

Slope Reinforcement and Erosion Protection Train Robbers Bridge, Ledburn, Bucks

Client



Material: F³ Rockmat, Timber Stakes

Contractor



Date: January - March 2004

In January 2004 work started on the West Coast Mainline Route Modernisation project. Part of the project was the reinforcing of the embankment at the infamous Train Robbers Bridge at Ledburn. Network Rail and main contractor Balfour Beatty were looking for an economic and effective solution to the problem of burrowing animals undermining the embankment and potential soil erosion on the steepened slopes.

The solution had to be effective and easily installed being next to a high speed electrified rail line, robust to prevent burrowing animals and fire retardant in the event of sparks or vandals attempting to set fire to the fibres.

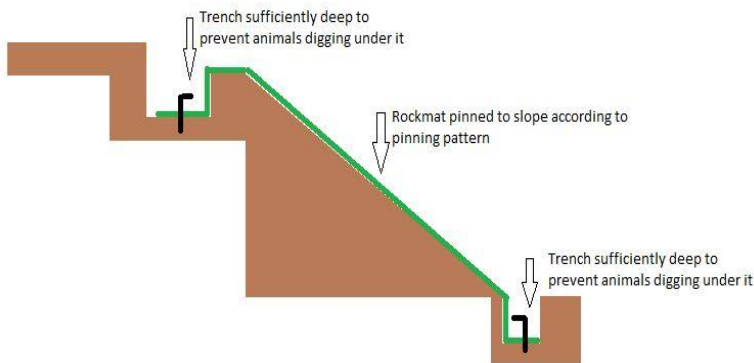
The answer was Greenfix F³ Rockmat a composite of fire retardant sea grass fibres woven into a thick blanket, stitched to an anti-vermin galvanised wire mesh.

The unique European sea grass fibres are naturally fire retardant and biodegrade within 36-60 months. The blanket is of sufficient density to prevent erosion of the underlying soils and promote the establishment of grasses for long term protection. F³ Rockmat meets the requirements of DIN 4102-1



The steel mesh layer is a galvanised wire mesh to DIN1200, aperture width is 25mm, and wire diameter is 0,8mm provides a highly effective anti-vermin protection layer to prevent rabbits and badgers burrowing, and creating slope instability

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Embankment in 2004 after some establishment had taken place

The slopes were re-graded as a result of the installation of new signalling posts and gantries. 75mm of top soil was placed on the embankment by sub-contractor Joywheel Ltd.

An anchor trench, sufficient to prevent animals from burrowing under the blankets, was dug at the crest and toe of the slope and 300mm timber stakes were used to pin the matting to the subsoil, using the pinning pattern supplied by Greenfix

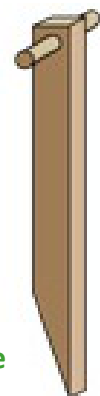
Greenfix sourced a native grass seed mix which was sown under the F³ Rockmat as it was installed.

The F³ Rockmat is easily manageable at approximately 25kg per 30 square metre roll.

In less than five weeks from installation the embankment was fully vegetated. The grasses grow through the fibres, enveloping the mesh to produce a protected grass embankment reinforced by the mesh and is visually attractive.



Rockmat F3-2d
1.2 x 25m rolls
suitable for slopes up
to 75 degrees



Greenfix Timber stake

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