

CASE STUDY

**Project: Earls Court Underground Station;
Roof Replacement Project**

Phase 1: Temporary Lighting, Electrical Surveys,
Diversion and Removal of Existing Services.

Value: £2 Million

Client: Metronet Rail SSL Ltd

Electrical Contractor: Giffen Group plc

Dates: November 2006 to July 2007

Phase 2: Design & Reinstatement of Services to
facilitate the removal of the crash deck and
return station to normal operation.

Value: £2.2 Million

Client: LUL Nominee SSL Ltd

Principal Contractor: Giffen Group plc

Programme: Design; April to September 2008

Installation; October 2008 to May 2009

Background

Phase 1 works began in November 2006, with Giffen Group installing a new electrical system under a crash deck spanning the whole of the train shed and ticket hall. Earls Court is a very busy main line station and had to remain operational throughout the whole process.

The Earls Court area is also very densely populated and is the subject of a Section 61 Noise Abatement Order, which presented new challenges, as the works had to be carried out during Engineering Hours (01.15 am to 04.30am). This requirement led to many new innovative ideas and procedures including the use of wet drills and acoustic screens.

Phase 2 works started in April 2008 with the design, which had to be substantially complete and ready for the assurance process by September 2008. This was achieved, whilst encountering and dealing with several problems including station electrical loading and ensuring that English Heritage issues were accommodated.

After a vigorous qualification and interview process, LUL Nominee SSL Ltd selected Giffen Group as the Principal Contractor for the Second Phase installation works. This means that all site management, security and health and safety issues are now included in Giffen's work remit. It also includes liaising with all other contractors and ensuring that the project is delivered in a safe and timely manner.

The Phase 2 installation works has to accommodate complicated phasing issues to ensure that the whole station remains operational throughout the reinstatement process, including works linked to all other trades on site and meeting immovable dates, which are being achieved.

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Scope of work

Phase 1

- Diversion and removal of existing electrical systems.
- Installation of an under-decking lighting system and CMS, including in excess of 350 luminaires.
- Diversion & removal of existing and temporary installation of the camera and PA system.
- Removal and refurbishment of English Heritage protected platform train indicators.
- Installation of:
 - New switchgear, manufactured by Giffen Switchgear.
 - Sub-mains cabling.
 - Temporary enabling lighting and power supplies.
- Full electrical survey to entire station, including the testing of all circuits.

Phase 2

- Site Management in capacity of Principal Contractor.
- Design of new lighting, CCTV, PA and CMS systems.
- Reinstatement of the platform train-indicator signs.
- Installation of:
 - New CMS (Cable Management System) for all services.
 - Further new switchgear, manufactured by Giffen Switchgear and alterations to existing switchgear.
 - Uninterruptible Power Supply (UPS).
 - Sub-mains cabling.
- Phased removal of all temporary services.
- Installation of new train shed lighting, ticket hall lighting and gantry access walkway lighting on the exterior of the station building.
- Relocation of the existing fire alarm system.
- Installation of new PA system in the ticket hall and relocation of the PA on the platforms.
- Relocation and rewiring of the ticket hall and platform CCTV system.
- Laying reinforced concrete slab to floor of existing store-room for change of use to a switchroom.
- Construction of a new blockwork storeroom on platform including fit out and final finish.
- Various diversions of all services to enable phasing of the works.
- Testing, commissioning and handover.
- Renovate and reinstate English Heritage protected bench seating, from the District Line platforms.
- Civils works repairing the existing platform and canopy where temporary scaffolding has penetrated.

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