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

Dear Andrew,

**Occupied wheelchair contacting a passing train at Twyford station, 7 April 2016**

I write to report<sup>1</sup> on the consideration given and action taken in respect of the five recommendations addressed to ORR in the above report, published on 19 January 2017.

The annex to this letter provides details in respect of each recommendation. The status of all five recommendations is '**implementation on-going**'.

ORR will advise RAIB when further information is available regarding actions being taken to address these recommendations.

We will publish this response on the ORR website on 18 January 2018.

Yours sincerely,

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

## Initial consideration by ORR

1. All 5 recommendations were addressed to ORR when the report was published on 19 January 2017.
2. After considering the recommendations ORR passed recommendation 1 to RDG; recommendations 2 and 3 to RSSB; and recommendations 4 and 5 to GWR, asking them to consider and where appropriate act upon them and advise ORR of their conclusions.
3. When the report was published, ORR also brought recommendations 4 and 5 to the attention of TOCs as it was concluded that there are equally important lessons for them as station operators. ORR did not ask these organisations to provide a reply.
4. This annex identifies the correspondence with end implementers on which ORR's decision has been based.

## Recommendation 1

*The intent of this recommendation is that in advance of the implementation of Recommendations 2 to 5 below, members of the public are made aware, as quickly as possible, by the railway industry, of the potential hazard from train slipstreams at railway stations and the need to keep hold of wheelchairs and pushchairs.*

The Rail Delivery Group, in consultation with passenger groups, including those representing the interests of disabled persons, should seek to provide station users, in an expedient and appropriate way, with both advance information (such as published advice or leaflets) and real time information (such as announcements and customer information system displays) that:

- trains passing through platforms, particularly freight trains, can generate slipstreams which are strong enough to move wheelchairs and pushchairs, even if the brakes are on; and
- brakes should be applied to the maximum extent possible and carers should keep a firm hold on a wheelchair or pushchair when a train passes by (paragraph 74b).

## ORR decision

5. We are content with the approach RDG are taking to address the recommendation and the timescales are satisfactory. We will contact RDG in early 2018 to check they are on target to meet their deadline.
6. We have clarified our views on a number of issues with RDG over the use of posters at termini stations rather than announcements
7. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, RDG has:

- taken the recommendation into consideration; and
- is taking action to implement it by 31 March 2018.

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

### Information in support of ORR decision

8. On 12 May 2017 the Rail Delivery Group provided the following initial response:

*Our progress to date comprises:*

1. *Shortly after publication of the RAIB report on 19 January, RDG provided a summary of the report, its findings and recommendations in the January edition of our Operations Scheme Brief (issued monthly and targeted primarily at the senior operations, operational standards and safety contacts within our member organisations).*
2. *Wide engagement with relevant parties has taken place and is continuing, with the aim of planning and implementing RDG's response to the recommendation. This has included meetings with RDG's Accessibility and Inclusion Team, RDG Train Operators Safety Forum, RDG Stations Forum and Network Rail's BEAP (Built Environment Accessibility Panel), which is made up of disabled people and inclusive design experts.*

*The main conclusions to date from those meetings are summarised below:*

- All station users should be considered as potentially affected, not just those with mobility impairment or pushchairs.*
- Several media of communicating this were considered however, use of station posters was rejected as the experience of our members is that these are largely ineffective for informing station users.*
- Members of the RDG Train Operators Safety Forum noted the close link to RSSB research project T1098 (Identifying mitigations for the risk of unplanned movement of wheelchairs and pushchairs on station platforms), which is currently under way and which relates to the Southend and Whyteleafe incidents in which respectively a wheelchair and pushchair rolled onto the track because of platform gradient. The Forum agreed that the RSSB should be asked to expand the scope of this to cover slipstream effects and the RSSB have since confirmed that mitigating the effects of causal factors such as air turbulence and vibration are already in scope.*
- Current platform audible warnings should be tweaked to become more effective (i.e. through interchangeable use of colloquial accents and/or variety of voices), those should be played for all passing trains in an appropriate and efficient manner.*

- v. *The message needs to be regular, this to avoid creating panic.*
- vi. *It is suggested that a raising awareness campaign is the most effective method of informing people of the risks prior to travel.*

*Considering the information gathered from the consultation meetings (as above), RDG proposes the below measures to implement the recommendation, including the proposed timetable for securing that implementation:*

1. *In terms of advance information, RDG proposes to run a campaign to raise awareness of the risks. The intention is to focus on how the risk from slipstreams generated by passing trains can be mitigated by station users directly. We plan to publish this information through channels such as the National Rail Enquiries website and engagement emails to our customers (e.g. Family and Friends Railcard holders, Disabled Persons Railcard holders, Senior Railcard holders). We aim to have this finalised and live by Quarter 1 calendar year of 2018, this timetable is subject to the relevant RDG board agreement.*
2. *In terms of real time information, RDG will be engaging with Train Operating Companies regarding current announcement and customer information systems (CIS) deliver warnings for passing trains. Any good practices identified will then be promoted by means of a Guidance Note on optimising the accuracy, timeliness and effectiveness of such warnings so that stations users are made aware of passing trains appropriately and are able to take precautions if necessary. We aim to have this finalised and live by Quarter 1 calendar year of 2018, this is subject to consultation and the relevant RDG board agreement.*

## **Recommendation 2**

*The intent of this recommendation is that operators of stations where trains pass through at speed have a consistent set of measures they can take to ensure the safety of wheelchairs and pushchairs from train slipstreams, following appropriate risk assessment in accordance with Railway Group standards.*

RSSB, in consultation with the railway industry, should investigate and identify mitigation measures which can be applied by station operators to inform station users about what they should do to prevent wheelchairs and pushchairs from being moved by trains passing through stations at speed. Suitable and specific guidance should then be issued to the railway industry to be used in conjunction with the revised standard for risk assessment (see Recommendation 3)

## **ORR decision**

9. We are content that by reissuing the Railway Group Standard GIRT7016 (Interface between station platforms, track and trains) as industry guidance (RIS-

7016-RNS), RSSB are taking appropriate action to address the recommendation. Once the guidance has been published, it will be the responsibility of station operators to use it to help manage the risk of wheelchairs and pushchairs being moved by the aerodynamic effect of trains passing through stations at speed.

10. 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
- is taking action to address it by producing updated guidance for industry. Once this has been completed, we would consider the recommendation implemented.

**Status: Implementation on-going. ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.**

#### **Information in support of ORR decision**

11. On 3 May 2017 RSSB provided the following initial response:

*Regarding Recommendations 2 and 3, it is proposed that GIRT7016 (Interface between station platforms, track and trains) be updated accordingly. The consultation period is currently scheduled to end on 30 June 2017, with a view to publication in March 2018.*

12. On 18 September 2017 RSSB provided an update, which was then followed by a meeting on 19 October 2017. The update stated:

*Within ROGS, the requirement is on the IM (Stations) to conduct a suitable and appropriate risk assessment covering the station platform. An IM Stations may be Network Rail (they are responsible for 18 large stations in the country) but the remainder are managed by the local Train Operating Company.*

*The information which is included within GIRT7016 (soon to be RIS-7016-INS) clarifies some of the issues that an IM Stations should be aware of in the carrying out of this risk assessment. There is information detailing research associated with passing Freight trains, and there is a risk assessment which may be used to assess the risk in this difficult area.*

*However, the output from this risk assessment will be a series of actions which the IM Stations is responsible for implementing.*

*At this present time, there is nothing available which presents a unified series of solutions which deal with common issues which may be found. These may include the risks associated with platform surfacing falling towards the track, passing freight trains, wind effects associated with the station (say in an exposed location), local gradient issues surrounding assets such as lifts and stairs to name but a few.*

*Solutions may include station announcements and signage, but there is little hard evidence of what is deemed to be adequate to address particular problems. There is little in the way of valuable risk validation, instead measures are “deemed acceptable” but there is little evidence that they are categorically good enough.*

*The responsibility for developing the understanding of mitigation measures which can be applied by station operators does not really sit with RSSB. The responsibility does sit with TOCs and Network Rail, and as a body this may best sit with RDG.*

*We would anticipate however that this would be a prime candidate for further research work and it may be that this best sits with RSSB, however this should be mandated through the normal process driven by RDG. Finally, the output could then be incorporated into a RIS document, and it may be that this sits best within RIS 7016.*

*We therefore recommend that the recommendation be readdressed to RDG.*

### **Recommendation 3**

*The intent of this recommendation is that RSSB review the current Railway Group standard requirement for station aerodynamic risk assessments.*

RSSB, in consultation with the railway industry, should review the minimum freight train passing speed for which station aerodynamic risk assessments are required. This review should be carried out with reference to previous research such as RSSB project T248 and the findings of this investigation. Following this review, the appropriate Railway Group standard should be updated to document the revised requirements.

### **ORR decision**

13. RSSB have addressed the recommendation by reviewing the existing RGS covering aerodynamic risk assessment (GIRT7016, part 9) and reissuing it as industry guidance in March 2018. Once the guidance has been published, it will be the responsibility of station operators to use the guidance to review the minimum freight train passing speed for which station aerodynamic risk assessments are required. This may be done in conjunction with RSSB.

14. 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
- is taking action to address it by producing updated guidance for industry. Once this has been completed, we would consider the recommendation implemented.

**Status: Implementation on-going.** ORR will advise RAIB when further information is available regarding actions being taken to address this recommendation.

#### Information in support of ORR decision

15. On 3 May 2017 RSSB provided the following initial response:

*Regarding Recommendations 2 and 3, it is proposed that GIRT7016 (Interface between station platforms, track and trains) be updated accordingly. The consultation period is currently scheduled to end on 30 June 2017, with a view to publication in March 2018.*

#### Recommendation 4

*The intent of this recommendation is that Great Western Railway completes the station aerodynamic risk assessment work it has begun.*

Great Western Railway should complete its current project to undertake aerodynamic risk assessments for all station platforms for which it is responsible. Following completion of these risk assessments, the company should implement risk mitigation measures as appropriate to warn station users, including users of wheelchairs and pushchairs, about the potential risks from train slipstreams, and what users should do to remain safe on platforms

#### ORR decision

16. We are content with the approach GWR are taking to carrying out aerodynamic risk assessment for the station sit manages and accept the timescale they have in place as project is a significant piece of work.

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

- taken the recommendation into consideration; and
- is taking action to implement it by 31 March 2018.

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

#### Information in support of ORR decision

18. On 9 August 2017 Great Western Railway provided the following initial response:

*We aimed to have the above recommendation completed by the beginning of August 2017, however this has been amended due to the enormity of the data collection process and is being monitored with our local inspector. We aim to have this part of the project completed by the end of March 2018.*

- *GWR has identified 463 platforms, some of which do not require a full risk assessment (bay platforms or platforms that have no non-stopping trains passing adjacent to the platform - these exemptions are as stated in GI/GN7616 Appendix D- Platform Aerodynamic Risk Assessment Tool v2.0).*
- *GWR has split the project into three stages:*
  - *Stage 1: Classification of the type of platform (enclosed, intermediate or open).*
  - *Stage 2: Each platform has been inspected and existing aerodynamic drag platform control measures identified, using the mitigating control measure list provided in GI/GN7616: Guidance on Interface between Station Platforms & Track and Trains.*
  - *Stage 3: Obtaining train data for each platform. The following train data is required for each platform:*
    - o *Number of Road vehicle-carrying trains (Ford transit van carrier, cartic, carflat etc.) with the load exposed that pass through each platform.*
    - o *Number of Freightliner I Flat-bedded wagons with vertical ends that pass through each platform*
    - o *Number of Freight train other than those above (tankers, hopper wagons etc.) that pass through each platform*
    - o *Number of Multiple unit I loco-hauled passenger train*
    - o *Number of High speed passenger trains (HST, 180s, IET etc.) that pass through each platform (mainline 125mph and relief lines 90mph)*
- *I can confirm that Stage 1-has been completed for all 463 platforms and Stage 2 has been completed for 456platforms.*
- *Stage 3 is progressing with train data obtained and applied to 260 platforms, enabling us to complete the platform risk assessment using RSSB's Platform Aerodynamic Risk Assessment Tool. An example of the completed platform risk assessment for Platform 4 at Twyford is attached for your information. This leaves 203 platforms that still require this train data to be applied.*

*Once all the risk assessments have been completed, the control measures in place for each platform will be reviewed to identify any gaps based upon the platform risk ranking. The review will be performed by the Head of Property Services, the Local Station Manager and a Safety Manager. Where gaps are identified, consideration will be given to the justification for implementing the additional control measures, as recommended in the GI/GN7616 (mitigating control measure section).*

## **Recommendation 5**

*The intent of this recommendation is to ensure that Great Western Railway's station announcements to warn users of passing trains are timely and effective.*



Great Western Railway, in conjunction with Network Rail, should review how it warns station users of the approach of passing trains so that such warnings are timely and as effective as possible. This review should also address the issue of potential distractions and desensitisation of station users by unnecessary or inappropriate warnings from other platforms (for example, warning of approaching trains on platforms not accessible to the public). Great Western Railway should then implement practicable improvements identified by the review.

**This recommendation may also apply to other station operators.**

### **ORR decision**

19. We are content with the approach GWR are taking to carrying out aerodynamic risk assessment for the stations it manages and accept the timescale they have in place as the project requires significant resource.

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

- taken the recommendation into consideration; and
- is taking action to implement it by 31 March 2018.

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

### **Information in support of ORR decision**

21. On 9 August 2017 Great Western Railway provided the following initial response:

*GWR have the following messages played for passing trains:*

*"The train now approaching platform X does not stop here, stand back from the edge of platform X, the next train is not scheduled to stop"*

*and the visual notice is:*

*"\*\*\* PLEASE STAND CLEAR\*\*\* The next train is not scheduled to stop at this platform."*

*The stand clear triggers are based on train movements and timing factors, these vary according to location, and are designed to announce the passing train at least once before passing, but often twice. We have considered whether we should produce any further announcement(s), however there are timing limitations that can lead to confused messages, potentially increasing the danger.*

- *We've carried out an exercise to reduce the number of constant announcements which are active at stations. The feedback we received was that the more announcements we have, the less effective they are.*

- *The Customer Information Team are contacting Dan Basacik, RSSB's Human Factors expert to see if he has recommendations for changes we should consider making to the audible or visual announcements. If any changes are recommended, we will have an action plan to implement these by the end of March 2018.*

*GWR does not regard any safety incident as acceptable. Whilst we are on a continual journey to improve our safety management, we strongly believe that we are a very safe operation working in an industry of comparatively high risk. We have been investing heavily in safety management and continue to do so;*