

Material: PP5 Heavy Duty Permanent TRM & Greenfix Anchor System
Date: May–June 2014

Bank Stabilisation Glascoed Fish Pass, Nr Oswestry Wales

Client



Contractor



The free passage of migratory fish is a key requirement of the Water Framework Directive, and is being used as an indicator for assessing whether water bodies are meeting Good Ecological Potential or Status. Initial assessments suggest that many waters throughout the UK are at risk of failing to achieve Good Ecological Potential as a result of barriers to fish migration. Fish passes can provide a range of other benefits in addition to those associated to fish passage. Certain types of fish pass can also contribute to longitudinal sediment transport. They can also assist with nutrient transport and oxygenation if the fish pass is associated to an impoundment structure.

Natural Resources Wales is the new organisation that has taken on the functions of the Countryside Council for Wales, Forestry Commission Wales and the devolved functions of Environment Agency Wales.

This project comprises the construction of a bypass channel to allow fish passage to the upper reaches of the Afon Cynllaith. The bypass channel is approximately 140m in length, has gradient of 2.5% and contains 15 traverse bars spaced at a minimum distance of 9.6m. Other components of the project were further fish passes at Aberbeeg and Lower Clydach, and a gauging station at Aberbeeg.



Greenfix PP5 Heavy Duty was selected as the most suitable material. This is a fully synthetic, UV stabilised Turf Reinforcement Mat (TRM) manufactured using an innovative continuous thread weaving process. The finished product has a three dimensional pattern that is resistant to environmental and climatic conditions providing high strength, durability and reinforcing. The expected design life of the PP5 Heavy Duty is 25 years in most applications.

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The PP5-Heavy Duty material was installed by securing within an anchor trench at the head of the slope and securing at the toe of the embankment. To achieve an effective finished surface it was seeded prior to and post rolling out of the material. The mat was secured using the Greenfix Anchor System which works effectively in the fast flowing water conditions of the fish pass. The Greenfix Anchor System is designed to provide immediate stabilisation, requires no crimping and is accompanied by a range of installation tools. Supplied in combinations of anchors, terminations and wire lengths, kits are pre-assembled and specific to the project requirements and geotechnical conditions.



The completed PP5-Heavy Duty slope provides a secure surface once fully established and the permanent nature of the matting coupled with the Greenfix Anchor System ensures long term turf reinforcement and the immediate erosion control required by the constantly flowing water of the fish pass.



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