

Project Report

Retaining Wall

DESIGNER	CLIENT
Tellus Design	Private
CONTRACTOR	INSTALLER
Anchor Systems	CA Drillers

Requirement

A privately owned property in Frinton-on-Sea (CO13) required urgent stabilisation works after an existing retaining wall between two neighbouring gardens began to lean. The masonry wall—constructed from dense concrete blocks and supporting brick pillars with metal rail fencing—stood between 1.35m and 2.15m in height, retaining up to 2.0m of ground. Movement had progressed to a point where intervention was needed to prevent further displacement and ensure long-term structural stability.

Because the project was located in a residential setting, access and housekeeping were critical. All materials needed to be manually handled, and installation activities took place from the neighbour's garden, requiring exceptional care and cleanliness throughout.

Testing

With no formal site investigation data available, ground assessment was carried out using British Geological Survey information, indicating firm to stiff clay conditions. Anchor Systems completed the initial calculations and site testing to determine a suitable anchoring specification. Test results and design assumptions were then verified by Tellus Design.

Vertical testing was undertaken on site using a 30-tonne hydraulic ram. The test anchors were successfully loaded to 18kN within three pulls, meeting the project performance requirement of a 15kN proof load and 10kN lock-off load. These results confirmed that the proposed Vulcan Earth Anchor system would deliver the stability required.

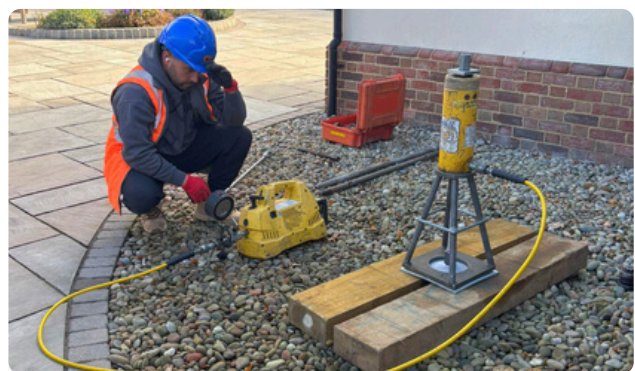


Solution

To stabilise the structure cost-effectively and with minimal disruption, Anchor Systems supplied AS-30 Vulcan Earth Anchors installed to a finished depth of 2.5m. The 3m-long ground anchors were chosen for their proven performance in clay soils and their ability to deliver reliable, immediate load capacity.

Installation was completed by CA Drillers, who also carried out core drilling through the retaining wall. To protect the neighbour's garden, ply boards were placed to shield grass from dust and water during drilling. Anchors were driven and locked off using a handheld breaker, powerpack, and 30-tonne jack—allowing the entire operation to be completed safely within a restricted residential environment. Recessed pattress plates were fitted to ensure a tidy and discreet finish.

The complete installation, including drilling works, was efficiently delivered within four days, restoring stability to the retaining wall without the need for excavation or more intrusive engineering measures.



High View

