

Project Report

ENGINEER

John Kettle & Associates

CLIENT

Private

PRODUCT

10 X AS-30 Vulcan Earth Anchor

CONTRACTOR

APX Project Management

INSTALLER

Hartman Construction

Requirement

The project at Hythe involved a failing stone retaining wall that required urgent stabilisation. With plans to construct an extension adjacent to the wall, ensuring its structural integrity before proceeding with further development was critical. The project aimed to reinforce the retaining wall using Vulcan Earth Anchors to prevent any movement and ensure long-term stability

Testing

Before proceeding with the installation of the Vulcan Earth Anchors, standard site testing was conducted. These tests aimed to:

- Evaluate the ground conditions to determine soil resistance
- Verify that the proposed anchor system could withstand the necessary loads
- Ensure compliance with engineering safety standards

Testing results confirmed that the AS-30 Vulcan Earth Anchors would provide the required level of foundation support, meeting load-bearing and safety factor requirements

Solution

To stabilise the retaining wall, a total of ten AS-30 Vulcan Earth Anchors were installed at a depth of 3 metres. The chosen anchor system included:

- 16mm threaded tendon for secure embedding
- 250x250x10mm pattress plate to distribute load forces
- Wedge-boss, hemi-spherical washer, and 16mm load nut for reinforced stability

Each anchor was engineered to handle a load requirement of 10kN, with a built-in safety factor of 3, ensuring long-term structural integrity.

Given the site's limitations, the installation process was adapted to use only handheld hydraulic breakers for anchor placement. To apply and test the required loads, a 12T hollow hydraulic ram was used, ensuring compliance with engineering standards

Result

The installation of the Vulcan Earth Anchors successfully stabilised the retaining wall, meeting the performance criteria and load capacity requirements. The project was completed without any unexpected challenges, ensuring a secure and reinforced retaining wall capable of supporting future construction.

Retaining Wall

Hythe Retaining Wall Stabilisation

