

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



5.7MVA INSTALLATION FOR A SOUTH EAST TELECOMS PROVIDER

Initially, WB Power Services were approached by a third party consultant to help design a specification, after they had been appointed by the end user to propose a new power solution, which would act as a back-up power supply for one of their regional data centres.

WB Power then worked with the appointed contractors to better define requirements, working through the practicalities of how the project could be delivered without affecting operational capability. Elements detailed within the works included removal of existing power infrastructure, procurement and installation of generating set, acoustic package and a fuel distribution solution.

PROJECT OVERVIEW



GENERATOR REMOVAL

Decommission, removal and disposal of four incumbent generating sets on-site.

5.7MVA

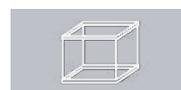
GENERATOR INSTALLATION

Three T1900 1900kVA Kohler-SDMO generators were installed on-site

**135,000
LITRES**

FUEL TANK INSTALLATION

Installation of three 45,000 litre banded belly fuel day tanks, complete with internal fuel distribution system



BESPOKE ACOUSTIC ENCLOSURE

Generator was installed with a bespoke acoustic enclosure designed to achieve a noise level of 75DBA

SOLUTION

Following project design and sign-off, the first stage of the project delivery was to decommission, remove and dispose of the following equipment located on-site:

- **THREE EXISTING GENERATING SETS, LOCATED IN A PLANT ROOM**
- **FOURTH GENERATING SET AT THE REAR OF THE BUILDING**
- **ATTENUATION EQUIPMENT INCLUDING EXHAUSTS**
- **DAY TANKS AND INTERCONNECTING PIPE WORK**

WB Power Services were able to conduct this aspect of the project in-house, removing all the four sets by utilising their own Hiab fleet.

Prior to the generating sets being delivered to site, they underwent a rigorous factory acceptance testing (FAT) process, undertaken at WB Power's own testing facility in Derbyshire. This included:

- **VISUAL INSPECTION OF GENERATING SET AND ACOUSTIC ENCLOSURE**
- **FIRST STEP LOAD ACCEPTANCE TEST**



One of the T1900 Generators being lifted onto a Hiab after FAT testing at WB Power's Derbyshire facility

- **4 HOURS AT 100% LOAD**
- **1 HOUR AT 110% LOAD**

WB Power designed a solution which included the installation of three T1900 Kohler-SDMO prime rated generating sets, which utilised the ComAp control system. Due to sound restrictions on-site, the sets were housed within acoustic containers rated to achieve a noise level of 75 dBA @ 1m FFC, complete with access steps.



The generators in position on-site, within acoustic containers, built with additional access steps due to the containers being sat on the belly tanks

The design also contained provision for a fuel management solution. This included three 45,000 litre nominal banded belly fuel day tanks, complete with a fuel transfer & fuel polishing systems.



The installed generating sets positioned on top of the three 45,000 banded belly day tanks

Finally, the sets were off-loaded and positioned on site. Due to the size of the cranes, a temporary road way and main road closure were undertaken. Once in position, the generators underwent a robust system commissioning and site acceptance process.

In addition to the generating set, WBPS also included ComAp controllers on the sets. WB Power were able to free issue the necessary ComAp control equipment to complete the entire control system package.

All works were undertaken on a strict schedule and budget due to the operational

importance of the site. All works were completed within these predefined indicators. WB Power continue to support the engineering team on-site and provide an ongoing service and maintenance package for the on-site generator and equipment.

