System Analysis and Protection Co-ordination Study for St George's Hospital

Background

St George's Hospital is part of the UK National Health Service (NHS) Trusts based in South London.

The Hospital is a medical college base and one of the largest in the country, providing medical facilities not only for London inhabitants but also for people right across in England and Wales for complex Neurological and heart diseases.

The Trusts needed to expand and upgrade the electrical system at St George's Hospital. In order to specify the new electrical equipment and to validate the capability of the existing equipment a system analysis and protection co-ordination study for the St George's Hospital was required.

In addition to the parallel operation of the site 11kV CHP generator and DNO system load shedding arrangements were required so that the system can be supported by the CHP generator only in case of loss mains (ie DNO).

ERA Technology Ltd conducted system analysis and protection co-ordination studies in order to ensure that new and existing electrical equipment would be suitable for

- proposed future load growth
- load criteria for varies supply conditions
- predicted maximum system fault level
- The provision of fast selective fault clearance.

Client: St George's Hospital, NHS Trusts

Location: UK

Services Provided:

ERA conducted electrical power system analysis, including the provision of protection settings for all the protective devices from the 11kV Distribution Network Operator (DNO) intake point down to the main 415V distribution switchboards.

Benefits:

- Specification and validation of electrical equipment
- Plan for future load growth
- Investigate for various supply conditions
- The provision for system load shedding so that the system can be supported either by CHP generator or DNO supply only
- Reliable protection system to safeguard equipment and site personnel.
- Assistance in achieving project timescales.

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