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# Naturalising a Stream at Bedlinog

Constant flooding and erosion had been causing some serious problems for Merthyr Tydfil Council who manage an old reclaimed tip site, close to the village of Bedlinog in the Taff Bargoed Valley.



Salix were brought in to do a full site analysis, design and implementation of a restoration scheme which would slow the flow of the Nant Llwynog, a concrete-lined channel that takes water from the mountains at high speed and in large volumes.

Salix were also tasked with stopping the flooding and erosion of the public footpath alongside the stream, whilst improving the habitat.

Salix proposed holding more of the water up at the top end of the park by desilting two of the ponds and by creating three new ponds linked to the main channel to attenuate floodwater. Salix also recommended reshaping the stone-lined channel to create a grass and reed-lined swale.

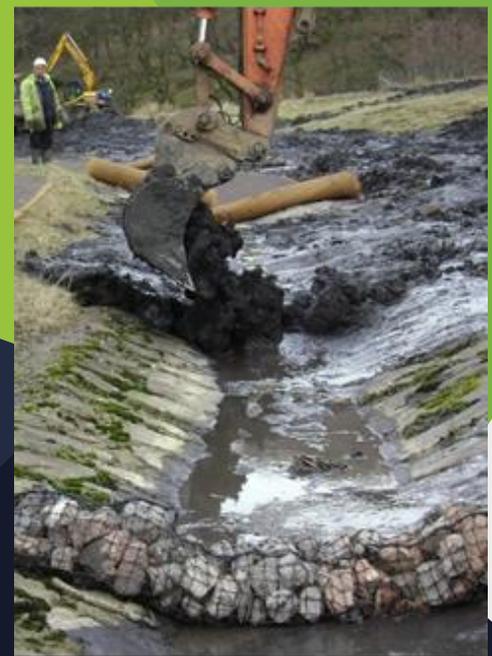
[www.salixrw.com](http://www.salixrw.com)  
Email: [info@salixrw.com](mailto:info@salixrw.com)  
Tel: 0330 002 1788

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A channel through the middle of the large top pond was desilted and its exit to the swale was raised to increase attenuation capacity. Installing Rock Rolls and seeded soils in the stream bed, protected with an anti-erosion turf reinforcement mat, increased capacity at the top of the park. A new area of wet woodland was planted next to the new attenuation pond to further enhance biodiversity and reduce runoff.



To preserve the footpath, the second existing pond was also dredged and a new pipe installed to take excess water beneath the footpath to a new attenuating pond. Water from this wetland pond can pass back into the main channel further down the hill via another underground pipe.

By focusing our efforts upstream, the need for hard engineering was completely removed by controlling the velocity of the water in the park. This has improved the public amenity and biodiversity at the same time, and reduced erosion downstream.

[www.salixrw.com](http://www.salixrw.com)  
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Rolf Brown, Countryside Officer for Merthyr Tydfil County Borough Council said:

*“The aim of the project was to better manage water through the park in a way that was environmentally, ecologically and visually beneficial. We approached Salix to devise a sustainable system that would minimise erosion in the valley and improve the landscape.”*



*Environment Agency Wales – now Natural Resources Wales – favoured creating a more natural appearance to the existing engineered drainage channels, and grant monies were offered by them for reducing flash flooding impacts by slowing down water runoff by creating more ponds and wetlands and naturalising the stream course.*

*Several years on the installed system continues to prevent erosion, has ‘naturalised’ and is regularly visited and monitored by local residents interested in the improved biodiversity. The significant visual impact now makes the valley appear very natural rather than an obvious industrial reclamation site, and forms a key link between the village of Bedlinog and the Merthyr & Gelligaer Common Landscape of Special Historic Interest.”*

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