Case Study

GREASBOROUGH DYKE - ROTHERHAM

Client: Henry Boot Ltd
Consultant: Hannah Reed
Approved Installer: Vertical Access Ltd

PROJECT SPECIFICATION

Steep embankments to this drainage dyke formed a boundary for a council depot and development site. Rapidly rising and falling water levels on top of surface water caused a large section of this bank to fail. The resulting slip partially blocked the water channel leading to a rise in water levels and seriously undermined the boundary. Remedial work to rebuild and stabilise the slope with minimum disruption was required.

SOLUTION

The section of failed slope was removed to allow the installation of a cellular confinement system. The new structure was filled with a granular mix and rebuilt with an incline to match the existing embankment. Anchors were installed on a grid pattern through this filled cellular system as well as across the affected slope to provide long term stability. To minimise any future pore water pressure build up, a series of 'Active' Plati-Drain® anchors were also installed. Load plates were used on all anchors to secure the Tencate 2020/20 geogrid and stabilise the surface to help retain the topsoil and aid re-vegetation. A row of Geo System anchors were used at the crest and toe of the slope to help tightly profile the geogrid product.

'Active' Plati-Drain System: 16 x S08EC & 10 x B06TC: galvanised spheroidal graphite iron anchor c/w 8m of 8mm Ø stainless steel wire tendon and Plati-Drain®, 200mm x 200mm stainless steel load plate & 8mm stainless steel wedge grip.

Anchor System: 40 x S08EC & 30 x B06TC: galvanised spheroidal graphite iron anchor c/w 8m of 8mm Ø stainless steel wire tendon, 200mm x 200mm stainless steel load plate & 8mm stainless steel wedge grip.

Anchor System: 38 x S04 Geo: aluminium alloy anchor c/w 1.2m of 4mm Ø stainless steel wire tendon, a 92mm Ø polyethylene load plate and conical wedge grip.

Quantity: 134 **Anchor Design Life:** 60 yrs **Soil Type:** Variable

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