

Shared Learning

Key learning following a serious incident

Train struck and damaged by location cabinet door within tunnel

Issued to: All Network Rail line managers, safety professionals and Achilles registered contractors

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Location: Watford Tunnel

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Damage to train

Overview

During project works new location cabinets were installed in the tunnels at Watford. Following overnight signal testing a London Midland passenger service travelling through the tunnel experienced an emergency brake application.

On investigation the driver found that a train door had become damaged and that a number of passengers had been showered in glass. Further inspection of the tunnel found that the train had struck the door of a location cabinet within the tunnel.

The location cabinet door had been pulled off its hinges and forced up, striking the wall of the tunnel and then hitting the train door.

The industry investigation identified that the location cabinet door had not been properly closed and secured. The hinged doors when in the open position were foul to gauge.

Underlying causes

Safe by Design

- The risk of an open location cabinet door being struck by a train was not identified during the design phase.
- An assessment of the risk associated with the positioning and maintainability of the location cabinets (including a review of potential human error) within the tunnels was not undertaken.
- The type of location cabinet used was not assessed when the design was modified from that detailed in the product approval.

Working in the location cabinets

- The method of work adopted for testing (working in multiple cabinets) made it more likely that a door would be left unsecured.
- There was no process in place for the padlocking or security of the location cabinets within the tunnel.

Lighting

- Task lighting was insufficient to identify that the location cabinet doors had been left ajar.

Previous incidents of trains striking location cabinets within Watford Tunnel

- The lessons from two previous events (1992 and 2000) where trains struck the doors of location cabinets within Watford Tunnel were not available to the project in order to help in identifying and determining risk.

Key message

- Equipment that requires regular access for inspection or maintenance should be located outside of locations with restricted access.
- Where it is necessary to specifying equipment for use in restricted clearances it is essential to assess and mitigate the risk of any part of it being struck by a train, including in a failed state.
- Testing procedures should be organised so as to prevent a door being left unsecured and include a process for checking and securing.