

**Oliver Stewart**  
**Senior Executive, RAIB Relationship and**  
**Recommendation Handling**  
Telephone 020 7282 3864  
E-mail oliver.stewart@orr.gov.uk



15 October 2020

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

Dear Andrew,

**RAIB Report: Fatal accident involving a train passenger at Twerton on 1 December 2018**

I write to report<sup>1</sup> on the consideration given and action taken in respect of the recommendations addressed to ORR in the above report, published on 16 October 2019.

The annex to this letter provides details of actions taken in response to the recommendations and the status decided by ORR. The status of recommendations are as follows

- **Recommendation 1** - The table at paragraph 7 of Annex A summarises the status for each operator.
- **Recommendations 2 & 4** – ‘Progressing’.
- **Recommendation 3** – ‘Implemented’.

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 16 October 2020.

Yours sincerely,

---

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

A handwritten signature in black ink, appearing to read 'Oliver Stewart', with a stylized, cursive script.

Oliver Stewart

## Initial consideration by ORR

1. All 4 recommendations were addressed to ORR when the report was published on 16 October 2019.
2. After considering the recommendations ORR passed recommendation 1 to all TOCs and charter operators; recommendation 2 to the 50 largest heritage operators; recommendation 3 to Great Western Railway; and recommendation 4 to RSSB asking them to consider and where appropriate act upon them and advise ORR of the conclusions reached. 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. All correspondence in respect of recommendation 1 can be found at Annex B.

### Recommendation 1

*The intent of this recommendation is to prevent passengers leaning out of opening windows on trains operating on the mainline railway.*

Operators of mainline passenger trains, including charter operators, using stock with opening windows that passengers could lean out of, should review their risk assessments for operating those trains and implement any additional mitigation measures necessary to minimise the likelihood of passengers leaning out of the windows away from stations

### ORR decision

4. The recommendation was addressed to all TOCs and charter operators. For the majority of TOCs the status of the recommendation is non-implementation as they do not operate trains with opening windows that are accessible to passengers. For those TOCs that currently operate trains with opening windows that are accessible, most are planned to be withdrawn within the next 12 months and mitigation measures are in place in the meantime. The downturn in passenger number as a result of the Covid-19 pandemic has led to fewer services being run, meaning in some case trains with droplight windows being withdrawn early or operated less frequently.
5. We are considering what action to take with the charter operators as most of them are not proposing engineering changes to reduce or eliminate the risk of passengers leaning out of train windows. Many of the charter operators have not responded due to the impact of Covid-19 and the suspension of operations and furloughing of staff.
6. Following our correspondence with TOCs and charter operators on rolling stock with droplight windows in spring 2019, we are holding an internal workshop to discuss actions taken by individual operators and what regulatory action we may need to take.
7. A summary of the status for each end implementer is set out in the table below:

Operator	Status	Notes
Arriva Rail Ltd	Non-implementation	No trains with opening passenger windows
Arriva cross country	Non-implementation	No trains with opening passenger windows
Avanti West Coast	Non-implementation	No trains with opening passenger windows
C2C	Non-implementation	No trains with opening passenger windows
Chiltern	Progressing	Engineering/operational controls currently under consideration
East Midlands Trains	Progressing	Changes made to signage but engineering changes not considered to be reasonably practicable.
Eurostar	Non-implementation	No trains with opening passenger windows
Govia Thameslink Railway	Non-implementation	No trains with opening passenger windows
Grand Central	Implemented	Locking mechanism fitted to droplight windows that are accessible to passengers on DVTs operating as part of planned Class 90/MkIV London Euston to Blackpool service
Greater Anglia	Non-implementation	No trains with opening passenger windows
Great Western Railway	Progressing	A design for a droplight window lock has been developed and will be fitted to the droplight windows on the sleeper fleet by the end of 2020.
Heathrow Express	Non-implementation	No trains with opening passenger windows
Hull Trains	Non-implementation	No trains with opening passenger windows
LNER	Non-implementation	No trains with opening passenger windows
Merseyrail	Non-implementation	No trains with opening passenger windows

MTR Elizabeth Line	Non-implementation	No trains with opening passenger windows
Northern Rail	Non-implementation	No trains with opening passenger windows
Scot Rail	Non-implementation	No trains with opening passenger windows
Serco Caledonian Sleeper	Non-implementation	No trains with opening passenger windows
Southeastern	Non-implementation	No trains with opening passenger windows
South Western Railway	Non-implementation	No trains with opening passenger windows. Window bars fitted to Class 442s following Balham fatality
Transpennine Express	Non-implementation	No trains with opening passenger windows
Transport for Wales	Implemented	Additional security employed on busy services to discourage passengers from using droplight windows. Mk2/Mk3 coaches will be withdrawn by the end of 2020
West Midlands Trains	Non-implementation	No trains with opening passenger windows
Belmond UK Ltd	Insufficient response	No response received
Hastings Diesels	Insufficient response	Existing controls restated, but no engineering controls planned
Locomotive Services Ltd	Progressing	Central door locking and window bars being fitted, but no completion date
Princes Royal Class Locomotive Trust	Insufficient response	No response received
Rail Operations Group	Insufficient response	Existing controls restated, but no engineering controls planned
Riviera Trains	Insufficient response	No response received
Scottish Railway Preservation Society	Insufficient response	Existing controls restated. Reference to RSSB Heritage Trains Risk Group considering engineering controls for droplights
West Coast Railways	Insufficient response	Existing controls restated. RSSB Heritage Trains Risk Group considering

		engineering controls for droplights, but not due to report until March 2023
DB Cargo	Insufficient response	No response received

### Information in support of ORR decision

8. See summary of end implementer correspondence below at Annex B.

### Recommendation 2

*The intent of this recommendation is to improve heritage railways' management of the risk associated with passengers leaning out of vehicles.*

Operators of heritage railways, using stock that passengers could lean out of, should review their risk assessments for people leaning out and implement any additional mitigation measures necessary to achieve an acceptable level of safety.

### ORR decision

9. The recommendation was addressed to the 50 largest heritage railways by number of passengers carried. To date we have only received responses from around 15 of these railways. Given the widespread furloughing staff and threat of closure in the heritage sector earlier in the year, we have written to them again as a greater number are now operating.

10. Following the Balham fatality we wrote to HRA in July 2019 asking them to publicise the issue of passengers leaning out of droplight windows and the need to do risk assessment.

11. We will provide RAIB with a more detailed update on actions being taken in the heritage sector once we have received more responses to the recommendation.

**Status: Progressing**

### Recommendation 3

*The intent of this recommendation is to reduce the potential for Great Western Railway to overlook hazards associated with its operations.*

Great Western Railway should review its hazard identification process to understand why, prior to 2017, it did not result in identification of the hazard of passengers leaning out of a droplight window, or an assessment of the associated risk. It should take any necessary action to ensure that the possibility of other hazards being overlooked is minimized.

### ORR decision

12. GWR has reviewed its hazard identification and risk assessment processes and made changes to improve identification of safety risks and the control in place.

13. 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
- has taken action to implement it

**Status: Implemented.**

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

14. On 28 February 2020 Great Western Railway provided the following initial response:

*In March 2019 GWR implemented a new Risk Register tool where the previous versions of GWRs risk register have been uploaded, it also includes extensive work undertaken using BowTie analysis.*

*GWR's BowTie review is progressing well and has highlighted updates required to the Risk Register, this piece of work will be completed by the end of March 2020.*

*There is a plan in place to complete all the BowTies for the Risk Register which will enable GWR to manage the identified safety risks and have full view of the controls in place.*

*Upon review of our safety management system GWR have updated SMS-0300-00 'Safety Risk Management Strategy' which was approved at Safety Management Improvement Group on 26th February a summary of the changes are below:*

- *Update to flowchart to show elements within the High Level Risk Management process.*
- *Further explanation on each of the process steps within High Level Risk Management. This includes CoreStream, BowTies, RSSB Risk Management Tool and ORR RM3 Model.*
- *New supporting document SMS-0300-30 'Corestream Guidance for Managing Risk'.*

### **Recommendation 4**

*The intent of this recommendation is to ensure that the advice contained in the relevant Railway Group Standards or Railway Industry Standards in relation to warning signs on rolling stock, accurately reflects the level of risk associated with the hazard to be mitigated.*

RSSB should review its existing guidance to train operators on the design of emergency and safety signs. It should then, as necessary, revise it and prepare new guidance (possibly associated with the Technical Specifications for Interoperability

for Persons with Reduced Mobility). Guidance should be prepared in consultation with train operators and should suggest designs of emergency and safety signs that are appropriate and commensurate with the risk to passengers being managed. Specific consideration should be given to the types of warning signs to be displayed on and around external doors with opening windows.

### **ORR decision**

15. RSSB has updated its industry guidance (RIS) around risk assessing the signs needed displaying safety related information to train passengers. A longer term project is underway to issue guidance for the PRM TSI.

16. 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 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**

17. On 14 February 2020 RSSB provided the following initial response:

*RSSB accepts the recommendation, which it has already partly addressed in RIS-2730-RST issue one Vehicle Fire Safety and Evacuation (scheduled for publication in June 2020). The RIS includes guidance to create and maintain a risk assessment to establish the need for and type of signs required. The RIS also directs readers to the Twerton RAIB report.*

*A wider piece of work – a guidance note on the Technical Specifications for Interoperability for Persons with Reduced Mobility (as referenced in the recommendation) – is also under way. As part of this project, RSSB will consult industry to establish if they want work to be undertaken centrally by RSSB to design signs that are commensurate with the risk to passengers being managed, or if this work should be undertaken by individual operators. This guidance note will be subject to due industry process, Standards Committee approval and industry consultation. Development of the guidance note is also specifically included in the RSSB Business Plan for 2020-21, to be published shortly.*



## Summary of end implementer correspondence

### Recommendation 1

*The intent of this recommendation is to prevent passengers leaning out of opening windows on trains operating on the mainline railway.*

Operators of mainline passenger trains, including charter operators, using stock with opening windows that passengers could lean out of, should review their risk assessments for operating those trains and implement any additional mitigation measures necessary to minimise the likelihood of passengers leaning out of the windows away from stations

### Responses from TOCs and FOCs as follows:

1) Arriva Rail London provided a response on 9 April 2020:

*In response to Recommendation 1 arising from the RAIB investigation into the passenger fatality at Twerton on 1<sup>st</sup> December 2018 we have carried out a full review of our operational fleet to identify any potential issues; Arriva Rail London operates fleets of CI 315, CI 317, CI 378 and CI 710 trains. We can confirm none of these trains has opening windows that passengers could lean out of. As such, we have assessed that there is no requirement for us to implement any additional mitigation measures to minimise the likelihood of passengers leaning out of the windows.*

2) Arriva Trains Cross Country Ltd provided the following response on 8 May 2020:

#### Class 170

*There are no opening windows fitted in the saloon, or to passenger access/egress power operated doors. No action has therefore been taken in relation to these areas.*

*Manually operated cab doors on 50XXX and 79XXX vehicles are fitted with droplight windows (driver's side and non-driver's side). In order to satisfy Recommendation 1 of RAIB report 14/2019, warning labels to drawing PTM 19012857 (Cat No. 056/117694) have been fitted to these droplight windows. Completion of the campaign to install these labels was achieved on 11/03/2019.*

#### Class 220/221

*There are no droplight windows or other types of opening windows, that passengers or traincrew could lean out of, fitted in any area of Class 220/221 DEMUs. It is therefore considered that no additional measures are necessary in order to satisfy Recommendation 1 of RAIB report 14/2019.*

#### HST

*All of CrossCountry's HST sets have either undergone, or are currently undergoing PRM modifications, which includes the installation of power operated sliding passenger access/egress doors. These doors replace the original slam doors which incorporated droplight windows, except for the van end of TGS vehicles (see below). The final HST set to have this work completed was taken out of traffic in December 2019, and is scheduled to be completed by the end of May 2020. No action is*

therefore proposed in terms of the passenger areas of CrossCountry's Mk3 trailer vehicles.

Droplight windows are fitted to HST power cars and in the van area of TGS (Trailer Guard Standard) vehicles. Warning labels to drawing PTM 19012857 (Cat No. 056/117694) have been fitted above all power car cab droplight windows, completion being achieved on 18/03/2019. On TGS vehicles, three new labels have been fitted at each of the droplight window crew doors (2 doors per vehicle) as follows:

- Label drawing PTM 19012857 (Cat No. 056/117694) warning label, fitted above the droplight window
- Label drawing PTM 19012858 (Cat No. 056/117695) warning label, fitted on the ledge beneath the droplight window
- Label drawing PTM 19012859 (Cat No. 056/117696) window close label, fitted to the window lifter bar

Completion of the Campaign to install the above labels on TGS vehicles was achieved on 11/03/2019.

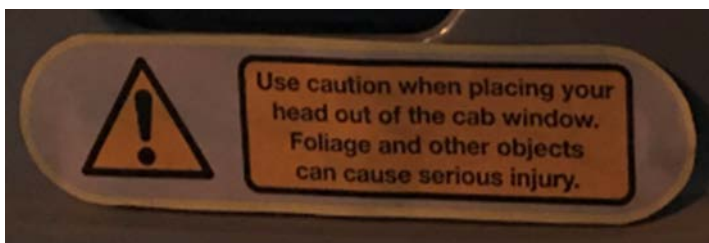
A number of additional labels have been procured to facilitate replacement of any damaged items pending amendment of existing label inspection tasks within the Maintenance Plan.

3) Avanti West Coast provided the following response on 6 May 2020:

Avanti West Coast no longer operate coaching stock with drop light windows. Our Class 390 and Class 221 fleets are sealed units in respect of passenger saloon windows and vestibules end windows.

The only area that poses this risk is the side window within the driving cab of our Class 390 EMU. Avanti West Coast are implementing a fitment of a warning label within the driving cabs of these units to inform persons using the window of the dangers (example in figure 1). The Class 221 fleet do not have opening side cab windows.

Below is an example the above mentioned sticker



4) c2c Rail Ltd provided the following response on 16 March 2020:

c2c do not operate any rolling stock that have opening windows that passengers

could lean out of. c2c currently operate class 357 and class 387 electric multiple units.

5) Chiltern Railways provided the following response on 21 May 2020:

*Since the RAIB report was first published we have been keeping our ORR inspector up to date with our actions to manage the risk relating to drop light windows. Chiltern's risk assessment that covers this issue is contained in a broader risk assessment that also covers other risks associated with our one slam door rake; for Chiltern, the drop light window risk is confined to this set and the five DVT vehicles that we operate.*

*This was updated earlier this year to include further detail on our controls, and it is this latest version that I attach here. I believe this covers all aspects of the questions you asked for a response on in your letter dated 11<sup>th</sup> March 2020.*



Chiltern Railways  
Slam door Risk Asses

6) East Midlands Trains have provided a response on 28 May 2020:

*We can confirm that EMR have taken this recommendation into consideration and can confirm that a review of the risk assessment has been completed and the hierarchy of controls reviewed. This resulted in the following actions and conclusions:*

- *The installation of window interlocking was reviewed, however this was assessed as not being reasonably practicable due the cost and time of installation not being proportionate to the remaining HST operational timescales.*
- *Enhancements were made to the existing controls with the provision of upgraded signage in doors and on train announcements.*
- *The review considered specific route risks and additional controls implemented.*

*We continue to review our risk assessments and controls in this area and make any necessary amendments.*

7) Eurostar provided the following response on 28 May 2020:

*Eurostar operate services between London, Paris, Brussels, Amsterdam and to locations in the south of France using Class 373 and Class 374 rolling stock. These trains are not equipped with any opening windows which are accessible by the travelling public (the only windows which can be opened are located within the driving cabs, to which the public cannot gain access). We are therefore satisfied that we do not require any action to be taken to address this recommendation.*

8) Govia Thameslink Railway (GTR) provided the following response on 7 May 2020:

*With regards to the recommendation 1 from the fatal accident involving a train passenger at Twerton on 1st December 2018, I can confirm that the recommendation does not require any additional measures implementing on GTR, as we no longer operate rolling stock where passengers are able to open a window, which eliminates the risk of them leaning out by design.*

*Therefore we don't consider it appropriate to undertake any additional measures as a result of the RAIB recommendation 1.*

9) Grand Central Railway provided the following response on 21 May 2020:

*Recommendation 1 intends to prevent passengers leaning out of windows on rolling stock that has windows available to passengers, enabling them to lean out. GC is of the opinion that a response is required to point (B) relating to our Class 90 and Mark IV-DVT rolling stock and to point (C) relating to our Class 180 rolling stock.*  
*Class 90 and MarkIV-DVT rolling stock*

*GC is currently preparing to start operating services from Blackpool to London Euston, this is currently suspended due to Covid-19. When in operation this service will utilise Class 90 traction units coupled to MKIV trailers with a DVT.*

*The Class 90 traction unit has two droplight windows that will accessible to an employee, however not from the driving seat, therefore our control measure will be to put appropriate signage in place above each drop light window.*

*This MKIV-DVT rolling stock includes four droplight windows in the DVT two of which are only accessible to employees therefore the control measure will be appropriate signage above each droplight window. There are also two available to both passengers and employees. These are useful for the Senior Conductor (Guard) to use when carrying out train dispatch at several of the stopping locations and would currently be accessible to passengers if we were operating in passenger service.*

*The use of these droplight windows is included in our train dispatch risk assessment. It was decided that the most suitable control measures were the installation of a locking mechanism to the windows accessible to passengers, that allowed the guard to lock the window when not in use and therefore removing the risk of a passenger being able to lower the window. This, along with appropriate signage on all droplight windows, employee dispatch instructions and a briefing on dispatch methods is deemed as suitable and sufficient.*

*The work on the locking mechanism, signage, dispatch instructions and briefing will be completed prior to the start of each train set being used in passenger service.*

### **Class 180 rolling stock**

*GC can confirm that Class 180 trains do not have drop light windows and therefore recommendation 1 does not apply*

*I believe that GC now has the appropriate control measures in place to minimise the risk from droplight windows to both our passengers and employees.*

*We would also like to point out that, whilst Grand Central is taking appropriate steps to mitigate the risks of passengers leaning out of droplight windows that they have access to, we are concerned about the risks associated with Network Rail's management of lineside vegetation, although this is not reflected in the report. It is clear from the RAIB investigation of this accident, that the fatality would have been prevented if Network Rail had managed the tree involved appropriately. It is Grand Central's view that train operators should be able to rely on Network Rail doing so. Grand Central continually engage with Network Rail on this matter through reporting and numerous industry forums.*

10) Greater Anglia Ltd provided the following response on 27 May 2020:

*Following the publication of the report, Greater Anglia reviewed risk assessments for operating trains with drop light windows and applied stronger messaging and signage at all drop light locations*

*Since Summer 2019, Greater Anglia ceased operating the MKII coaches between Norwich and Great Yarmouth and replaced these with class 755 BMUs.*

Since 30 April 2020, all MkIII coaches have been removed from Greater Anglia services which have been replaced by class 745 EMUs. Greater Anglia no longer operates trains with drop light windows and therefore deems that recommendation 1 is no longer applicable due to no longer operating rolling stock with opening windows that passengers could lean out of.

11) Great Western Railway provided the following response on 28 February 2020:

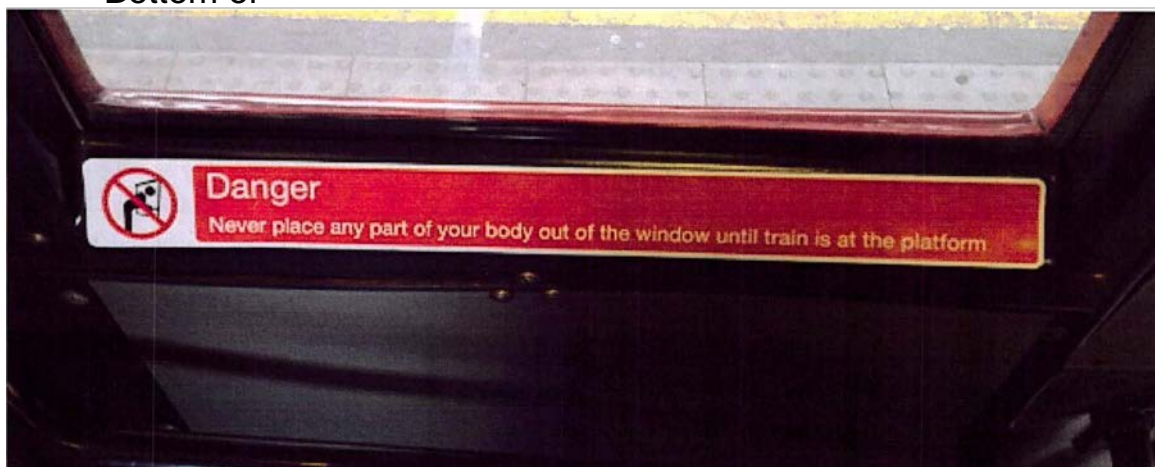
*As of 1st January 2020 the only trains GWR operators with droplight windows is the Sleeper service, which operates two services each night, one down service from London Paddington to Penzance and one up service from Penzance to London Paddington.*

*As part of our risk assessment for mitigating the risk of a passenger leaning out of the droplight windows on the Sleeper since 7th February 2019 we have had updated signage on our Sleeper service, as shown below:*

Top of window



Bottom of



*An Operations Brief was also issued to colleagues which highlighted the expectation of colleagues to make extra patrols on services ensuring windows are closed and challenging unsafe behaviours. We also mandated that additional announcements were to be made reminding customers that the droplight windows are only to be used to open the train door and that this should only be done once the train has stopped at a station. It also asks customers to never lean out of the windows whilst the train is in motion as this is very dangerous. A briefing note went out in cycle 1 (April 2019) of our Safety and Business Brief to colleagues.*

*On 12th August 2019 a proposal went to the Timetable Review Improvement Group (TRIG) seeking approval to make the down Sleeper (London Paddington - Penzance) set down only at stations served between Plymouth and Penzance and the up Sleeper (Penzance - London Paddington) pick up only at stations served between Penzance and Plymouth. This will stop the Sleeper service being used by commuters and school / college children thus reducing the risk from droplight windows further. The change was agreed by TRIG and was implemented on 15th December 2019.*

*We have contracted ESG to undertake a design and feasibility study of the doors of the Sleeper which consists of an air operated window bolt which is interlinked with the CDL. When the CDL is operated, a bolt which will be built into the*

*frame of the window would be released catching under the lip of the droplight window, holding the window in the closed position. If an emergency situation arose e.g. the emergency door release was operated the bolt would recede releasing the window and allowing the door to be opened.*

*We have engaged the services of an external consultant to provide a suitable design. We currently have two stored vehicles with droplights which we will use to prototype the lock. Subject to the successful design of the new window lock we would hope to have the droplights on our Sleeper service modified by the end of 2020, however we will be able to commit further to this once we have more from the designers and been able to get suitable commitments from the supply sector regarding installation.*

12) Heathrow Express provided the following response on 23 April 2020:

*Great Western Railway (GWR) operates the Heathrow Express on our behalf and under their safety certificate and we have concurred that the recommendation is not applicable to the operation of the Heathrow Express service on the cl332 rolling stock.*

13) Hull Trains Company Ltd provided the following response dated 18 May 2020:

*This recommendation no longer applies to Hull Trains as we took delivery of 5 class 802 bi-mode units in Q4 of 2019 which along with other 800x series units are no longer fitted with manually operated opening windows on any of the external doors or internal windows. We intend to use this fleet for the foreseeable future.*

*Our legacy loaned Class 43 / Mk3 HST stock was returned to the leasing agent in early December 2019.*

14) LNER provided the following response on 2 June 2020:

*We no longer operate Mark 3 vehicles. We responded at the time of the incident to state that we had risk assessed the Mark 3 fleet and undertaken improvements to the signage. We also briefed all onboard staff to be vigilant to the issues of people congregating in the vestibule area between stations and to intervene if necessary.*

15) Merseyrail provided the following response on 12 May 2020:

*In relation to the existing Class 507/8 fleet of trains, there are no drop light windows available to passengers. All windows in passenger saloon areas are 'hopper vent' windows and are there for ventilation only. They are high- at the top of the window panel, open down and to a restricted width, therefore preventing anyone leaning out. The new fleet of trains being introduced onto the MEL network also offers no risk in this area as there are no available windows to be opened within passenger areas.*

16) MTR Elizabeth Line provided the following response on 18 May 2020:

*I can confirm that I do not believe this recommendation is applicable to MTR Elizabeth line because none of the rolling stock that we operate (class 315, 345 and 360) have windows which passengers can lean out of.*

17) Northern Rail provided the following response on 11 March 2020:

*Northern Trains Limited does not operate any rolling stock with droplight windows.*

18) ScotRail provided the following response on 4 May 2020:

*a) The Mark 2 rolling stock that is in use on Scotrail services until the end of May 2020, is in the process of being fitted with window bars to reduce the possibility of passengers leaning out of the door windows. Eight of the 12 available coaches have been fitted. The fitment was planned to have been completed by now however this has been disrupted by the COVID19 pandemic. The Mark 2 rolling stock will cease being used on ScotRail services at the end of May 2020.*

*b) Since our previous reply regarding slam door stock we have now removed the "classic" slam door HST units from operation within ScotRail and all the passenger services use refurbished HST stock which have power operated doors.*

19) Serco Caledonian Sleeper provided the following response on 14 May 2020:

*Caledonian Sleeper have considered the recommendations within the RAIB report and we have concluded that the recommendations do not apply to Caledonian Sleeper operations due to the fact that there are no droplight windows on our new MK5 stock, which is the only passenger stock we operate on our routes. As these are new vehicles the signage is of the required quantity and complied with the current standards when introduced into service in 2019, thus the door signage referred to in the report does not apply to MK5 stock due to having no droplight style windows.*

20) Southeastern provided the following response on 11 March 2020:

*We do not believe that any measures to implement this Recommendation are necessary because we do not operate any rolling stock fitted with opening windows that passengers could lean out of. We only operate electric multiple units of classes 375, 376, 377, 395, 465 and 466, none of which incorporate such windows in areas accessible to passengers.*

21) South Western Railway provided the following response on 29 April 2020:

*Prior to the RAIB report for the above incident being published in October 2019, SWR only had droplight windows available to passenger use on the Class 442 units.*



*These droplights had already been fitted with vertical bars fitted to prevent any passengers opening them in line with recommendations following the Balham accident, furthermore Class 442 units have half droplights in the vestibule areas and these are locked in the closed position, thus preventing passengers from opening these windows.*

*Following the publication of the Twerton report, SWR considered the additional risk of Droplight windows within the cab environment to Traincrew and conducted a risk assessment on 27th November 2019 which included H&S representatives from the Drivers grade.*

*The outcome of this risk assessment was, that as there is still a requirement for Drivers to perform a PTI lookback where possible and safe to do so, a Traincrew Bulletin was issued highlighting the risks posed by droplight windows in the cab and to limit the use of the cab windows to the level platform where lineside furniture is at a minimum. The bulletin also included safety information regarding limited clearance structures applicable to SWR Traincrew, such as Westminster Road Bridge adjacent to the Down Slow line departing Waterloo station, as published in Section D of the Wessex Route WON by Network Rail.*

*Further to this, assurance was obtained that the risks associated with in cab droplight windows is being highlighted during the basic training sessions for Traincrew at SWR Operations and Safety Training Centre which will ensure ongoing risk awareness and training.*

22) Transpennine Express provided the following response on 5 May 2020:

*TPE have reviewed recommendation 1 and for our current fleet types note the following for passengers:*

- Hitachi Class 802 not relevant no droplight windows accessible to passengers.*
- CAF Class 397 not relevant no droplight windows accessible to passengers.*
- CAF Class Mk5a Carriages not relevant no droplight windows accessible to passengers.*
- Siemens Class 185 not relevant no droplight windows accessible to passengers.*

*The recommendation is relevant to TPE colleagues and other stakeholders for the following classes of train operated by TPE:*

- Siemens Class 185 which has droplight windows in driving cabs.*
- Stadler Class 68 Locomotive which has droplight window in driving cab.*
- CAF Mk5a Driver Trailer (DT) end which has a window that opens inwards, but it is possible to put a limb or head out of the window albeit with considerable dexterity.*

*TPE is currently reviewing the current instructions and controls for each of these fleet types such as cab access controls, training and instruction to traincrew in relation to cab windows. In addition, each of the Fleet Engineers has been instructed to carry out an assessment to establish if additional physical controls might be required such*

as signage. Within the context of the current COVID-19 situation with most engineers working from home the timescale for this work is at least three months. TPE will write to your office detailing progress and results of this work as agreed by the end of July 2020.

23) Transport for Wales Rail Services provided the following response on 22 June 2020:

*Following this recommendation, TfW undertook a review of Local Haul Coaching Stock (LHCS) operations that have drop light windows, this included completing a traction risk assessment of the current control measures for the hazard of customers using drop light windows whilst the train is moving.*

*TfW operate LHCS on the Rhymney to Cardiff line (Mk 2 Coaching Stock), within the Cardiff Valley Line network of South Wales as well as on the Holyhead to Manchester and Holyhead to Cardiff lines of route (Mk 3 Coaching Stock). Control measures that were previously in place consisted of the common industry risk mitigation for customers using drop light windows. These included:*

- *Advisory stickers on windows, warning of the risk of personal injury to anyone who opening a window and leaning out when the train is in motion.*
- *Customer service announcements by the conductor, instructing people not to use the windows when the train is moving.*
- *General safety and security checks undertaken by the conductor, which included checking that customers were not opening windows as the train moved.*

*When reflecting on the RAIB report, TfW recognised that there were further control measures that could be implemented to reduce the risk as low as reasonably practicable (ALARP).*

*There were three engineering options that that were considered and would remove the hazard. These are:*

- *Modify the coaching stock to power operated doors.*
- *Change the door handles to allow the doors to be opened from the inside and secure the windows, requiring a T Key or other railway key to open them.*
- *Fit bars to the outside of the doors preventing people from being able to lean out, but still allowing people to open the doors by using their hands through the windows to open the doors from the outside.*

*TfW are currently changing several of the fleet to different class trains; this includes removal of the Mark 2 and Mark 3 coaching stock, of whom both have customer accessible drop light windows. These types of coaching stock are due to be taken out of service by the end of 2020. This change renders all engineering solutions as impracticable based on cost and timeframe. It is likely that the modifications would not be complete by the time the fleet is taken out of service.*

*TfW took the approach of employing additional security to travel in the vestibules of the trains, ensuring that the windows are not used by customers before a train has come to a stand. There are two different methods of work being utilised, these are based on the regular footfall on these trains.*

- *The Mk 2 stock on the CVL Rhymney line has security managing every vestibule area throughout the line of route.*
- *The Mk 3 stock on the Manchester to Holyhead and Cardiff to Holyhead lines of route have security on board from Chester to Manchester and Chester to Cardiff. The footfall between Holyhead and Chester is sufficiently low for the conductor to ensure customers are aware not to use the drop light windows when the train is moving.*

*The other established control measures also remain in place i.e. conductors making regular announcements and safety checks and also instruction notices are in place on the inside of the train door windows.*

*TfW continue to monitor compliance with drop light window use and will do for the remaining few months they are in use within our franchise.*

24) West Midlands Trains provided the following response on 18 May 2020:  
*On Consulting with both WMT Fleet and Operational Colleagues this doesn't apply to us as we have no rolling stock where passengers can open a window and lean out*

25) Belmond UK Ltd have not provided a response

26) Hastings Diesels Ltd provided the following response on 13 May 2020:

*Hastings Diesels has always had the following actions in place to prevent passengers putting their heads out of an open window:*

1. *Our 'Code of Conduct' and 'Leaning out of Windows' requirements are included in the Rail Tour pages of our web-site,*
2. *Ticket applications require the holder to signify that they accept the booking conditions and the Code of Conduct requirements before a ticket is issued,*
3. *Each ticket issued for a tour contains the requirement of not leaning out of windows.*
4. *The Code of Conduct is included in the itinerary provided at seat*

*A copy of the relevant documents is attached to this letter and it should be noted that we reserve the right to remove a passenger from the train for infringement and refuse to accept a future booking.*

5. *Train operating staff and HDL on-train staff patrol the train regularly and*

remind passengers standing in vestibules of the Code of Conduct requirements.

6. Regular PA announcements to remind passengers are made.

(b) Full details of any measures that you propose to take to implement the recommendation and the proposed timetable for securing that implementation

7. We will provide a minimum of one steward per coach on all future train operations to implement the Code of Conduct requirement ,

8. We have re-ordered our door signage to emphasise the warning notice and intend to provide an additional notice on the window release catch in black lettering on a distinctive yellow background, as shown below. This notice will be amended in the production version to read:

**A FINAL WARNING – DANGER OF DEATH – DO NOT LEAN OUT OF THE WINDOW**



(c) A full explanation as to why you do not think that any measures to implement the recommendation are necessary.

Not applicable.

*The current restriction requirements have prevented the completion of our full updated risk assessment.*

*It will be completed as soon as practicable but in the meantime Hastings Diesels Ltd. wish to demonstrate our actions taken so far in respect of risk mitigation.*

27) Locomotive Services Ltd provided the following response on 19 March 2020:

You requested that each TOC and charter operator take the recommendations into consideration and where appropriate act upon them, and provide you with:

(a) full details of any measures taken to implement the recommendation

*LSL TOC had already implemented large warning stickers on every window with white writing on a red background.*

*Also stewards in vestibule ends to observe passenger behaviour with a clear zero tolerance explained to all customers.*

(b) full details of any measures that you propose to take to implement the recommendation and the proposed timetable for securing that implementation

*LSL TOC had already taken the decision to fit a bar across the window at an angle to limit the ease of placing and body part out of the window but allowing our staff to open the doors in a safe manner.*

(c) a full explanation as to why you do not think that any measures to implement the recommendation are necessary.

*LSL TOC fully support the recommendations within the report and have taken on board the report and all recommendations to improve passenger safety.*

On the back of this we have reviewed our Risk Assessment and made any necessary changes.(can provide on request)

Although not droplight related but worthy of note, LSL TOC have now implemented the fitment of CDL on MK1 vehicles.

This project is underway and the full fleet of MK1s we operate will have CDL fitted in the near future.

28) The Princess Royal Class Locomotive Trust have not provided a response.

29) Rail Operations Group provided the following response on 7 May 2020:

*Rail Operations Group (ROG) operate Charter Services which convey rolling stock with droplight windows. We assessed the risk of operations and strengthened our comprehensive and rigorous suite of risk controls 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 (including 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 a 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.*

30) Riviera Trains have not provided a response.

31) Scottish Railway Preservation Society provided the following response on 27 May 2020:

*SRPS Railtours Ltd has a fleet of Mark 1 vehicles which are used on charter trains with all operations being undertaken by external Train Operating Companies. The vehicles are all fitted with secondary door locks only and access is required by means of the droplight windows to the external door handles when opening the bodyside doors.*

*Our current arrangements for managing the risks associated with droplight windows are;*

- *Signage in place on all passenger doors advising of the dangers of leaning out of the window.*
- *Additional signage on the droplight windows warning of danger of death from hitting nearby structures fitted in 2017, this was an action arising from the RAIB report into the fatality at Balham.*
- *Regular on train announcements using the PA system warning passengers not to lean out of droplight windows.*

- *Regular monitoring of droplight windows by designated coach stewards with warnings made and followed up with preventative and enforcement action as required.*
- *Leaflets at passenger seats to act as a reminder and warn passengers of the risks from leaning out of droplight windows.*

*We believe these arrangements provide a suitable level of control regarding the risk. In addition to this we are planning to get further involved in the RSSB-led Heritage Trains Risk Group (on which ORR is represented) and the sub-group which is looking at ways of reducing the risks associated with droplight windows.*

32) West Coast Railways provided the following response on 19 May 2020 (dated 31 March 2020):

*The current system of door-locking requires access to the external door handle to be maintained, so that the door handle can be accessed from within the vehicles.*

*Having reviewed our risk assessment, following the incident at Twerton on 1st December 2018, we are satisfied that our current arrangements, provide suitable and sufficient warning and protection for our passengers, specifically:*

- *notices on tickets warning of the dangers of leaning out of windows;*
- *announcements on trains, using the on-board PA system, warning of the dangers of leaning out of windows;*
- *the placement of stewards in the vestibules, warning and actively preventing the leaning out of windows;*
- *prominently-placed and enhanced 'Danger of Death' notices fitted to all 'droplight' windows that are accessible to passengers.*

*WCR is a full participant, within the RSSB-led Heritage Trains Risk Group (HTRG) (on which ORR is also represented), and its sub-group. This sub-group is looking at reasonably practicable means to reduce the risks associated with droplight windows and rolling stock which isn't currently fitted with central door locking, without importing additional risks, of which there are several. The timetable for the completion of the project is March 2023.*

*There have been some suggestions that the droplight windows might be sealed or have access restricted by mechanical means and, together with the HTRG, we will continue to explore the possibilities, whilst being conscious that some solutions might introduce further hazards and risk such as: causing poor ventilation, impeding emergency egress and obstructing traincrew in the proper performance of their duties.*

*We have also actively engaged with Network Rail, regarding the hazards presented by lineside structures and vegetation on its infrastructure, particularly as many train operations do require our drivers and guards to make observations of the line ahead, by looking out of side windows and droplight windows.*

33) DB Cargo have not provided a response