Bender UK critical care power & lighting installation project at Queen Elizabeth Hospital, Woolwich

A demanding installation schedule and maintaining high levels of availability for medical facilities presented a double challenge for Bender UK undertaking vital improvements to Uninterruptible Power Supplies (UPS) and Isolated Power Systems (IPS) at the Queen Elizabeth Hospital Stadium Road Woolwich.

The work involved upgrading electrical supply systems to create Isolated Power Systems and install Uninterruptible Power Systems to improve the resilience and overall performance, and availability of the power infrastructure serving 7 operating theatres & recovery areas, a 20-bed Intensive Care Unit, 8-bed Critical Care Unit and Cath Lab.

It also included running a new mains supply cable from a sub-station and under the Blue Light ambulance access road to the hospital facility to serve the two new 250KVA UPS units. The access was achieved using existing ducting but it still proved an arduous task because of the size of cable and the distances involved whilst working in confined space areas.

Bender UK has also secured a 3-year maintenance contract for the IPS and UPS systems at the hospital and the new Steris lights installed in the operating theatre, which includes access to a Bender engineer 24/7/365, annual inspection of the IPS, and twice-yearly inspection of the UPS in accordance with HTM06-01 Part B and BS 7671 2008:2001.

The project was carried out under contract to Vinci Facilities Management, a division of VINCI Construction UK, and instructed by medical services provider the Meridian Hospital Company under a Private Finance Initiative (PFI) with Lewisham and Greenwich NHS Trust Vinci specialises in delivering an integrated approach to sustainable Health Care & commercial property services and building maintenance solutions.

Lewisham and Greenwich NHS Trust (LGT) provides NHS services for local people in Lewisham, Greenwich, Bexley, Woolwich and other parts of South East London. It is responsible for NHS services at the Queen Elizabeth Hospital, Woolwich and 11 different health centres in the South East of London.

A key requirement of the Bender UK contract was that all of the facilities should continue to operate throughout the work and there should be minimum disruption, which meant the work had to be carefully scheduled so that any changeover in the systems was carried out during normal breaks in use of the facilities.

The design of the electrical systems was carried out by Haakon Engineering Limited of Maidstone and managed by David Grant, under contract to Vinci FM. All works were project managed by Philippe Ahtuam Vinci Capital Project Manager.

Bender UK's Operations Manager Gareth Brunton

continues

CASE STUDY

BENDER UK
Low Mill Business Park, Ulverston, Cumbria, LA12 9EE
Tel: 44(0) 1229 480123 Tel ROI: +353 1 5060611
www.bender-uk.com

Bender UK critical care power & lighting installation project at Queen Elizabeth Hospital, Woolwich

explained: "We were responsible for provision and installation of the new IPS and UPS systems on site and worked with our cabling specialist STS Electrical Ltd to carry out the work."

"The facility at the Queen Elizabeth Hospital is a relatively modern facility but was built in the first wave of PFI contracts and opened in 2000, shortly before the regulations on isolated power supplies were introduced as the benchmark for critical medical systems – hence the need for the upgrade identified by the then South East London NHS Trust .

"Our team installed new systems from power source to socket trunking, bed head trunking with blue sockets, isolating existing cables and delivering a seamless changeover from the old to the new systems. With our extensive experience installing and maintaining IPS and UPS systems we have an intimate knowledge of the medical sector and understand the patient and staff safety and welfare priorities which are always paramount."

The new critical power systems are protected by Bender's ATICS high integrity changeover systems for added resilience. It removes the single-point-of-failure threat to power resilience inherent in the traditional single supply cable, by enabling supply from 2 different sources. The primary supply maintains normal operation but in the event of failure ATICs transfers over to the secondary supply within 0.5 seconds to comply with HTM06-01.

ATICS is the only changeover solution purpose-designed for medical applications with patient safety at the very core of its conception and development. Central to the ATICS design is the incorporation of permanent self- testing across all critical components bringing increased peace of mind over other products that are susceptible to failure without prior warning.

ATICS has the unique distinction of achieving independent (TUV) accreditation to the Safety Integrity Level (SIL) Level 2 standard and compliance with BS7671 2008 (2001)

CASE STUDY

BENDER UK
Low Mill Business Park, Ulverston, Cumbria, LA12 9EE
Tel: 44(0) 1229 480123 Tel ROI: +353 1 5060611