Design
Build
Products
Nursery

Brookside Business Park

Brookside Business Park is located 4 miles West of Oldham, Manchester. The business park comprises of 27 industrial warehouse units, accommodated for industrial use.

The Problem:

To understand the solution required, it is important to understand the type of river erosion and bank failure that the Wince Brook is causing; geotechnical bank instability cannot be solely prevented by implementing measures that reduce erosion, rather landscaping and a mixture of green/grey solutions may be required.

In this case, the business park was experiencing failure from the river undercutting the bank, hence causing tension cracks on the road above, subjecting it to shear failure.

The Water Framework Directive aims to improve the ecology and water quality of all water bodies, setting out objectives to achieve at least 'good' ecological status across all water bodies. Salix were commissioned by Brookside Business Park to reduce river erosion on the adjacent bank which is causing tension cracks to the footpath above. As a result the road and bridge were closed and unsuitable for the public use.

www.salixrw.com
Email: info@salixrw.com
Tel: 0330 002 1788

Salix

Design
Build
Products
Nursery

Case Study

Brookside Business Park

The Solution:

Salix installed AquaRockBags on the foot on the river and left bank, for structural reinforcement and erosion control. AquaRockBags are a semi-natural feature located in an green and blue space which is acting to provide environmental, economic and health benefits through providing erosion control. AquaRockBags are a tough revetment and a form of green infrastructure. They act as a flexible and sustainable alternative to grey infrastructure, often concrete, gabion and rip rap revetments.

Pre-established coir rolls were used to line the river bank, at the bottom of the first AquaRockBag line. Rock rolls are a robust, permanent and cost-effective revetment, acting as a suitable alternative to rock rip rap and gabions. The selection of species is an important consideration; parameters such as soil type, water quality, lighting conditions and inundation depth was all taken into account for Salix to advice and provide the best product for this site.

The AquaRockBags were built up to reach the concrete wall, forming a gentle gradient. This simple slope gradient was derived using knowledge of bank stability equations and critical caving erosion width (CCEW) formulas; CCEW decreases when the slope angle of the bank increases (Wang et al., 2016). Due to access being limited, a crane, positioned at top of the road and was used to gently lower and install each individual AquaRockBag.

Sheet piling was used at the back of the bank behind the AquaRockBags to provide structural support and ensure absence of any further erosion undercutting the bank. AquaRockBags not only reduced the amount of sheet piling that was necessary to use, but also enhanced the aesthetics and biodiversity of the area. After installation the AquaRockBags were soiled and seeded with a standard mix of wetland species.

For further information, visit us at www.salixrw.com or contact:
Salix: The Stables, Blakenhall Park, Bar Lane, Barton – Under – Needwood, Staffs DE13 8AJ
0330 002 1788 | info@salixrw.com

Salix




Apr 2024



Feb 2026

The Outcome:

AquaRockBags have been effective at absorbing river energy and stopping erosion of the concrete bank. Successful establishment of grasses on the AquaRockBags creates an aesthetic feature for the public and a 'green' image for the Business Park and their clients to enjoy. As well as this Biodiversity is improved significantly vs an alternative hard solution. The vegetation established will help to slow flows during a flood event, reducing potential downstream erosion.

www.salixrw.com
Email: info@salixrw.com
Tel: 0330 002 1788

Salix