Eta Projects

Royal Marsden Hospital

2x 1500kVA standby generators

PROJECT DETAILS

Client

Royal Marsden Hospital

Consulting Engineer

Eta Projects Ltd

Architects

Ansil and Bailey

CDMC

WT Partnership

Value

£763,000.00

Timescale

6 months

DESCRIPTION

The project involved the design, tender and implementation of a complete new HV infrastructure for the Royal Marsden Hospital in Chelsea. The project included two new UKPN intake sub-stations, two new 1500kVA standby generators and inter-connectors between each sub-station to provide resilience, redundancy and maintainability.

OBJECTIVES

The Royal Marsden Hospital was supplied via two outdated and undersized UKPN sub-stations one of which was below ground level. The original 500kVA generator supported lift services only. The Hospital was undergoing major redevelopment works and lack of power was identified as a serious risk and major constraint to the development plans.

Eta Projects were instructed by the Trust to develop a long-term infrastructure strategy for their high voltage and low voltage electrical distribution.

DESIGN

Working within a Listed Building introduces design criteria specific to the building. This was addressed by close liaison with the project Architect and Listed Building planning officer to ensure that the requirements were met in full.

Detailed load analysis was undertaken of the UKPN local network which involved major enhancement works to the external network to provide the necessary capacity to support the long term needs for the site.

The project expanded into the detailed design for the provision of two new UKPN twin transformer sub-stations supported by two 1500kVA generators.

SPECIFIC DESIGN REQUIREMENTS

Due to the architectural layout and congestion of the site, identifying suitable locations for the new generators was a major challenge. One of the generators was positioned on the roof and the other was located within the confines of a Victorian archway. A major water storage tank had to be de-commissioned to make space for the new roof level generator.