WBPS POWER YOU CAN TRUST

PROJECTS

WB Power Services (WBPS) was first established in 1983 and since then we have grown significantly in size and service capability. Today, we provide critical power services to some of the UK's most important businesses and organisations, ensuring essential services are protected. We are proud to retain our family values on a national scale as we strive to be the biggest and the best power generation company in the UK.

CASE STUDY

2MVA INSTALLATION AT A GOVERNMENT TESTING FACILITY

WB Power Services were approached by a consultant to scope, design and install a power solution for a government funded testing facility, which would provide vital back-up power to the facility in the event of a power failure.

PROJECT OVERVIEW

2MW

GENERATOR INSTALLATION
A T2200 Kohler-SDMO generator was installed with multiple bespoke features

12,800 LITRES

FUEL TANK INSTALLATION
Installation of a both a bulk tank & day tank, totaling 12,800 litres of fuel capacity

BESPOKE ACOUSTIC ENCLOSURE
Generator was installed within a bespoke, acoustic enclosure

OTHER REQUIREMENTS

BESPOKE FUEL PIPEWORK

ONGOING MAINTENANCE PACKAGE

OVERVIEW

An incredibly bespoke and diverse project for the WB Team, the specification contained a number of varied infrastructure requirements which WB were required to design and install.

The finalised solution comprised one T2200, 2000 kVA prime rated generating set installed in an acoustic container, along with an accompanying fuel management solution. The scope also included commissioning, testing and finally, training for the facilities engineering team.

The proposed solution also came with a 12 month maintenance package, delivered by the WB Power Service department. This would ensure the generator was kept in full working order.

GENERATING SETS

Following a detailed analysis of the hospitals power requirements, WB Power proposed the installation of a T2200, 2000kVA prime rated diesel generating set. The set was installed with additional bespoke work, which included:

- LOW FLOW FAN
- ENGINE & ALTERNATOR HEATERS
- APM 403P CONTROL PANEL
- SET MOUNTED SCHNEIDER ACB WITH ELECTRONIC TRIP
- DUAL BATTERIES & 20A CHA
- LUBE OIL MAKE UP SYSTEM

The T2200 Kohler-SDMO generator set positioned within the bespoke acoustic enclosure.

ACOUSTIC ENCLOSURE

The generating sets was installed in a bespoke acoustic container with penthouse inleet, which was designed to achieve a noise level of 75dBA @ 1m FFC. Further to this, the enclosure also housed a 2,800 litre day tank and an output connection panel. Finally, the enclosure was completed with:

- FIRE VALVE
- MOTOR AND GRAVITY LOUVERS
- LEAK DETECTION
- LUBE OIL MAKE UPFIT OUT
- LOAD BANK CONNECTION CAT FLAP

The acoustic enclosure is lifted into position on-site

EXHAUST SYSTEMS

The designed exhaust system comprised both a primary and secondary exhaust gas silencer system. The silencer was externally roof mounted in its own frame, made from stainless steel, and terminated in a horizontal tailpipe mitred at 45°.

The roof mounted silencer is fitted into its own bespoke frame

The exhaust system also contained a catalytic converter offering an up to 25% reduction in CO2 emissions.

FUEL MANAGEMENT SYSTEM

The designed fuel management solution designed and installed came complete with a 2,800 litre day tank, complete with 10m of mapress steel fuel pipework. This day tank was located within the acoustic enclosure, and was fed fuel by a 10,000 litr, built to the following specficiation:

- DIGITAL TANK LEVEL INDICATOR (4 – 20MA) TO LINK TO BMS
- OVER/UNDER BUND ALARM
- 2" OVER FILL PREVENTION VALVE
- DUTY PUMP SET AND CONTROL PANEL

COMMISSIONING & SITE TESTING

As part of the solution, WB Power provisioned for two WB Power Commissioning Engineers to be on-site for four days. The testing schedule included:

- G99 TEST
- SITE ACCEPTANCE TESTING (SAT) INCLUDING A RESISTIVE LOAD BANK TEST
- FUEL REFILL UPON TESTING COMPLETION
- INJECTION TESTING

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