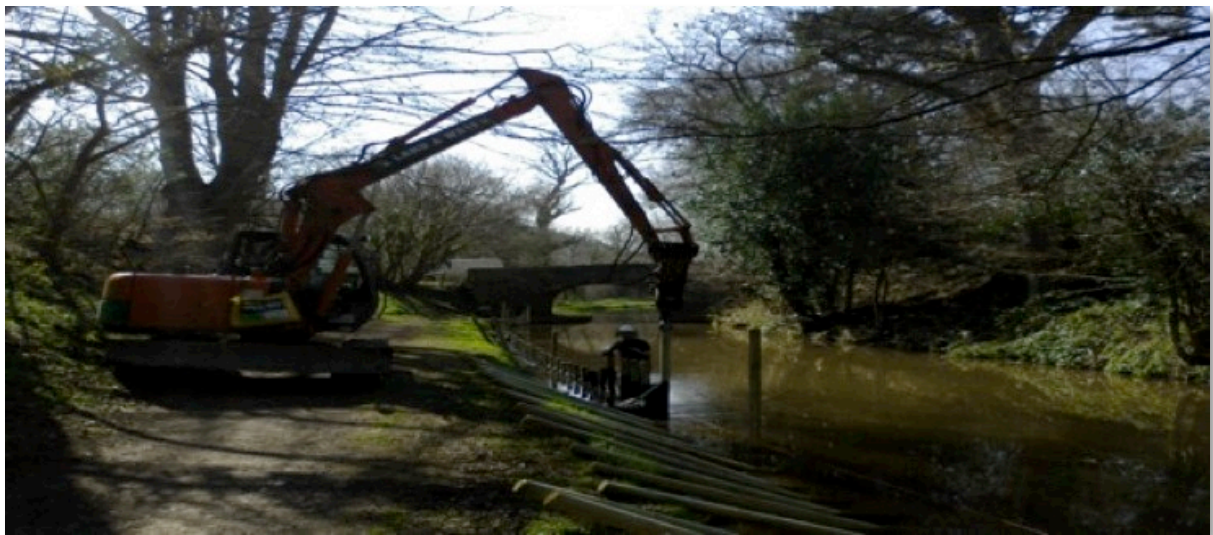


TERRAQUA NICOSPAN CASE STUDY

Client: British Waterways
Project: Monmouth & Brecon Canal – Brecon – Dredging & Embankment repairs.
Contractor: Land & Water Services Ltd
Site Agent: Andrew Littler

As British Waterway's sole UK framework dredging contractor, Land & Water Services were contracted to carry out a dredging & embankment repair scheme on the Monmouth & Brecon Canal, Brecon, Wales. As part of the contract British waterways instructed LAWS to repair the badly eroding banks and use as much retained silts as possible.

"Nicospan" was the chosen as the product to install at the water's edge, it provides a high-quality and economical erosion control system and is designed specifically for protecting vertical banks. Easily installed, Nicospan is especially useful where access to the bank is limited and is an ideal low cost bank protection system that allows the use of dredged silts as fill.



On this section of canal the wider towpath enabled Land & Water Services to use a digger with a hammer attachment and cup to knock the posts down.



The first post is driven to the required level, 200mm set above the water level; the Nicospan is then placed in pockets over the first and every post in the line of 2.4M long x 100mmØ* FSC timber posts, the posts are installed at 600mm centres, the Nicospan is stretched between each post, the posts are then cut-off to the required finish level.



Tencate's Geolon PP15, a medium-strength woven geotextile is then installed at the rear of the Nicospan, the geotextile is folded over and placed along the edge of the front posts and stapled down with 40mm x 4mm galv steel staples, giving a neat front edge finish.. The geotextile acts as a separator and holds the silts in place; it is installed across the back of the repair and slightly up the back of the bank.



2.5mmØ galvanised mild steel wire is used to tie the front posts to the back-posts of 1.8M long x 100mmØ which are installed at one to every 3 front posts, this when tied brings strength and stability to the system. The system is then ready to take the infill of the dredged silts.



On the embankment, the Nicospan was installed from the wet side, no machinery was allowed onto the bank area, the tree line would have made a bank-side installation almost impossible. The Nicospan system was installed in exactly the way with LAWS using a digger placed on a floating pontoon. Here you can see the digger, with a bucket attachment, filling in the revetment behind the Nicospan with dredged silts.



A finished stretch of installed Nicospan and back-filled with dredged silts.



The dredged sediments from the canal are then planted with aquatic plants and grasses, the canal banks will be left to fully vegetate, the soils will stabilise over time to give a long lasting, aesthetic and environmental pleasing result.

Nicospan is a prefabricated; double weave revetment fabric manufactured from strong UV stabilised monofilament yarns with pockets. Each pocket is 220 mm wide to allow 100 mm (max) diameter posts to be used as fixings. Nicospan is available in 100 metre long rolls with standard width of 1.0 m.

*FSC - Forest Stewardship Council