Greenfix
Soil Stabilisation and Erosion Control Specialists

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Case Study: Borders Rail Load Support, Galashiels, Scotland
Products: Geoweb® for Load Support

The Borders Railway is the longest new domestic railway to be constructed in Britain for over 100 years. It will see four new stations built in Midlothian and three in the Scottish Borders and cut journey times between Tweedbank and Edinburgh to less than one hour from nearly two and a half hours currently.
The area approaching the new Galashiels station at Fountainhall was found to have particularly wet and marshy peat ground requiring additional stabilisation beyond the geosynthetics routinely used in trackbed construction. Geoweb has been successfully employed in the rail industry for over 30 years solving challenging soil stability problems. Geoweb carries Network rail approval for track drainage with PADS numbers covering 100mm, 150mm, and 200mm depths.

Greenfix worked with the main contractor to establish the most appropriate grade and depth of Geoweb® to suit the prevailing exceptionally soft ground conditions. This was supported by test results from the Transportation Technology Center in Colorado demonstrating Geoweb's suitability for this application. Design work was carried out by Greenfix in conjunction with local track engineers. The use of Geoweb stiffened the ground and reduced the additional depth of ballast by confining the aggregate and Greenfix were able to provide guidance on this once complete site information was provided via the Geoweb Project Evaluation form. Two layers 150mm GW30V6 Geoweb was selected as the most suitable depth. The Geoweb® panels were expanded to their maximum size, and laid 2 panels wide across the trackbed, providing a width of 5.2 metres. The Geoweb was temporarily held open with timber pegs whilst it was filled with ballast.

Contractor

bam nuttall

Client

BordersRailway
Edinburgh • Midlothian • Scottish Borders