

## Case Study: Steep Embankment Protection, Donside, Aberdeen Products: Geoweb® Slope Protection, Atra® Tendons, Atra® Keys & Anchors



Albion Drilling Group Ltd were employed by main contractor Safedem to stabilise and encapsulate an existing embankment which runs alongside the River Don. Albion were then tasked with stabilising the embankment by means of Soil Nailing and this was followed by the installation of a 600mm thick encapsulation layer consisting of both Class 6G Stone and Top Soil. The encapsulation layers were held together through the use of rock fall netting with Geoweb used as a soil retention system. Greenfix were provided with the original site drawings and offered a solution that reduced the original two layers of a shallower cellular confinement system to one layer of 300mm deep Geoweb secured by the unique ATRA Tendons and Tendon Clips.

ATRA Tendon Clips are load transfer devices that transfer slope gravity forces from the Geoweb cell wall to the tendon. They then connect and lock securely through the Geoweb cell wall I slots allowing for preassembly at the top of slope. This arrangement also minimised worker time on the steep slope reducing the risk of accidents. Greenfix proposed a suitable pinning pattern for the Geoweb to supplement the ATRA tendons, and worked with Albion Drilling to ensure that the work proceeded smoothly. The total amount of Geoweb used on site was 4000m<sup>2</sup>. Once all site works were complete in March 2015 and by summer a stable green slope was established.



**Contractor**



**Client**

