

Enhanced Supplementary Bonding Upgrade

Quartzelec delivered an enhanced supplementary bonding upgrade for the Renal Dialysis Suite at Burnley General Hospital, ensuring full BS7671 and HTM compliance through seamless collaboration within the PFI programme.

HEALTHCARE | BURNLEY GENERAL HOSPITAL

Our Customer's Challenge

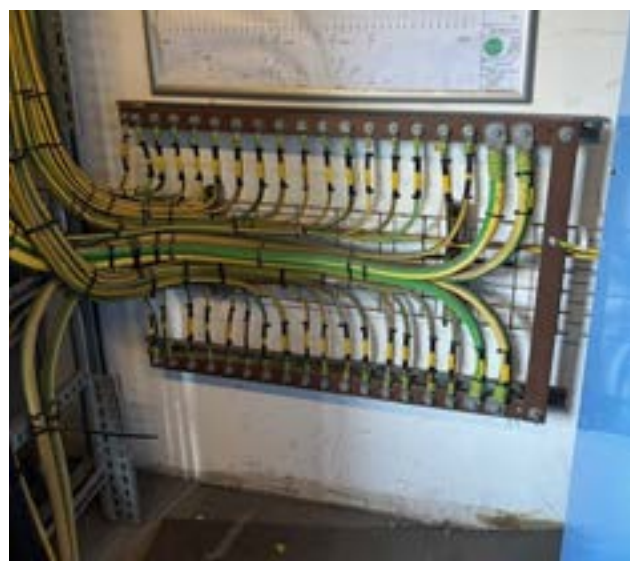
The client was experiencing a compliance shortfall within the Renal Dialysis and Infusion Suites at Burnley General Hospital, where the existing electrical installation, designed to earlier IEE Wiring Regulations, no longer met current BS7671 18th Edition and HTM 06 requirements. This raised concerns around patient and staff safety, specifically the ability of the earthing and bonding arrangements to achieve the stringent 0.2 ohm maximum resistance required for Group 1 Medical locations. The issue formed part of planned Life Cycle and Variation works under the BGH PFI Contract, linked to the Phase 5 redesign of the Renal Dialysis Suite.

The client required a coordinated enhanced supplementary bonding scheme covering both the Dialysis Suite and Treatment areas, integrating the refurbished spaces into the wider site earthing infrastructure. Delivery was required within a live healthcare environment, working alongside the embedded variation electrical contractor, and in full compliance with HTM 06 01, HTM 06 02, CDM requirements and site safe systems of work.

The Quartzelec Solution

Quartzelec delivered a detailed enhanced supplementary bonding scheme aligned with the requirements of GN7 Section 9 and BS7671:2018 Section 710.419.2. The solution involved installing a new main enhanced bonding earth bar connected directly to the Main Earthing Terminal within LV Switch Room 2, forming a robust reference point for the medical locations.

From this position, new 25 mm² main earthing conductors were routed, including all associated containment, to local Type 2 Earth Reference Bars serving the Infusion Suite, Treatment Room 1 and Treatment Room 2. Local 6 mm² supplementary bonding conductors were then installed from each Earth Reference Bar to all relevant extraneous conductive parts within the locations. On completion, the entire system was comprehensively tested and verified to confirm compliance with the 0.2 ohm resistance requirement and Regulation 710.415.2.2, ensuring a safe, reliable and fully compliant earthing solution for the clinical environment.





Key Benefits

- **Modernised electrical infrastructure:** Upgrading the Infusion Suite from Sixteenth Edition standards to full BS7671 18th Edition compliance
- **Full compliance with Section 710:** Delivering a safe and compliant Group 1 Medical location
- **Seamless delivery within a tight programme:** Achieved through integrated working and careful coordination
- **Increased organisational capability:** With enhanced knowledge and training around supplementary bonding requirements

Quartzelec delivered a high quality enhanced supplementary bonding solution, demonstrating strong technical competence, excellent collaboration and a consistently professional approach. The works were completed safely, on time and fully compliant with all regulatory requirements, meeting the expectations of all stakeholders within the PFI framework - Technical Services Manager

Regulatory
Compliance
Achieved

Enhanced
Patient
Safety

Seamless
PFI Delivery