

BELL GREEN, SYDENHAM – PHASE II	
Description:	Remediation Earthworks
Form of Contract:	JCT Design & Build
Duration:	35 weeks
Contract Value:	£5,500,000
Client:	Castlemore Securities Limited
Clients Representative:	Erith Construction

The 7Ha site was a former gas works at Bell Green, Sydenham, London.







The contamination on the site has been contained by the construction of a cement bentonite cut-off wall which completely encloses the site and is set into the underlying London Clay.

Part of the site has been developed with the construction of a large supermarket store. The remaining part of the site was to be prepared to receive a new garden centre and other retail outlets.

The site had been demolished to floor slab level and subsequently overfilled with 3 meters of gas works waste. The foundations, which had been left in place, extended through made ground from the sub 3 meter level into the London Clay at a depth of 7 meters. The made ground was a mixture of contaminated clays and gasworks waste.

Given the age and location of the works, the risk of unexploded ordinance from the Second World War was high. Appropriate mitigation measures to support the intrusive works were specified by BACTEC.

The contracts works comprised:

-  The excavation and screening of 80,000 cubic metres of contaminated fills to produce 70,000 cubic metres of engineered fill which was compacted and validated.
-  The excavation, breaking, crushing and screening of all foundations within the footprint of the proposed buildings to a depth of 7 metres.
-  Crushed and screened materials were recycled to produce 14,000 cubic metres of inert engineered capillary break capping layer over the site, as well as 2,500 cubic metres of clean aggregate as fill to the concrete crib walling.
-  The construction of 160 meters of 6metre high concrete crib walling.
-  The diversion of a 1.2 metre diameter live concrete culvert, 7 metres deep, around the proposed building foot print.
-  The engineering and validation of all retained materials to provide a stable development platform for the proposed works.

