

Redditch Substation Mini-Piled Foundations

Client: Stirling Power
Designer: Barry Collings Consultants
Value: £228k
Period: Oct — Dec 2016

The construction of a new substation in Redditch required mini-piled foundations for the WPD Control Room, the Transformer Base and other external concrete bases.

The pile design was based on installing 47 no x 220mm dia and 152mm bottom driven tubular steel piles to depths of up to 8m and founded in very stiff clay. Safe working loads were 225KN and 125KN respectively.

Pile tubes are supplied in 2m sections with a slightly enlarged collar to receive the next pile section, the pile sections are then welded together before driving. On completion the pile tubes were filled with structural concrete and a central reinforcing bar placed to full depth which was linked to the slab reinforcement detail.

The site had originally been a timber yard and pre-excitation of starter pits to 1.2m was required to remove oversite debris and obstructions from pile bores.

We resourced 2 of our 2.5 tonne 'drop hammer' rigs to the contract and the piling work was completed in 9 days.

Following completion of piling we have completed a number of other elements of the new substation contract including; reinforced concrete foundations, ducting, brick and blockwork, external tanking, steelwork, superstructure and building elements of the contract.

