

Shared Learning

Balfour Beatty
Rail

The Thameslink Programme

Issue Date: 16th September 2015 - For further info contact mike.netherton@networkrail.co.uk

Issue Number: TLP038 Title: Damage to Train traction equipment (17th June 2015)

Overview of Event:

At 05.15 following the hand back of a Thameslink Possession, the first passenger service travelling on the Up Charing Cross between Spa Road & London Bridge caught a traction cable with its conductor shoe.

The cable was severed and left a stub sticking up in the air, which was then caught by a second train causing it to lose all conductor shoes and damaging the connector beam on four carriages and disabling the train. It appears the cable had been left sitting high on the ballast near to the conductor rail following work in the area.

Causes:

Immediate - An ETE cable left foul of the traction collector shoe clearance envelope of operational trains caught the conductor shoe equipment of two trains in passenger service. The first train dislodged the cable and the second train caught it around the conductor shoe gear causing detachment and damage.

Root and Underlying Causes

- An ETE traction cable was moved on to a ballast shoulder to protect it from the movements of track mounted plant traversing along an area where a rail section had been removed. Once the cable was moved it was not returned to its original position.
- The person that moved the cable was not aware of the consequence of leaving the cable on the ballast shoulder in close proximity to the conductor rail.
- The Track Hand Back Process did not allow the identification of the cable being within a position likely to foul the conductor shoe of a train in service.
- On track plant is generally made to traverse over a large footprint to collect materials.
- The person carrying out track hand back duties is required to check a large area whilst under pressure of limited time. Additionally the inspection checks are hampered by obstructions such as Engineering trains and materials.
- Although task lighting is supplied and used in specific work areas, lighting over the site as a whole was limited

Actions Taken As a Result of Investigation:

- Where cabling or other track equipment is moved for protection, arrangements should be in place to make sure its re-instated before handing back the worksite
- As part of Track Hand back processes, there are robust plans in place to check and be informed where work has been carried out
- Consider highlighting all cables with paint to make them more visible to check
- Make sure all personnel are familiar and competent in working and understanding 3rd rail traction areas

Photos of event:



Damaged conductor shoe and mounting beam



Severed ETE Cable and arcing marks on conductor rail

General Key Messages:

- Where equipment is moved, arrangements should be in place to ensure safe handback of the asset
- Work areas should be identified to persons carrying out handback checks to enable focused inspection