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

Dear Andrew,

RAIB Report: Derailment of a passenger train at Ealing Broadway, 2 March 2016

I write to report¹ on the consideration given and action taken in respect of the three recommendations addressed to ORR in the above report, published on 5 December 2016.

The annex to this letter provides details in respect of each recommendation. The status of recommendations 1 and 3 is '**progressing**'. The status of recommendations 2 is '**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 6 December 2017.

Yours sincerely,

Oliver Stewart

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

Initial consideration by ORR

1. All 3 recommendations were addressed to ORR when the report was published on 5 December 2016.
2. After considering the recommendations ORR passed all 3 recommendations to London Underground Ltd 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.
3. ORR also brought learning point 1 to the attention of operators using 3rd/4th rail – Southeastern, Southern, South West Trains, Docklands Light Railway, Merseyrail and Glasgow metro as it was concluded that that there are equally important lessons for them. 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 to improve the presentation of information to service control staff so that they can comply with the LUL rule book requirement to come to a complete agreement on the actions to allow a train past a signal at danger.

London Underground Limited should provide signallers and, as appropriate, service control staff with adequate means of determining the position of points and a clear method of identifying the required points and their positions in order to be able to come to a complete understanding and agreement of the actions necessary to set a route in order to pass a signal at danger.

ORR decision

5. We are seeking clarification from LUL that they have considered the use of route cards to assist staff in identifying the required position for every end of every set of points in a route that is required to be set.
6. After reviewing the information provided ORR has concluded that, in accordance with the Railways (Accident Investigation and Reporting) Regulations 2005, London Underground Ltd has:
 - taken the recommendation into consideration; and
 - is taking action to implement it, subject to confirmation that actions have been completed

Status: Progressing

Information in support of ORR decision

7. On 24 February 2017 London Underground Ltd provided their initial response and subsequent confirmation of completion of actions 21 November 2017:

To ensure Service Control staff, including Signallers, are competent in identifying complex or unusual point types shown on traffic controllers diagrams and ensure traffic controllers diagrams provide for easier identification of complex or unusual point types, London Underground will:

- *Include within the Service Control training the identification of complex and unusual point types and how they are depicted on the traffic controller's diagrams.*

A briefing has been developed by London Skills & Development department, titled, Moving trains under failure conditions with points involved (Attached), to remind Service Control staff what to look for when deciding what points need securing. The briefing is not designed to be exhaustive and it is strongly advised that locations where staff know there are complex points or configurations, that Service Control staff become familiar with the area. If Service Control staff are not confident in their area, then this should form part of any P&D/CMS discussions. Bernie Moran, Competence and Compliance Manager will be reinforcing this action via the competence assessment process

- *Reinforce the identification of complex and unusual point types as shown on the traffic controller's diagrams through the competence assessment process.*

The LU Competence and Compliance Manager has contacted the Service Control Standards Managers for each area regarding the FIR at Ealing Broadway. The Service Control Standards Managers are responsible for carrying out their annual CDP for each line. Within the CDP, they are shown TCD's and carry out table top exercises for different scenarios in order to ensure they demonstrate their ongoing competence. This is captured within the individuals CMS records. The LU Competence and Compliance Manager will also be carrying out CMS verification checks on a sample of service control staff to ensure that this is being adhered to.

- *Update traffic controller's diagrams to include the representation of unusual or complex point types in the signals key table.*

All traffic controller diagrams have been reviewed to identify unusable or complex points. As a result symbols for unusual or complex point types, as per British Standard BS376-1:2012, have been added to the Symbol Key drawing for all Traffic Controller Diagrams. Drg No. 6140-TS-107918/2. These have been uploaded to the LU Intranet and service control staff are instructed to use these versions.

- *Review traffic controller's diagrams to identify any enhancements in the depiction of slip points to improve clarity.*

As the above bullet point.

- *Include in the training of LU Operational staff that may be required to secure points, details of how to identify what points are required within a route, what position they require to be secured in and how to secure them correctly*

LU Skills & Development have undertaken the following actions

- *Amended the learning material in the rules and procedures training for scotching and securing points has been amended. (See attached powepoint slides and extract of training notes for securing points.*
- *Delegates will have to complete a module on the e-zone and watch a video for securing points.*
- *Delegates have to complete a learning check which is focused mainly on securing points.*
- *There is also a practical assessment for each delegate to demonstrate their ability to secure points correctly.*

Recommendation 2

The intent of this recommendation is to ensure that all staff who may be called on to provide information for safety critical decisions are aware of the need, and are able, to pass complete messages.

London Underground Limited should review its safety critical communications training and revise it to include the provision of training to staff members who may need to provide information to operational staff, in order to ensure adequate, accurate and complete information is conveyed and full understanding reached

ORR decision

8. We are content with the approach London Underground Ltd have taken to improving the training of communication of safety critical information for relevant staff, and have now confirmed completion of the actions in their plan.

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

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

Status: Implemented

Information in support of ORR decision

10. On 24 February 2017 London Underground Ltd provided the following initial response:

The following actions have been undertaken to address recommendation No.2.

- *Safety Critical Communications is now within scope of the Safety Culture Steering Group. The Piccadilly Line Service Control Manager (Comm's Champion) presented at the January meeting, 04th Jan, progress for Service Control and next steps for Safety Critical Comm's*
- *Service Control lead initiative to encourage a 'zero tolerance' message, when communicating with all other functions.*
- *Following approval from the business cross-sampling between lines will be introduced across Service Control with recommendations and lessons learned.*
- *Monitoring of safety critical calls made using other methods will be included in monitoring process.*
- *Joint review with LUSD, Connect and Ops of current training continues.*
- *Increased use and familiarity of connect equipment by staff. E.g. Line and network Incident talk group tests.*
- *Targeted communications reinforcing importance of safety critical communications and increase awareness across the business*

The LU Training Specification for Connect Radio has been reviewed and is now at V2.0. Reasons for change detailed below

- *The Connect user equipment consists of hand portables, despatchers, train radio, fixed station radio and desktop radio units. Existing training courses incorporate these elements. However a request was made to consider a more effective approach to Connect training that proposes a limited number of core courses that can be delivered to any persons working on or about the railway. A desk top review showed that current course material was duplicated, not consistent and not up to date with current technology. Existing courses are not underpinned with task analysis, training needs analysis and training specifications*
- *The training material has been reviewed to enable participants to operate the Connect radio system effectively within their sphere of work*
- *L & D have reviewed all the Connect training courses and revised courses are being created.*
- *L & D have started to populate a new Connect folder on the Sharepoint site and all information will be held here, with older connect information in other folders, slowly deleted.*
- *L & D have started with prioritising Hand Portable usage, but are now moving onto dispatcher, mobiles (fixed, desktop, train). Hand*

Portable is near enough ready to go, we plan to hold a test session with Connect team members as delegate

- *A “get to know you session” has been arranged with the L & D instructors (10) that Pat Halpin has selected to deliver Connect training*

The briefing produced by the London Underground Skills & Development department, titled, ‘Moving trains under failure conditions with points involved’, will also address some of the points recommendation No.2 requires to be addressed.

Recommendation 3

The intent of this recommendation is to improve the quality of team working to avoid conflict and promote improved decision making during periods of degraded working.

To promote and enhance team working, and to facilitate effective decision making in degraded working situations, London Underground should identify barriers to good decision making by service control staff, particularly where there are interfaces between lines and take action to develop the capability of these staff to:

- i. communicate effectively;
- ii. challenge decisions where there is doubt or uncertainty;
- iii. be aware of information gaps and the risk that assumptions may fill knowledge gaps; and
- iv. to be aware of how some behaviours may adversely influence the behaviours of others, and how to deal with this.

ORR decision

11. We are content with the approach London Underground Ltd have taken to improving team working by to facilitate better communication in times of degraded working. However, the LUL response only refers to the District and Piccadilly lines, so we are seeking clarification that actions will be rolled out to other lines.

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

- taken the recommendation into consideration; and
- is taking action to implement it, subject to confirmation of completed actions

Status: Progressing

Information in support of ORR decision

13. On 24 February 2017 London Underground Ltd provided the following initial response:

London Underground will undertake a review to identify factors that may influence the productive and efficient working arrangements between different Service Control teams. Special attention shall be paid to (but not limited to); non-technical skills, colocation of the teams, communication channels, conflicting performance measurements, understanding of roles and responsibilities. Where deficiencies or short comings are identified these should be addressed with appropriate controls and mitigations.

The above actions will be completed by 30/06/2017

14. London Underground provided an update on 21 November 2017 providing further information:

Key members of the District and Piccadilly Service Control management team met with the respective Line Trains Performance Managers to agree the actions necessary to address the recommendation and some immediate reliability / service management issues. The attached document titled District & Piccadilly Teamwork Plan Update detailed the steps taken to improve relationships between Piccadilly and District Line Service Controllers.

The briefing produced by the London Underground Skills & Development department, titled, 'Moving trains under failure conditions with points involved', addresses the issues of making service control staff aware of communication information gaps, the risk that assumptions may fill knowledge gaps and to be aware of behaviours that can impact others, particularly when people are under pressure.

Additionally, non-technical skills now form part of all safety critical training.