

# River Washford Roadwater Erosion Protection

The River Washford runs through the village of Roadwater near Minehead, Somerset. The catchment creates a flashy river which floods parts of the village in large flood events. The increasing frequency of flood events required the existing system to be replaced and improved.



A forty metre section of the river which had timber piled revetment running between properties required urgent attention. These piles were at the end of their working life and new erosion protection was required. The site was constrained on both sides and as such a conventional system was not feasible.

Salix was approached by the Environment Agency to offer a Design and Build solution, in order to provide long-term protection to the riverbank, but using bioengineering solutions to ensure that the riverbank was ecologically sensitive.

The old wood piling was removed and the bank behind was graded to about 45°, as shallow an angle as achievable. The scrub and soft vegetation was removed, leaving the small bankside trees as they were integral to the bank stability.

The new bank protection provided a robust toe and a reinforced turf slope. This combination has the required shear stress resistance to the flow during peak flood events. Rock Rolls are 300mm diameter high strength nets ready filled with stone and were used instead of riprap or gabions.



They were placed to provide “engineering” resistance to flow and also to create natural features with habitat value. They are sewn together where they touch to create one mass, either in line or where stacked up the slope.

The pebble bedload was thought to be mobile, so site won brushwood was placed around them to slow the water and reduce potential impact. As the slope was so steep and this was a live repair, Salix installed “Shear Stress Turf”.

This is a turf reinforcement mat (TRM) grown off-site and therefore has immediate resistance to 6m/s flow. This reinforced turf instantly provided the required performance in this confined site.

*“An urgent solution was required and Salix were able to evaluate the situation and resolve the problem within the tight budget.”*

Kevin Coombes, Flood and Coastal Risk Officer for The Environment Agency