



Cattedown Regeneration Scheme involves the excavation of 425,000 tonnes of limestone rock from a disused quarry and depositing it in Cattewater Estuary to form two six acre areas of development land.

Brent Construction negotiated the £3million contract on a design and construct basis, with their appointed designers Babbie Group. The innovative design made the scheme feasible after the initial design proved too expensive when first tendered in the competitive market.



Work in Shapters Field quarry involved the excavation and processing of limestone rock, to form drainage layer material and rock armour as well as general fill. Substantial cliff stabilisation works were undertaken to ensure the resultant cliff face was safe for development to take place below. These stabilisation works involved the use of rock dowels, post tensioned rock anchors, rock netting and wire reinforcing ropes. The complexity and the variation of the rock strata meant that these measures were designed and installed as the rock was excavated. Close liaison and co-operation between the contractor and the consultant were necessary to ensure that programme and costs were not exceeded. Value management exercises were undertaken to examine cost effective solutions to several major stability problems that were encountered.



Reclaim work involved the deposition of the excavated rock onto the bed of the Cattewater Estuary. This river bed consisted of 20metres depth of non-load bearing silts which required consolidation to form the reclaim land. The fill was deposited in layers on a geotextile/geogrid material and vertical wick drains were installed to allow pore water to escape from the saturated silts and hence consolidate. Again close liaison and co-operation between contractor and consultant was required to ensure that the underlying silts were not overstressed and the formation of the reclaim was stable. Pore water pressures and settlement readings were extensively monitored utilising a computerised evaluated system, this then dictated the rate of placement of fill. Extensive geotechnical testing of the fill material was also undertaken to ensure the suitability of the material for the future development use.



The completion of a successful project that had engineering and environmental problems was achieved by the close relationship between contractor, consultant and client. Costs and programme were maintained by attention to detail and innovative solutions to problems.