



Client:
Kier

Contractor:
GeoGrow®

Completed:
November 2021

Rootlok® Vegetated Wall System installed to provide flood protection works in St Blazey.

As part of the STARR projects - Rootlok® vegetated wall system was specified for use on part of the major Par River flood protection works to provide an innovative measure to reduce the flood risk for over 800 homes and businesses in St Blazey & Par.

GeoGrow worked with Atkins on an early solution and then a formal design for all aspects of the installation, which was approved by the Environment Agency, Cornwall Council & Atkins. Kier the main contractor placed the sub-contract order with Geogrow to supply and install the Rootlok system over a 6 week build programme.

The works

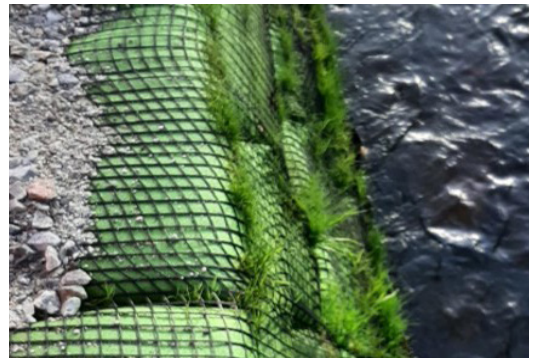
To replace approx 44LM of a failing gabion basket embankment along the Par River and install a Rootlok vegetated retaining wall system. The works was situated off the A390 Tywardreath Hwy adjacent the Outboard Services + Marine Company HQ.

First requirement was to install a dam and flume to maintain the waterflow during the early part of the installation, a 600mmØ twinwall water carrier pipe extended the length of the works. Once this was in place the existing riverbed was reduced by 500mm and the old gabion baskets removed. A tie-back design was used, a reinforced earth structure including geogrids with a geogrid wraparound Rootlok bag face. Gravel filled bags were installed on a compacted stone within the foundation and up to the average water level with the wraparound geogrid at every 3rd bag, gravel filled bags provide extra scour protection whilst the wraparound face offers extra factors of safety.

Once the base and foundation bags were in place, a 500mm depth of large granite stone was laid on the riverbed for extra erosion protection. At 0.75m high the wall build could continue out of the water so the dam and flume was removed to allow the river to flow naturally.

Preseeded sand and soil bags were specified for use on this project, the wall was built up to an average retained height of 1.6M, the backfill area is compacted at every level to minimise any post settlement of the system.

This was a challenging project working within a water environment with restricted space and access and having to flume and dam the watercourse, our thanks go out to Kier Infrastructure who helped with their experience in making this a successful Rootlok installation.



Rootlok is a cost-effective system that provides end users with a strong, yet flexible, green solution for retaining walls. It's ability to vegetate creates a retaining wall that blends seamlessly with the natural environment. It is important to consider the choice of vegetation to ensure that the result is aligned with expectations and the ability to effectively and safely maintain it.