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

Dear Andrew,

RAIB Report: Self-detrainment of passengers onto lines that were still open to traffic and electrically live at Lewisham, south-east London on 2 March 2018

I write to provide an update¹ on the action taken in respect of recommendation 1 addressed to ORR in the above report, published on 25 March 2019.

The annex to this letter provides details of actions taken in response to the recommendation and the status decided by ORR. The status of recommendation 1 is **'Implemented'**.

We do not propose to take any further action in respect of the recommendation, unless we become aware that any of the information provided has become inaccurate, in which case I will write to you again.

We will publish this response on the ORR website on 5 February 2021.

Yours sincerely,



Oliver Stewart

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

Recommendation 1

The intent of this recommendation is to identify practical opportunities to improve train service resilience when conductor rail ice risk is forecast.

Network Rail (South East route) and Southeastern, should undertake a holistic review of their seasonal preparedness arrangements for winter taking into account the actions already taken or in progress as result of this incident. This should have the objective of maximising operational resilience and minimising the risk of train stranding incidents that could lead to unsafe passenger detrainment. In so doing it should consider the effectiveness of existing and proposed mitigation measures (for instance conductor rail heating and the running of de-icing trains), and the criteria for their use, taking into account the criticality of locations to operational performance. The review should also include consideration of operational strategies, such as the key route strategy, and encompass train routeing strategies designed to enhance operational resilience during winter weather and avoid the unnecessary blocking of key junctions. Strategies and practices used by other metro-type railway operators should be considered. Network Rail and Southeastern should jointly implement changes that are identified as beneficial

ORR decision

1. Network Rail (South East route) and Southeastern reviewed seasonal preparedness arrangements ahead of winter 2018/9, leading to a number of actions being taken to improve service resilience in the event of a conductor rail becoming frozen. Since then, further actions have been taken including revised winter working arrangements, including a new standard for conductor rail heating and a review of LUL operational procedures.
2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail (South East route) and Southeastern has:
 - taken the recommendation into consideration; and
 - has taken action to implement it

Status: Implemented.

Previously reported to RAIB

3. On 25 March 2020 ORR reported the following:

Network Rail (SE route) and Southeastern have carried out a review of their seasonal preparedness arrangements and identified a number of actions around both prevention (con-rail forecast, Snow & Ice Treatment Trains) and mitigation (improved communication between and placement of incident response staff). The plan initially submitted was due for completion in November 2019, but has since been extended to July 2020.

Update

4. On 2 December 2020 Network Rail provided the following closure statement and supporting documents:



Closure Statement
Lewisham detrainme



Signalling During
Disruption Southerr



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MANUAL.pdf

5. Network Rail state the following:

Closure Statement

Network Rail (South East route), in conjunction with Southeastern, undertook a detailed review of their seasonal preparedness arrangements in readiness for winter 2018/9.

At the time of publishing the original action plan in June 2019, the South East route with Southeastern, had already completed the following actions:

- *Commissioned an independent investigation (“Sowden/AD Little”) coupled with assurance activity on action completion.*
- *Improved con-rail forecast, e.g.by removing low risk conditions (hoar frost) from “Red Risk” category.*
- *Revised AM strengthening plan, Key Route Strategy (KRS) lite and KRS for implementation in snow and ice (includes reduced junction working no split/attach and increased service frequencies).*
- *Multi-purpose vehicle/Snow and Ice Treatment Trains (SITTs): circuits and coverage spread throughout day to ensure there are no gaps around crew changes (gaps had existed around peak times).*
- *Mapped high risk sites.*
- *Updated seasonal matrix with improved mitigation against high risk conditions and clearer decision points.*
- *Fitters placed with Mobile Incident Officers.*
- *Improved conference call process implemented including strategic and tactical level conference calls with set agendas.*

The further actions that are now completed are as follows:

1. Following a review into operational best practice on other metro-style railways. LUL practices were identified (Code Red and Code Amber radio protocols). Due to the mixed service pattern we run on the GB rail network these practices are not completely transferrable but we have used the ideas to create the guide which we have previously shared with you – “Southern Region Signalling During Disruption”. A personal copy of this has been issued to every signaller across Kent and Sussex Route, it has been shared with Wessex Route as well and shared nationally as a good practice

2. The Kent Winter Working arrangements document was published in December 2019 and included a protocol for use of ice breaker shoes on passenger trains as well as a revised Strategic Weather Call process.

3. Southeastern have reviewed, amended and briefed their company document "Meeting the Needs of Passengers on Stranded Trains"

4. A Conductor Rail and winter mitigation measures review using Mott Macdonald has taken place. Derived from that review, a new Conductor Rail Heating Standard has been completed and issued for publication. A copy of the issued document is attached – it is included in the current standards briefing cycle.

Previously reported to RAIB

Recommendation 1

The intent of this recommendation is to identify practical opportunities to improve train service resilience when conductor rail ice risk is forecast.

Network Rail (South East route) and Southeastern, should undertake a holistic review of their seasonal preparedness arrangements for winter taking into account the actions already taken or in progress as result of this incident. This should have the objective of maximising operational resilience and minimising the risk of train stranding incidents that could lead to unsafe passenger detrainment. In so doing it should consider the effectiveness of existing and proposed mitigation measures (for instance conductor rail heating and the running of de-icing trains), and the criteria for their use, taking into account the criticality of locations to operational performance. The review should also include consideration of operational strategies, such as the key route strategy, and encompass train routeing strategies designed to enhance operational resilience during winter weather and avoid the unnecessary blocking of key junctions. Strategies and practices used by other metro-type railway operators should be considered. Network Rail and Southeastern should jointly implement changes that are identified as beneficial

ORR decision

1. Network Rail (SE route) and Southeastern have carried out a review of their seasonal preparedness arrangements and identified a number of actions around both prevention (con-rail forecast, Snow & Ice Treatment Trains) and mitigation (improved communication between and placement of incident response staff). The plan initially submitted was due for completion in November 2019, but has since been extended to July 2020.

2. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, Network Rail (SE route) and Southeastern have:

- taken the recommendation into consideration; and
- is taking action to implement it by 31 July 2020.

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

Information in support of ORR decision

3. On 29 May 2019 Network Rail and Southeastern provided the following joint initial response:

Action Plan

Network Rail (South East route), in conjunction with Southeastern, undertook a detailed review of their seasonal preparedness arrangements in readiness for winter 2018/9.

At the time of publishing this action plan, the South East route with Southeastern, have already completed the following actions:

- Commissioned an independent investigation (“Sowden/AD Little”) coupled with assurance activity on action completion.
- Improved con-rail forecast, e.g.by removing low risk conditions (hoar frost) from “Red Risk” category.
- Revised AM strengthening plan, Key Route Strategy (KRS) lite and KRS for implementation in snow and ice (includes reduced junction working, no split/attach and increased service frequencies).
- Multi-purpose vehicle/Snow and Ice Treatment Trains (SITTs): circuits and coverage spread throughout day to ensure there are no gaps around crew changes (gaps had existed around peak times).
- Mapped high risk sites.
- Updated seasonal matrix with improved mitigation against high risk conditions and clearer decision points.
- Fitters placed with Mobile Incident Officers.
- Improved conference call process implemented including strategic and tactical level conference calls with set agendas.

Actions to be completed:

1. Following a review into operational best practice on other metro-style railways. LUL practices have been identified (Code Red and Code Amber radio protocols) which will be reviewed for applicability and implementation on the SE Route.
2. Complete a Conductor Rail and winter mitigation measures review using Mott Macdonald, focusing on recommendations and next steps regarding the effectiveness of conductor rail heating and possible expansion, Southeastern and MPV / SITT fleet effectiveness at clearing ice, anti-ice materials deployed and anything that we can learn from the approach of other rail networks worldwide.
3. Complete work on the potential use of ice breaker shoes on passenger trains. Both the actions that have been completed, and planned actions will be shared at the Head of Operations Delivery meeting and with the train operating companies through the joint NR/RSSB/RDG workstream on stranded trains.

Completion date 30 November 2019.

4. On 5 November 2019 Network Rail advised of a timescale extension until 31 July 2020. The reason for the extension is as follows:

I have spoken to Daniel Matthews about the ice breaker shoes for Southeastern. To enable fitment on to a planned 2 units, so ideally require 48hrs notice which we will implement (or not) based on weather forecast predicted conditions – a process to cover this will be put into the Winter

Working Arrangements. We do not believe this is a suitable mitigation for wider deployment as fitment comes with some significant downsides and risks. I've attached the Southeastern process covering deployment. This part will be closed once the winter working arrangements are finalised. The E&P RAM team are preparing a remit for the response to the Mott Macdonald report as funding is available for this. The remit will inform a workstream which will result in formalisation of our Conductor Rail Heating asset approach. Once this is completed we will need to consider what changes we will need to make to assets but I regard that the RAIB action will be closed once the workstream is completed as response to it will fall into BAU.