

Oliver Stewart
RAIB Recommendation Handling Manager



23 July 2026

Mr Andy Lewis
Deputy Chief Inspector of Rail Accidents

Dear Andy,

RAIB Report: Fatal accident at Stratford London Underground Station on 26 December 2023

I write to provide an update¹ on the action taken in respect of recommendation 1 addressed to ORR in the above report, published on 16 January 2025.

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 **‘Closed’**.

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.

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 reduce the risk of a person being struck by a London Underground train in circumstances where they have fallen, slipped, tripped or have otherwise inadvertently come to be on the track adjacent to a platform.

Considering the circumstances of the accidents discussed in this report at Stratford, Clapham South and High Barnet stations, and the accident which took place at London Waterloo (RAIB report 05/2021), London Underground Limited should identify the effectiveness of its current risk controls and evaluate possible measures to further reduce the risk of a passenger being struck by a train where they have inadvertently entered the track adjacent to a platform.

This review should specifically include considering the use of technology that can detect if a passenger is in a dangerous position and intervene or warn as is necessary to stop an approaching or departing train.

Following this review, London Underground Limited should determine what improved or further risk reduction measures may be required to ensure that risks of passengers being struck by trains in these circumstances are reduced (paragraphs 126a, 126b and 128b).

ORR decision

1. London Underground Ltd (LUL) conducted a review of PTI risk controls in 2024, which considered a range of engineering and operational mitigation measures. The review identified a number of mitigation measures to be progressed, including changes to infrastructure (passive gap fillers, moving platform nosing stones etc) and operational enhancements, such as improving CCTV equipment for a better view of the PTI. In addition, the LUL PTI New Technology Programme is using a combination of CCTV and sensors to improve detection of passengers that may have fallen from a platform.

2. The information provided by LUL on the PTI New Technologies Programme to evidence closure of this recommendation was also recently used to support closure of recommendation 2 from the report Trap and drag accidents at Archway and Chalk Farm stations, 18 February and 20 April 2023.

3. 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 close it.

Status: Closed.

Previously reported to RAIB

4. On 27 November 2025 ORR reported the following:

London Underground Ltd (LUL) has established the PTI New Technologies Programme to investigate technology that may reduce the risk of passengers coming to harm at the PTI or in the track environment. A trial of new technology is planned to take place in 2025 and 2026. As an interim measure, the LUL Rule Book has been updated and platform staff have been briefed on how to identify if lost property is suspicious or not.

Update

5. On 18 June 2026 LUL provided the following update:

In my letter dated 29 September 2025, I outlined the work that we have done to establish a TfL Platform Train Interface (PTI) New Technologies Programme which is trialling how new technologies could help reduce the risk of harm coming to a customer in the track environment.

Our trials will test a mix of CCTV and sensor-based solutions on three different services (Central line, Piccadilly line and Docklands Light Railway). This technology aims to detect the specific scenarios noted above and will then send an alert to our operational colleagues to respond and reduce the potential for someone getting seriously injured.

In December 2025, we started our first trial of the new technology – a trial on the Central line aimed at detecting someone falling or accessing the track. We started with falls on the track as this type of incident is most likely to lead to a serious customer injury or fatality. The trial, which is taking place on three stations on the Central line (West Ruislip, East Acton and Mile End), uses a combination of new video analytics and existing camera technology to detect people who access the track environment either intentionally or unintentionally.

The trial is happening in two phases, a shadow trial, followed by an operational trial.

- *The shadow trial, which commenced in December 2025, is testing the effectiveness, accuracy, and reliability of the new technology using One Person Operated (OPO) analogue cameras. During this time, there will be no operational responses to incidents identified by the system as the technology will be picking up false alerts as it learns what is correct. In the past six months, we are actively learning how we could use this technology, through changing the technology configurations. Our trials on the Central line will continue through to October 2026, at which point we hope to make a decision on next steps.*
- *The length of the shadow trial depends on how long it takes to refine the technology to accurately identify PTI incidents. Once we have established confidence in the accuracy and reliability of the technology, we will progress to an operational trial which will allow us to respond to any incidents.*

On 5 June 2026, we started our second trial of the new technology – a lab-based trial which combining sensors and camera to determine if the technology can alert train operators quickly enough to respond to a ‘fall between the train and the platform’ incident. We consider that this lab-based trial will take approximately four months, after which, if successful, it will move to a shadow trial, and then to operational trial.

Later in June, we will start a trial using new technology using digital station cameras on the Docklands Light Railway aimed at detecting deliberate or accidental access to the track environment. We plan to run the first stage of this trial (the shadow trial) for three months, though noting as above that the length of the shadow trial depends on how long it takes to refine the technology to accurately identify PTI incidents.

If the trials are successful, we plan to use the technology more widely across our network to further enhance the safety of our customers travelling on our network. To inform the development of our trials, we conducted research into PTI technology solutions across metros and other railway operators, including Network Rail, Singapore, Japan, Sydney, Hamburg and Delhi. We met these transport operators to understand the range of solutions that have been tested both across the UK and internationally, and to capture lessons learnt. As our own trials process, we will continue to engage with our national and international counterparts to share insights and ensure we incorporate emerging best practice and learning into our approach.

A small number of other railway operators around the world are using technology to identify people on the track. Most of these operators are managing similar metro systems, in environments with fewer customers and using new digital cameras. Some have deployed it in a site-specific way, rather than across the network. TfL has done similarly – in response to a serious incident on the DLR, we installed technology at DLR Custom House station which is identifying people in the track area and allowing the control team to respond quickly to protect that person as far as possible.

PTI Holistic Review

In 2024, we undertook and published a detailed, holistic review of PTI controls which considered a range of potential engineering/infrastructure and operational mitigation measures which might reduce the risk of a person either falling between the train and the platform or falling on to the track (with no train in the platform) and that person not being seen by a member of staff or customer. This is included as Appendix 1 to this letter. These potential mitigation measures were drawn from a range of sources, including a review of approaches taken by other metros, suggestions from colleagues within TfL and suggestions from customers.

For each potential mitigation measure, the potential contribution to improving safety was considered in the light of:

- Existing infrastructure and rolling stock factors.*
- Assessments of the risk considered to date.*
- Potential benefits.*
- Potential disbenefits.*
- Potential safety impact.*

Potential mitigation measures considered in this review included:

Infrastructure Asset Changes:

- *Platform Edge Doors*
- *Passive gap fillers to reduce the size of the gap between the train and the platform*
- *Active gap fillers to reduce the size of the gap between the train and the platform*
- *Under platform lighting for visibility if a person has fallen onto the track or between the train and the platform*
- *Blue under platform lighting to highlight the gap between the train and the platform*
- *Platform shelf to reduce the distance a person might fall if they fall between the train and the platform*
- *Moving platform nosing stones to reduce the size of the gap between the train and the platform*
- *Pressure pads and strip sensors to detect if a person has fallen onto the track or between the train and the platform*
- *Improvements to train operator one person operated in cab CCTV equipment to improve train operator views of the PTI for safe train despatch*
- *Improving train headlights to improve train operator views of the track*

TfL Colleague Roles

- *Introducing station staff at terminus platforms*
- *Increasing Station Assistant Train Services (SATS) provision across the network*
- *Reviewing the procedure for train operators changing ends to walk along the platform (rather than through the train) for greater visibility of the PTI*
- *Reviewing arrangements for station CCTV monitoring*
- *Reviewing the procedures in place for train operators monitoring customers boarding and alighting trains on terminus platforms*
- *Reviewing lost property procedures for when lost property is found on or near the platform edge*

The Holistic Review outlines the feasibility of each mitigation measure and those that we have or are in the process of taking forward are:

- *Trial of passive gap fillers on London Underground*
- *Pressure pads and strip sensors to detect if a person has fallen onto the track or between the train and the platform (being considered as part of the PTI New Technologies Programme)*
- *Moving platform nosing stones to reduce the size of the gap between the train and the platform*
- *Pressure pads and strip sensors to detect if a person has fallen onto the track or between the train and the platform*
- *Improvements to train operator one person operated in cab CCTV equipment to improve train operator views of the PTI for safe train despatch*

- *We have reviewed and updated our procedures for when lost property is found on or near the platform edge to ensure that a check of the track is undertaken*

The holistic review and PTI New Technologies Programme demonstrate that we have considered the effectiveness of the current risk controls in place for falls between the train and the platform and falls on the track and evaluated the possible measures to further reduce the potential for and consequences of incidents of this nature. Further risk reduction measures have, as outlined, been determined as a result and there are plans in place to implement these which we have previously shared with the ORR. Based on this we believe that sufficient evidence has been provided to close this recommendation.

We will review our PTI Holistic Review in 2027, three years after the first review was published.

We will of course continue to share progress of this work with the ORR.



PTI Holistic Review
Final Draft 2024.pdf



CMS Bulletin 23

Review Feb 2026.pd

Previously reported to RAIB

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ORR decision

1. London Underground Ltd (LUL) has established the PTI New Technologies Programme to investigate technology that may reduce the risk of passengers coming to harm at the PTI or in the track environment. A trial of new technology is planned to take place in 2025 and 2026. As an interim measure, the LUL Rule Book has been updated and platform staff have been briefed on how to identify if lost property is suspicious or not.

2. 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 address it.

Status: Open.

Information in support of ORR decision

3. On 26 March 2025 London Underground Limited provided the following initial response:

The RAIB recommendation suggested that LU should identify the effectiveness of existing risk controls and evaluate possible measures to further reduce the risk of a passenger being struck by a train where they have inadvertently entered the track adjacent to a platform and that the review should consider detection technologies. It

also highlighted a number of other incidents where customers inadvertently entered the track environment. The work we are doing to manage this risk has considered the risk in the context of these incidents and other similar incidents across the TfL network.

We are developing an approach to reduce risk at the platform train interface using technology. During 2025, we will trial technologies to improve customer safety at the PTI in three areas – on the Piccadilly line, on the DLR and on the Central line. We will trial these technologies in a number of operational environments. This will allow us to make recommendations for potential wider deployment. The focus on this work is to address the following risks:

- the risk of someone being hurt when they fall between the train and the platform (hurt immediately, or once the train begins to move)*
- the risk of someone being caught in train doors and being dragged*