Oliver Stewart
Senior Executive, RAIB Relationship and Recommendation Handling

24 May 2018

OFFICE OF RAIL AND ROAD

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

Dear Andrew,

Fatal accident involving a train passenger near Balham, 7 August 2016

I write to report[1] on the consideration given and action taken in respect of the two recommendations addressed to ORR in the above report, published on 25 May 2017.

The annex to this letter provides details in respect of each recommendation.

- **Recommendation 1 –** 'Implementation on-going'.
- **Recommendation 2:**
  - 'Implemented' by Govia Thameslink Railway, Grand Central, Locomotive Services Ltd, Northern Rail, Rail Operations Group, Abellio ScotRail and West Coast Railways.
  - 'Implementation on-going' for CrossCountry Trains
  - 'Progressing' for Great Western Railway and East Midlands Trains.

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 25 May 2018.

Yours sincerely,

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

Oliver Stewart

Initial consideration by ORR

1. Both recommendations were addressed to ORR when the report was published on 25 May 2017.

2. After considering the recommendations ORR passed recommendation 1 to Network Rail and copied it to RSSB.

3. Recommendation 2 was passed to Arriva Greater Anglia, CrossCountry Trains, East Midlands Trains, Grand Central, GTR Southern, Great Western Railway, Northern Rail, ScotRail, Virgin Trains East Coast, West Coast Railways, Locomotive Services Ltd and Rail Operations Group 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.

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 to improve the industry's management of the interacting risks between infrastructure and rolling stock on the route.

Network Rail, in collaboration with operators of trains, should introduce a process to implement the sharing of data regarding clearances between structures and trains at window height with train operators, so that operators can make more informed decisions about the management of risk associated with opening windows

ORR decision

5. Network Rail stated in their initial response that to address the recommendation they would, for each issue of the National Gauging Database (NGD), produce a list of structures on the network that infringe on the window box for vehicles with opening windows as detailed in GI/RT7073, Issue One Clause 2.2.3.

6. We have asked Network Rail to confirm that they have provided all the necessary information to operators, including to charter and mainline heritage operators and measures to automate the process to release the window box infringement data with each new NGD release.

7. 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 31 May 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 15 August Network Rail provided the following initial response:

To satisfy the recommendation Network Rail will for each issue of the National Gauging Database (NGD) produce a list of structures on the network that infringe on the window box for vehicles with opening windows as detailed in GI/RT7073, Issue One Clause 2.2.3. The list will be made available to Train Operators and Charter Operators.

The Recommendation will be addressed through the following:

1. *Define and agree with TOCs, FOCs and RSSB the format and location(s) for holding window box infringement data for access by train operators.*
   Target Completion date: 31/10/2017

2. *Produce window box infringement data, by use of RSC Insight and manual manipulation and publish in agreed format and location/s.*
   Target Completion date: 30/11/2017

3. *Develop and implement processes and documentation to release the window box infringement data as above with each new NGD release (nominally 4 weekly).*
   Target Completion date: 31/03/2018

Further to this, NR will carry out a feasibility study into developing a module for RSC Insight to produce and publish window box infringement data automatically; this is not required to fulfil the requirements of the recommendation.

The action plan includes 2 months after completion of step 3 for production, review and sign-off of the closure statement.

Overall completion date 31/05/2018

Recommendation 2

The intent of this recommendation is to reduce the risk of injury at open train windows.

Operators of trains which include rolling stock with droplight windows should assess the risk arising from reduced clearance outside those windows and implement any reasonably practicable measures to mitigate it. The review should be informed by obtaining from Network Rail the data referred to in recommendation 1, and include consideration of means of preventing people from leaning out of windows and/or improving warning signage. These measures should address the risks to both passengers and staff

ORR decision – CrossCountry Trains

9. CrossCountry Trains are replacing the drop light windows/slam doors on their small HST fleet, removing the risk of a passenger being able to put their head out of a window. Until the work is completed, staff are being trained to deter misuse through use of PA announcements.

10. 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 May 2018.

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

Information in support of ORR decision

11. On 13 October 2017 CrossCountry Trains provided the following initial response:

We have indeed taken the recommendations contained within the report into consideration, and where applicable to the specific types of rolling stock consider the recommendations valid and will of course be acting upon them.

Please see below a summary of actions we are taking;

- *We have contacted Network Rail to understand where within the scope of CrossCountry Trains operations there may be structures that limit clearance, which have the potential to lead to similar events, such as the one at Balham.*
- *Network Rail have provided some route information for the LNE route, however as CrossCountry's operations are so geographically widespread Network Rail have indicated this information may not be completely supplied until May 2018.*
- *The only trains that have passenger drop lights/opening windows are our HST fleet, of which we have 5 train sets. Work has currently started on these to replace the existing slam doors with Central Door Locking to Automatic Closing doors with no opening windows. This in effect engineers out the risk for these trains. Full modification of all 5 trains will be complete April/May 2018.*
- *In the meanwhile we have included briefing material on our briefing/training days, for Train Managers to make PA announcements to deter passengers in leaning body parts through open windows.*
- *We are also briefing staff about cab windows, which apply to class 170 DMU's.*
- *Briefing dates start on the 1st November 2017.*
- *We are also working together with the fleet and commercial team to look at temporary signage to be fitted at each window.*

We have also made the point to Network Rail that it isn't just structures that have the potential to cause harm in these situations, it could also be vegetation. We are now trying more robust methods to manage lineside vegetation clearance.

ORR decision – East Midlands Trains

12. ORR has written to East Midlands Trains asking for an explanation of any action being taken with the doors on their HST fleet, in line with those of other operators.

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

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

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

Information in support of ORR decision

14. On 5 January 2018 East Midlands Trains provided the following initial response:

EMT has made use of information supplied by Network Rail, through Train Operations Sub Group (a sub group of the Route System Safety Panel for London North Eastern – East Midlands Route (LNE-EM) as well as information from an internal review of depot clearances to consider the risk to individuals using droplight windows arising from reduced clearance outside of these windows.

EMT has also reviewed the existing mitigations against the risk of passengers placing their heads out of train windows; in particular the location and clarity of the warning signage located in the vicinity of train doors with droplight windows.

Within East Midlands Trains, this relates to the High Speed Train (HST) fleet which has droplight windows for each of the passenger train doors. Across the fleet, there are some staff doors where traincrew can look out of, but the risk associated with these is considered negligible because of the training, competence and experience of the traincrew and the circumstances in which they make use of these windows.

On the basis of this review, EMT has concluded that the existing mitigations remain suitable and sufficient to manage this risk. The wording and location of the signage in the door areas is clear and prominent. Network Rail's Operations Risk Advisor for the LNE/EM route has been consulted and is comfortable with this course of action.

EMT has considered alternative mitigation measures such as the installation of window bars but has concluded that this is not a suitable mitigation based on the way in which the door opening mechanism works.

ORR decision – Great Western Railway

15. GWR are replacing most of their HST fleet in 2018 and those retained will have plug doors fitted, which will engineer out the risk of a customer being able to put their head out of the window. We have asked GWR for an update on progress since their initial response in September 2017. We have also asked GWR to explain the measures they take on their sleeper services to address the risk of a customer placing their head out of a window.

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

- taken the recommendation into consideration; and
- is taking action to implement it, but ORR has yet to be provided with timescales for actions being taken with the retained HST fleet or sleepers

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

Information in support of ORR decision

17. On 21 September 2017 Great Western Railway provided the following initial response:

GWR has obtained the clearance data from Network Rail and is currently in the process of undertaking a route clearance risk assessment. We have made contact with others TOCs to share risk assessments and work collaboratively on risk mitigation.

We aim to have completed our risk assessment by 30th November 2017 ensuring we have consulted with frontline colleagues, Managers and Health and Safety Representatives. Once we are content that all hazards have been identified we will then share the risk assessment with other TOCs and work jointly on an action plan for mitigation measures we will be taking. We aim to have a finalised action plan by 31st March 2018 and will share the output with our Inspector upon completion .

It is important to note that GWR is embarking upon a total fleet renewal of our Intercity train fleet between now and 2019 with the first train having already left the business and returned to the ROSCO. The vast majority of the HST fleet with droplight windows will leave the business in 2018. HSTs retained as part of our fleet longer term will have droplight window doors replaced with plug doors without such a feature. We will however, retain our overnight sleeper train with entry carriages which will still have droplight windows. We believe the risk to customers on our

overnight sleeper fleet is minimal due to the number of staff present on the train and that the majority of our customers will be asleep during the journey.

GWR takes safety seriously and strives to learn lessons from all safety incidents, in our mission for continuous improvement of 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.

ORR decision – Govia Thameslink Railway

18. Govia Thameslink Railway (GTR) no longer operates trains with windows that it is possible for a passenger to open, thus eliminating the risk identified in the RAIB report.

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

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

Status: Implemented.

Information in support of ORR decision

20. On 4 August 2017 Govia Thameslink Railway provided the following initial response:

> *I can confirm that at the time of this incident in August 2016, many of the Class 442s (of which we originally had the entire fleet of 24 x 5 car units), had already been withdrawn. There were 6 x 5 car units remaining in service, and we took an immediate decision to design and fit window bars to the two droplight windows either side of the guards brake area as soon as practically possible. In the interim we applied hazard tape across the windows as a deterrent against their use. In the event all six units were window barred by early December 2016, and from that time*
> *only 4 of the 6 units (2 x 10 cars) were planned in use, normally only on 2 morning and two evening peak trains from Brighton and Eastbourne to London Bridge and return respectively. These services were subsequently changed to Class 377 operation, and the last Class 442 operated on Friday 10th March 2017.*

ORR decision – Grand Central

21. Grand Central have replaced their HST fleet with trains where it is not possible for passengers to open the windows, thus eliminating the risk identified in the RAIB report.

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

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

Status: Implemented.

Information in support of ORR decision

23. On 24 October 2017 Grand Central provided the following initial response:

We have reviewed the signage we provide on our Mark 3 vehicles to warn passengers not to lean out of open droplight windows on moving trains. This review has confirmed that labelling is in place on all vehicles and is as prominently located as we believe it can be. We have also held an internal professional discussion (involving our professional safety and operations heads and senior safety/operations managers) to assess whether there are further measures we should/could implement. This included consideration of additional on train announcements to highlight the risks to passengers of leaning out of windows. We have concluded that this is not a measure we wish to apply, based on the fact that we are already making additional announcements in connection with the present security levels and there is a danger of "announcements overload". Also, we believe that making announcements highlighting the droplight windows could actually be counter-productive by (conversely to the purpose of such announcements) raising awareness that it is possible for someone to lean out of these windows. Many people travelling are probably not particularly aware of this and sadly (but nevertheless in reality) there are people who use trains that may foolishly act upon such announcements by doing the very thing we are trying to discourage.

Had we been continuing to operate HST rolling stock beyond December 2017 then we may have considered additional measures in relation to this RAIB report, but we believe that on the grounds of reasonable practicability, the measures taken as outlined here are suitable and sufficient for the short period remaining before we no longer operate rolling stock with droplight windows.

ORR decision – Locomotive Services Ltd

24. Locomotive Services Ltd have not yet started running services that are available to the public, but have considered the operational arrangements they will put in place when they do so to address the risk of a passenger putting their head out of a window. We will monitor the arrangements through our usual inspection work.

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

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

Status: Implemented.

Information in support of ORR decision

26. On 26 September 2017 Locomotive Services (TOC) Limited provided the following initial response:

Locomotive Services (TOC) Limited have discussed the RAIB report into the fatal accident involving a train passenger near Balham on the 7 August 2016 at several forums within the company, also with LNWR H our coaching stock provider and with Network Rail.

Network Rail have confirmed that they now have a full database of lineside infrastructure on all routes that falls within the "less than" 450mm between 2m and 3m door window height. Information will be available to train operators via a secure portal on the NR website. The Locomotive Services (TOC) Ltd Head of Safety, Environment and Operational Standards will review the information contained in the portal for each route over which we operate train services and provide appropriate information to the Head of Operations to update the Route Risk Assessments and Route Maps.
We have reviewed the notices required on the coaching stock to be operated by Locomotive Services (TOC) Ltd and our Head of Engineering has responsibility to ensure the following actions are implemented before we commence passenger train service operations:

1. To revise the wording of the notices fitted to door droplight windows

2. To enhance the scheduled maintenance tasks covering Safety Notices and Door Droplights (giving special attention to the steel locking strip and catches)

3. To include the Safety Notices and Door Droplights as specific items within the Engineering Audit Plan

We completed a review of the tasks and responsibilities of on train staff including the Train Manager and Train Stewards and the Head of Operations has responsibility to ensure the following actions are implemented before we commence passenger train service operation:

1. Training for the Train Manager and Train Stewards will include monitoring doors and windows during the journey

2. Location of restricted clearance will be included in our route risk assessments and specific locations will be included in our 'start to finish' file' and on train staff will be briefed on the specific locations for additional monitoring*

3. The Guard will be briefed by the Traction Inspector prior to the start of the service and informed of the locations where restricted clearance applies and given the Guard has sufficient acquaintance knowledge of the route, there will be a requirement for the Guard to make an announcement to the Train Stewards prior to approaching restricted clearance location and again when the train has completely passed the restricted clearance area. In this way there will be a positive presence at the doors to deter any person from dropping the window and putting their head out.

** a file containing all details for a successful train service operation such as - from 'start' (train preparation) through each part of the journey (stopping points, locations of reduced clearance and locations requiring specific MOWs) to completion of operations (berthing and disposal)"*

ORR decision – Northern Rail

27. The services operated by Northern Rail using rolling stock with opening windows all have window bars fitted, mitigating the risk of a passenger leaning out of the window.

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

- taken the recommendation into consideration; and
- already has control measures in place to address the risk identified in the RAIB report

Status: Implemented.

Information in support of ORR decision

29. On 4 October 2017 Northern Rail provided the following initial response:

We only operate rolling stock with droplight windows on our Cumbrian coast through a sub-contract to DRS. All of this stock are fitted with bars to prevent customers from leaning from the windows.

ORR decision – Rail Operations Group

30. Rail Operations Group have operational arrangements in place to minimise the risk of a passenger leaning out of a window.

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

- taken the recommendation into consideration; and
- already has control measures in place to address the risk identified in the RAIB report

Status: Implemented.

Information in support of ORR decision

32. On 28 November 2017 Rail Operations Group provided the following initial response:

Rail Operations Group (ROG) operate Charter Services which convey rolling stock with droplight windows. We have assessed the risk of operations and strengthened our comprehensive and rigorous suite of risk controls in order to meet recommendation 2 of the Balham Accident Investigation report.

Elimination of Risk at Source.
Rail Operations Group rarely operate vehicles with centre droplight windows. Wherever possible, alternative vehicles are sought. Where these vehicles are operated, specific controls are introduced through our Passenger Train Approvals and Checklist Process.

Control Measures to reduce risk ALARP
In general terms, the risks associated with all droplight windows (inc those at vestibule ends) are controlled by On-Train signage at all vestibule end windows. On-Train Stewards, who are briefed specifically to patrol and monitor vestibule end windows and customer behaviour, are present on every service Rail Operations Group operate. These Stewards are supported by ROG Guard who additionally patrols the services monitoring customer behaviour and vestibule end window use. Additionally, the ROG Guard makes on-board announcements advising customers to refrain from using droplight windows for anything other than access/egress purposes.

The Network Rail Window Box Data has been received and reviewed. Examination of this data to identify any additional route risk has been embedded in our Passenger Train Approvals process and the above risk controls of additional on train announcements, specialisation by stewards and inclusion in any Charter Publications are put into place.

Where the data indicates that increased risk exists, all centre droplight windows are additionally labelled out of use with the risks of opening clearly outlined and stewards formally briefed to pay particular attention to access to the droplight windows on the parts of the route that are a particular risk.

Review of Control Measures and Lessons Learned

Following each ROG operated charter service, a full review of the operation is undertaken and any lessons learned factored into our processes, with the aim of continual improvement and risk reduction. These review sessions are open to customers and operators alike and outputs are documented and factored into ROG systems and processes.

ORR decision – Abellio ScotRail

33. Abellio ScotRail will no longer operate rolling stock with drop light windows after April 2018. Until then, existing control measures have been reviewed and improvements made where necessary.

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

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

Status: Implemented.

Information in support of ORR decision

35. On 29 September 2017 Abellio ScotRail provided the following initial response:

Abellio ScotRail have considered the key hazards associated with droplight windows arising from reduced clearances, and have applied the following measures.

We have taken into consideration the fact that the current contract to operate loco hauled stock fitted with drop light windows is due to end in April 2018.

We would also ask you please note that whilst ScotRail have procured a fleet of Class 43 High speed trains these will be subject to refurbishment which will remove all droplight windows prior to entering passenger service.

In August 2016 when we were alerted to this accident we:

• Confirmed with our supplier (Direct Rail Services) of coaching stock fitted with drop light windows Warning Labels are fitted to all droplight windows to inform customers of this risk.

• Issued a safety alert to ensure our staff were aware of the hazards associated with either themselves or our customers leaning out of windows on coaching stock and driving cabs.

Following the publication of the RAIB investigation and your correspondence we:

• Have requested our supplier of coaching stock confirm that the warning labels fitted to coaching stock supplied to Abellio Scotrail are sufficiently conspicuous. (ref: Investigation Clause 49)

• Have also requested feedback from our supplier on the practicality of fitting window bars to loco hauled coaching stock with droplight windows. (ref:Investigation Clause 46 & 47)

• Are now working with Network Rail to review the data regarding clearances between structures and trains at window height to inform our decisions in relation to managing the risks of opening windows. (ref: Recommendation 2)

• As part of this work are working with Network Rail to prioritise foliage clearance on routes that coaching stock fitted with drop light windows operate over this is taking cognisance of Clause 101 within the RAIB investigation report which indicates from 26 accidents involving passengers being struck while leaning from a moving train 12 involved vegetation (one major injury). (ref: Investigation Clause 101)

• Have taken cognisance of your advice within the correspondence in that in respect of the above actions we have initially discussed the recommendations with our ORR account holder David Whitmarsh. We have agreed with David to provide regular updates on our progress against these actions.

ORR decision – West Coast Railway

36. We have reassured West Coast Railway that we wrote to all operators using rolling stock with windows that it is possible for passengers to open. West Coast Railway have operational arrangements in place to minimise the risk of a passenger leaning out of a window.

37. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, West Coast Railway Company has:

- taken the recommendation into consideration; and
- has is not taking action to implement it.

Status: Implemented.

Information in support of ORR decision

38. On 16 August 2017 West Coast Railways provided the following initial response:

In response to your e-mail containing a copy of the fatal accident report near Balham on 7th August 2016 and your letter advising West Coast Railways that the RAIB report recommendation 2 is 'applicable' to them.

I would like to remind you that West Coast Railways (WCR) have previously advised the ORR and NR of the comprehensive mitigation measures that we have in place to try and avoid passengers putting their heads out of the drop light windows.

To date we have not had any response from either party indicating that our measures were insufficient or otherwise.

Other points to note are that WCR have been operating charter trains for circa 20 years.

No one has ever lost their head.

The Balham RAIB recommendation 2 is based on a franchise operator incident whereby a railway employee elected to put his head out of a unmanned guards access/egress door droplight.

Given the comprehensive measures that we have in place, none of which were in place in the Balham incident, and as previously mentioned both ORR and NR were made aware of our measures by request, we find it difficult to understand the correlation between the Balham incident and what we actually have in place by way of mitigation other than droplight windows.

We are also surprised that unusually a separate letter was sent to us telling us that recommendation 2 applied to us without apparently understanding the measures that we already have in place and which we feel are reasonable and practicable.

Could you please advise at how you arrived at your decision that recommendation 2 applied to us and confirm if this 'letter' was only sent to WC