

River Ebbw Bank Stabilisation

Salix worked with consulting geotechnical engineers to provide design and build proposals to stabilise over 800 metres of steep riverbank composed of highly erodible colliery shale. Initial proposals looked at the extensive use of large blockstone to stabilise the bank.



Salix wanted to explore the possibility of using greener and more cost effective bioengineering methods which would provide underlying engineering stability whilst providing an ecological resource and improving the visual landscape.

Bank gradient 1 in 1.5 Slope length 10-15m Water depth (1:100) 4m
Velocity (1:100) 4.2m/sec Discharge (1:100) 80 cumecs

The toe of the bank was protected using a combination of rock rolls and living willow brushwood fascines. The upper bank was protected using two high performance erosion control mats, VMax³ P550 and VMax³ C350.



Independent research and thousands of applications across the world have shown these products to be able to withstand extremely high flow velocities (7.6m/s – P550 and 6m/s C350) when vegetated.

Even prior to vegetation establishment the “composite” fibre layer provides exceptional erosion control performance (3.8m/s – P550 and 3.2m/s – C350).