



CASE STUDY

# POWERING THE FIGHTBACK AGAINST COVID-19

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## MEMS PULL OUT ALL THE STOPS TO PROVIDE RELIABLE POWER SUPPLY FOR LIFE-SAVING EQUIPMENT

The NHS Nightingale Hospital in London was the first of seven of the NHS Nightingale Hospitals to be set up in the UK during the COVID-19 pandemic. These temporary large-scale critical care hospitals were set up by NHS England to provide cover for the projected increase in patients requiring critical treatment. Housed in the ExCeL London convention centre, Nightingale Hospital South East has a potential capacity for 4,000 beds, each equipped with critical care equipment to treat the particular symptoms caused by COVID-19.

In nine days the entire exhibition halls consisting of 87,328 square metres was fitted out with the framework for about 80 wards, each with 42 beds. If capacity is reached, it would be the largest hospital in the UK. The MEMS team worked long shifts, night and day alongside Armed Forces, NHS staff and additional contractors to transform London's ExCeL Centre into a new temporary field hospital enabling the NHS to provide the best possible care for critically ill patients.

### PROJECT SUMMARY

One of the main challenges for the NHS was that of utilities, particularly electricity with considerable requirements for additional duty and standby power. Having assessed the sites electrical infrastructure; it was deemed that ExCeL's existing electrical infrastructure was to be modified to ensure the mains supply could cope with the additional demand required for the temporary hospital, and that mains power was the primary source to each of the critical areas of the hospital. However, this still required backup power which was provided in the form of a temporary UPS and generation at each of the sites multiple substations.

Allowing the limited mains capacity to provide the primary source of power to the critical areas; areas deemed non-critical were supported directly via temporary generators with the majority supported via a duty/standby application.

MEMS received the initial call to provide support based on an existing relationship with central Government developed over previous years trading. A project manager was assigned to oversee the project on MEMS behalf and work with site contractors to find a fast and effective solution to enable the hospital to open in the quickest timeframe possible.

Within days of the initial call, MEMS supplied and installed a combined 21,850kVA of temporary power with machines ranging from 100 to 1250kVA, over 25 kilometres of temporary cable and multiple distribution boards, changeover panels and a vast quantity of cable covers and heras fence panels.



## PROJECT SUMMARY CONTINUED...

The project was not without its challenges; one of the biggest was weight restrictions on the south side of the building, which overhangs water with no support. MEMS liaised closely with the site architects whereby the conclusion was made to install and cement into position 140 steel beams to give sufficient support to the weight of the temporary generators and associated equipment. Once the support beams were installed, MEMS carefully positioned each generator in their exact required location as instructed by the client's architects.

Once installation and commission of each scope of works were complete, the project was passed over to our project management team whereby planned maintenance schedules and fuel replenishment programs were booked. MEMS monitored all equipment remotely via our MEMS Connect software whereby operational and system alerts would be sent to our 24-hour manned control room and actioned accordingly.



## THE RESULTS

Through the hard work from all involved in the project, the NHS Nightingale Hospital in London officially opened on 3rd April 2020 and received its first coronavirus patients within a matter of days.

Although MEMS have been providing temporary power and support throughout the planning, construction and running of the hospital, thankfully, due to other London Hospitals being able to cope with the number of COVID-19 patients requiring critical care, the NHS Nightingale Hospital South East has now been placed on standby.



*"We are proud to be part of this landmark project to help defeat Covid-19, and we are incredibly proud of our great team who have made this possible." - By Marc Cooper.*

Throughout this awful pandemic, MEMS are incredibly grateful for being given the opportunity to assist NHS England in the global fight to defeat COVID-19.