Guy's Hospital

3X 3600 KVA GENERATORS

Client:	Guy's Hospital
Consultant engineer:	Eta Projects Ltd
Quantity surveyor:	n/a
Architects:	Eta Projects Ltd
Cdmc:	Turner
Value:	£4,250,000
Timescale:	6 months

Description

The project involved the design, tender and implementation of a complete new replacement of the Guy's Hospital site 11kV generators. This was to support the hospital's high voltage infrastructure for the site at London Bridge. The project involves the replacement of the existing 3x 2000kVA generators with 3no 3600kVA generators.

Objectives

Guy's Hospital was supplied via three 20 year old 2000kVA generators which were undersized to support the new developments on site, namely the new £300M Cancer Centre. Eta Projects were instructed by the Trust to undertake the detailed design and project management for the tender and implementation works associated with the new generator replacement works. The works were tendered on the OJEU (Official Journal of the European Union) open tender portal and Finning UK, part of the Caterpillar group, were successful in winning the tender.

Design

Working within a congested delivery area of the hospital, this project is one of the most challenging briefs undertake by Eta Projects. Detailed load analysis of the UKPN local network was undertaken. The design included the acoustic analysis and other specialist controls and monitoring packages. The project has expanded into the detailed design for the extension to the 21-section HV switchboard to accommodate additional feeders from UKPN and the provision of dual supplies to the new Cancer Centre.

Specific design requirements

Due to the architectural layout and congestion of the site, the existing generator rooms are congested with both electrical and mechanical ventilation equipment. The ventilation and cooling of the new generators was a major challenge. A specialist acoustic consultant was engaged to ensure the noise level does not increase above the level of the original noise level. This project was completed in March 2015.