JCA

PROJECT PROFILE

CLIENT
LEADING DATA CENTRE
PROVIDER
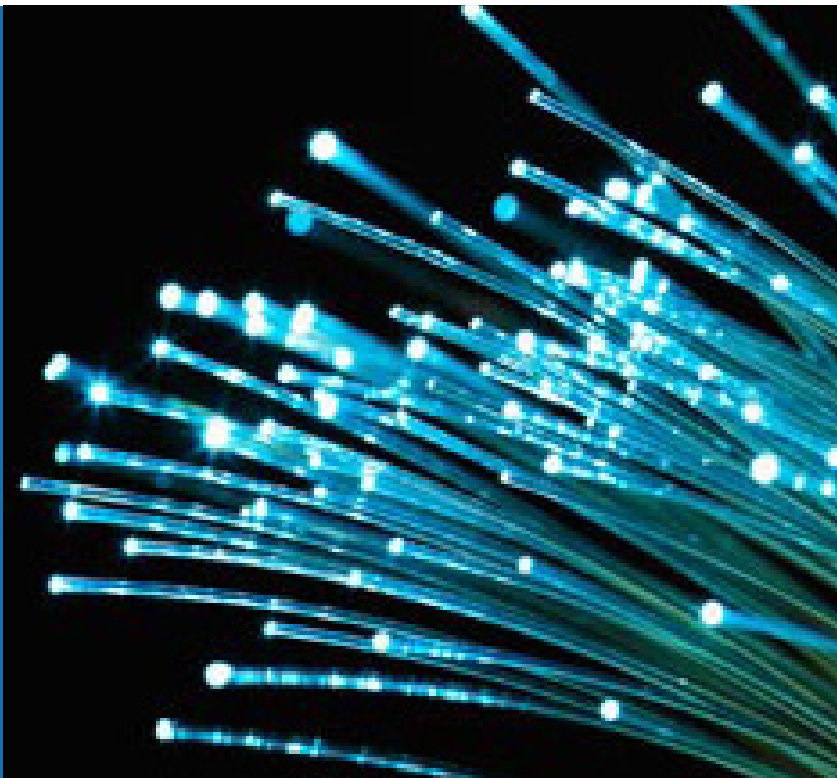
LOCATION
CORSHAM

SECTOR
DATA CENTRE

PROJECT
GENERATOR INSTALLATION

OVERVIEW

This data centre facility is supported via two LV diesel generator sets each rated at 2MVA prime power (continuous run) configured in N+1.

Each generator is capable of supporting the entire site load. The generation is open transition from mains to generators with a short break in supply (approx 10 seconds). The generators synchronise to the mains as return from backup mode and the system frequency varies within tolerance on application of a step load.

The generating sets were water cooled industrial diesel engine governed, to run at 1500 RPM 50 Hz close coupled to an alternator and supplied complete with control panel and exhaust system. The assembly was secured by anti vibration mounts to a prefabricated steel base plate. The set is arranged for auto start.

This power is the rating available for continuous supply when the generating set is operating as standby for another power source i.e. the mains and this power source fails. There is no limitation on the hours of operation but it assumes the load is variable. A 10% overload is available for 1 hour in 12 hours.

Intake and exhaust air to these units has been provided via louvered sections of wall to either end of the generator room, with all silencer sections and acoustic equipment being contained within the room itself.

In addition to general circulation and combustion air, the engine exhausts have been horizontally run, discharged and positioned above the extract louvered wall, with all necessary acoustic treatment of the exhausts being undertaken within the enclosure.

Fuelling to these sets was via two day tanks located within the base units of the individual generator sets themselves, with links to a remote central bulk fuel store.

To maintain system resilience, the generator control system operates as a distributed redundant control system. Therefore, the generator commander control panels are separated for active/redundant streams.