

Project Report

	DESIGNER	CLIENT
	Tellus Design	Selco Builders Warehouse
SUB-CONTRACTOR	CONTRACTOR	INSTALLER
CA Drillers	Anchor Systems	Hartmann Construction

Requirement

Selco Builders Warehouse at Hanger Lane, London, required a reliable solution to stabilise a retaining wall forming part of the access ramp to the car park. The wall, which holds a maximum retained height of approximately 2.2 m, had begun to lean, prompting concerns over further movement and long-term structural integrity.

The primary objective of the project was to prevent any additional displacement of the retaining wall using a robust, minimally disruptive ground anchoring system.

To address the issue, Anchor Systems selected AS-50 Vulcan Earth Anchors at a depth of 3 m, paired with recessed pattress plates to provide a clean, unobtrusive finish. Anchor Systems completed the initial calculations and site testing before presenting results to Tellus Design, who confirmed that this anchor specification met the performance requirements for the retaining structure

Testing

Ground conditions were inferred from publicly available British Geological Survey data, which indicates near-surface London Clay Formation consisting of clay, silt, and sand. No intrusive ground investigation was provided for the site.

Performance targets for the ground anchors were:

- Proof load: 18 kN
- Lock-off load: 12 kN
- Finished anchor depth: 2.5 m

On-site testing was carried out within the wall, with each Vulcan Earth Anchor successfully loaded to 40 kN, confirming that the solution delivered significant capacity beyond the initial design requirement and ensuring confidence in long-term performance

Solution

The stabilisation works required careful planning due to restricted access, as all machinery had to operate on a traffic ramp which was temporarily reduced from two lanes to one throughout installation. Despite this constraint, the works progressed efficiently and with minimal disruption to site operations.

CA Drillers spent one day on site core drilling to prepare the retaining wall. Hartmann Construction then carried out the anchor installation over three days using excavator-mounted equipment with a 30-tonne ram for loading. No bespoke anchor lengths or specialist fittings were required, and all works were completed in compliance with CDM 2015, supported by the appropriate project documentation and safety procedures.

The AS-50 Vulcan Earth Anchors provided a discreet, reliable, and high-performance ground anchor solution, effectively halting further wall movement and securing the long-term stability of the retaining structure. The use of recessed pattress plates ensured a neat and durable finish suitable for a live commercial environment.

Retaining Wall

Hanger Lane, Selco Builders Warehouse

