and other vehicles such as MPV and plant in travelling mode and the amendments of GM Rt 2141 will be extended to those types of vehicles to a wider consulted audience via rolling stock standards. We also know that the Gloucester recs make similar demands and these will be needed to be consulted on as well.*
- *ORR's understanding is that the GM Rt 2141 will go to version/issue 4 in due course and part of that is harmonising the requirements and methodologies of some of the contents of 2141 to be more compatible with the Euro Norm EN 14363.*
- *EN14363 uses a different 'assault course' as to the typical track geometry components (curve radii, over speed etc) needed to be negotiated to enable safe traverse. One of the functions that the consultation will look at to ensure that any requirements don't impose any additional burden to GB practise. Conversely ORR should also ensure that any non GB wagon entering into UK should be subject to sufficient scrutiny so that it can negotiate GB track without risks that we wouldn't expect from domestic wagons.*
- *ORR suggested RSSB publish interim guidance to supplement the intended changes to GM/Rt 2141 to ensure new entrants are aware of the issues raised and can be mindful of them when undertaking compatibility.*

ORR decision

2. The implementation of recommendation 3 is being taken forward by the RSSB cross industry working group, although they have not yet produced a time-bound plan for amending GM/RT 2141.

3. ORR, in attending the RSSB cross industry working group has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RSSB have:

- taken the recommendation into consideration; and
- is taking action to implement it, although a timebound plan has yet to be provided.

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