

CRL RMS 01

**Willesden
Track
Maintenance
Depot &
Satallite Sidings**

Kenton, South
Kenton, Harlesden &
Stonebridge Park



London Underground station works & improvement program

All trains on the London Underground are single-manned. Conversion to one-man operation began in 1984 and was completed in 2000. On one-man operated passenger trains the driver must be able to see the whole train to make sure that all the doors are safe for departure. On curved platforms a CCTV system, mirror or station dispatch staff are required

An upgrade to London Underground Limited's (LUL) One Person Operation (OPO) system was delivered in 2011 on the Bakerloo Line between Harrow & Wealdstone and Queen's Park stations, including Kenton, South Kenton, Harlesden and Stonebridge Park.

A number of platforms at these stations were not fully upgraded with latest visual and telecoms technology and continued to use a combination of mirrors and/or monitors to assist drivers.



Requirement

L.B Foster Telecoms was commissioned by LUL to produce detailed designs to upgrade the OPO system platforms at Kenton, South Kenton, Harlesden and Stonebridge Park previously omitted from the 2011 OPO project. Our brief also included providing a solution for the removal of all redundant OPO assets left in situ as part of the 2011 upgrade project.

Specification

Design including the items listed below;

- > All design check certificates
- > All necessary approved Applications
- > Details of the required test criteria for the commissioning of the design elements including, integration testing, where applicable
- > Detailed Design Drawings
- > Materials Proposal Schedule (MPS)
- > Asset Decommissioning Lists and New Asset Register
- > Mandatory Asset Information Data (MAID) – as appropriate for each station

Installation of the One Person Operation systems

- > Installation of new forward movement (Foursquare Metal) 4-way 15" MDA
- > Installation of new OPO CCTV (BOSCH 5000AN) series Cameras and lenses within (Samsung SHB-4300H1) box camera housings
- > Installation of new (Foursquare Metal) OPO camera boom suspended from the platform canopy
- > Installation of new (Foursquare Metal) column mounted Camera Boom installed on the platform open area
- > Installation of all communication cables Co-axial
- > Installation of all LV electrical cables
- > Installation on various CRMS systems

Our Solution

Due to the system being a Safety Critical asset L.B. Foster Telecoms Worked closely with LUL and SWIP to mitigate any issues and design risks, our expert team drew on its experience of working on similar OPO schemes in the rail sector to produce informed OPO designs.

We challenged the scope of the project, attending and generating discussions regarding design elements with LUL due to

station signage obstructing camera images and civil issues with construction of the MDA bases. This resulted in a number of potential major issues being avoided at the preliminary stage. Our innovative engineering solutions effected savings both on cost and delays.

Once commissioned, our systems interfaced with existing London Overground OPO systems.

What they said

"L.B. Foster Telecoms undertook the installation of a new OPO CCTV system at 4 stations on behalf of London Underground. Works included Communications, Electrical and Civils discipline works and were particularly complex with working on London Underground operated stations on Network Rail infrastructure.

"Throughout the project L.B. Foster Telecoms worked tirelessly and to a high standard. The project encountered some issues due to a previous suppliers poor design, however L.B. Foster Tew Plus were able to highlight this during Constructability checks and highlight them back to us before they were impacted and provide a workable solution quickly and cost effectively.

"I look forward to working with LBFoster Telecoms again on future projects."

Ed Ruddick Project Manager - from SWIP

"Throughout the project L.B. Foster Telecoms worked tirelessly and to a high standard. They provided a workable solution quickly and cost effectively."





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