

CASE STUDY

Gabion Stabilisation, River Rhiangoll, Brecon Beacons National Park



Project Overview

This gabion river wall was undermined by scouring beneath putting the houses on the riverbank at risk. In addition, the nearest building is a house 0.75m from the gabions at closest point. The works within an '8m inclusion zone' on a watercourse required permits from Natural Resources Wales (Cyfoeth Naturiol Cymru). The design proposed existing gabions were stabilised using Platipus Percussion Driven Earth Anchors (PDEA®), a scour protection footing was to be cast and a rock mesh installed over the top of the gabion wall providing a long term, safe solution to the surrounding houses and the riverbank.

Solution

Prior to installation of the anchors all vegetation and roots were removed from the face of the gabion wall. Platipus® S8 anchors were installed at 1.0m centres, both horizontally and vertically, in a 'diamond' array, locked off at 15kN (top row) and 28kN (bottom row). Double twist rock mesh helped to distribute the load across the face of the existing gabions. The wire mesh was cut locally to facilitate the anchor installation and a hole was cored through the existing gabions to allow for the ground anchors to be installed. Each anchor was driven at a downward angle of 45° below the horizontal. Upon completion the wire mesh of the gabion baskets was repaired.



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PLATIPUS
EARTH ANCHORING SYSTEMS
www.platipus-anchors.com

Platipus Anchors Limited,
Kingsfield Business Centre, Philanthropic Road,
REDHILL, Surrey, RH1 4DP, England.
T: +44 (0) 1737 762300
E: info@platipus-anchors.com

Platipus Anchors Inc,
1902 Garner Station Boulevard,
Raleigh, NC 27603, USA.
T: Toll Free (USA): (866) 752-8478 T: (919) 662-0991
E: civils@platipus.us



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