



1150kWe Caterpillar G3516LE Containerised Landfill Package



Location: United Kingdom
Output/Duty: 1150KWe Continuous Power
Equipment: Caterpillar G3516LE

Power Need Housed in an immobile 'drop over' style acoustic canopy, with a large accompanying suite of control panels in a separate building, the operator of this CAT G3516LE Landfill generator unit required it to be repackaged into a fully self-contained unit, giving them a far more flexible power generation asset and ease of relocation if needed in the future.

Solution The generator was carefully decommissioned and removed from site along with all components that could be reused. It was then transported to our Great Haywood works where all necessary control and instrumentation wiring was replaced, and the fuel system upgraded to a Woodward 110 Tecjet and EGS02 system this allows for fluctuations in both fuel pressure, and CH₄ content of the landfill gas fuelling the engine.

A specially designed acoustic container was then manufactured to house the generator, incorporating a separate control room at one end and being acoustically treated to give a performance of 75d(B)A at 1m. Time was taken at this stage to consult with the client's operations team to ensure that not only did we iron out any current issues they had with similar packages, but also include features to ease their regular maintenance tasks. The resulting package incorporated a roof mounted horizontal dry cooler, internal ventilation fans

to satisfy combustion and cooling air requirements, and a lagged stainless steel exhaust silencer system. This was then connected on site to a twin wall flue that discharged resultant exhaust gases to atmosphere at high level.

Control of the generator is handled by a bespoke panel with touch screen interface, Motor Control Centre (MCC) and synchronising breaker section. This was designed and manufactured to fit neatly in one end of the package. All site electrical interfaces and connections were made through the floor at this end, whilst essential fluid connections to site services were through suitably sized bulkhead pipework connections above ground level.

Once on site, due to the modular design, installation, assembly and commissioning was completed by Yellow Power engineers in a matter of days, with the generator ready for testing ahead of schedule.

Results Careful planning and programming of this project ensured that removal of the generator, packaging, testing, installation through to successfully passing its G59 mains protection test was completed in a period of just 13 weeks. Our customer now has a reliable, well performing and flexible power generation asset that should give them many more years of dependable operation.

For more details, please do not hesitate to contact our sales team at: sales@yellowpower.com or telephone +44 (0)1889 882255

