

CASE STUDY 4

SENT TO THE TOWER!

The Piling & Foundation Solutions Division of R. Withers plc are proud to have completed a four phase piling contract worth approximately £120,000.00 at the Tower of London Environs Scheme.

Main Contractor - Wallis (part of the Kier Group) - were constructing a new visitor centre incorporating a modern cafeteria; ticketing office & enhanced viewing facilities, together with extensive hard and soft landscaping.

Withers' contract was for the installation of approximately 125 No. 300mm dia. temporary cased auger bored piles, to depths of 14 - 28 metres. Ground conditions consisted of varying depths of made ground overlying London clay. Temporary casing was required through the unstable made ground to an average depth of 8.0 metres.

The piles, design by Arup, carry working loads between 260KN & 490KN with a design factor of safety of 3.0.

Due to limitations on working/storage space & the presence of live services, archaeological/ historical remains throughout the site, Withers chose to use its 4-tonne Wolf TD610 limited access piling rig to carry out the works. This compact, extremely powerful rig with its remote power pack proved to be the ideal choice.

During the first phase (Pumphouse) many trial pits were excavated to enable the extent of 12th century revetment walls to be logged. The piles were installed immediately behind. The second phase (The Vaults) was then successfully completed, with the remaining two phases (Western Pavilion & Causeway) completed some months later.

By reason of the very tight working areas & limited access, it was not possible to use ready-mixed concrete for the piles. Withers constructed the piles using a C35 sand/cement site mixed & pumped grout. Test cube results indicated average 28 day strengths at C50.

Withers are very pleased to say that their sentence to the Tower proved a very successful experience.

Employer:	Historic Royal Palaces
Architect:	Stanton Williams
Engineer:	Arup
Q.S.:	Gardiner & Theobald
Planning Supervisor:	Hannah, Reed & Associates
Main Contractor:	Wallis
Piling Contractor:	R. Withers plc

