

RETAINING WALL STABILISATION HEREFORD GENERAL HOSPITAL

Client: Hereford General Hospital
Engineers: S. Roughton Associates
Installer: WT Specialist Contracts

Requirements

A 3.3m high boundary retaining wall on the grounds of Hereford General Hospital, approximately 90m long, was showing signs of bulging and needed to be reinforced and stabilised. The stone wall stands less than 2m from the bank of the River Wye with a narrow towpath that meant access was difficult and working conditions severely restricted.



On the inside the ground level is virtually at the top of the wall from where it rises up a slope a further 2m, creating significant loads against the wall. The project engineers, S. Roughton Consultants, required a simple, cost-effective and reliable long-term solution to the problem.

Solution

The well-proven Duckbill mechanical ground anchors were seen as the ideal solution and supply and installation could be provided from within the WT Group.

Sister company WT Specialist Contracts first reinforced the wall by grouting stainless steel bars into previously channelled-out mortar beds which were then re-pointed.

Following this holes were cored through the wall and the Duckbill MR2 stainless steel anchors with 16mm grip bars were driven, at an angle, 6m into the stiff sands and sandstone.

Using a special rig mounted on an all-terrain fork lift truck WT installed a total of 150 Duckbills in two rows, at heights of 1.1m and 2.2m, before being secured with Combi-Tecs and set to a working load of 25kN.

The cored out stonework was then replaced and grouted to hide the anchors and provide an aesthetic finish with virtually no signs of the wall stabilisation work that had been carried out.

