

Diamond Crossing Replacement with TrackTex® Detroit Lakes MN



Project Information

Location	Detroit Lakes MN
Owner	Canadian Pacific
Engineer	Thomas Larsen
Contractor	CP & BNSF
Technical Description	Product: TrackTex (82ft x 12.7ft) & Geogrid

In Detroit Lakes, MN, a frequently trafficked diamond crossing operated by Canadian Pacific and BNSF had experienced frequent fouling because of mud-pumping. Mud pumping results in ballast failure, that weakens the track modulus, and consequentially reduces the bearing capacity. Under extreme conditions the ballast will become unmaintainable within a very short time post-installation

TrackTex was installed on a cold October morning beneath the ballast as long-term effective remedy to this problem. TrackTex is a unique patented geocomposite and the result of over a decade of research by trackbed engineers and materials scientists. Its specialist filter system improves trackbed quality over time and has been proven to significantly increase maintenance intervals.

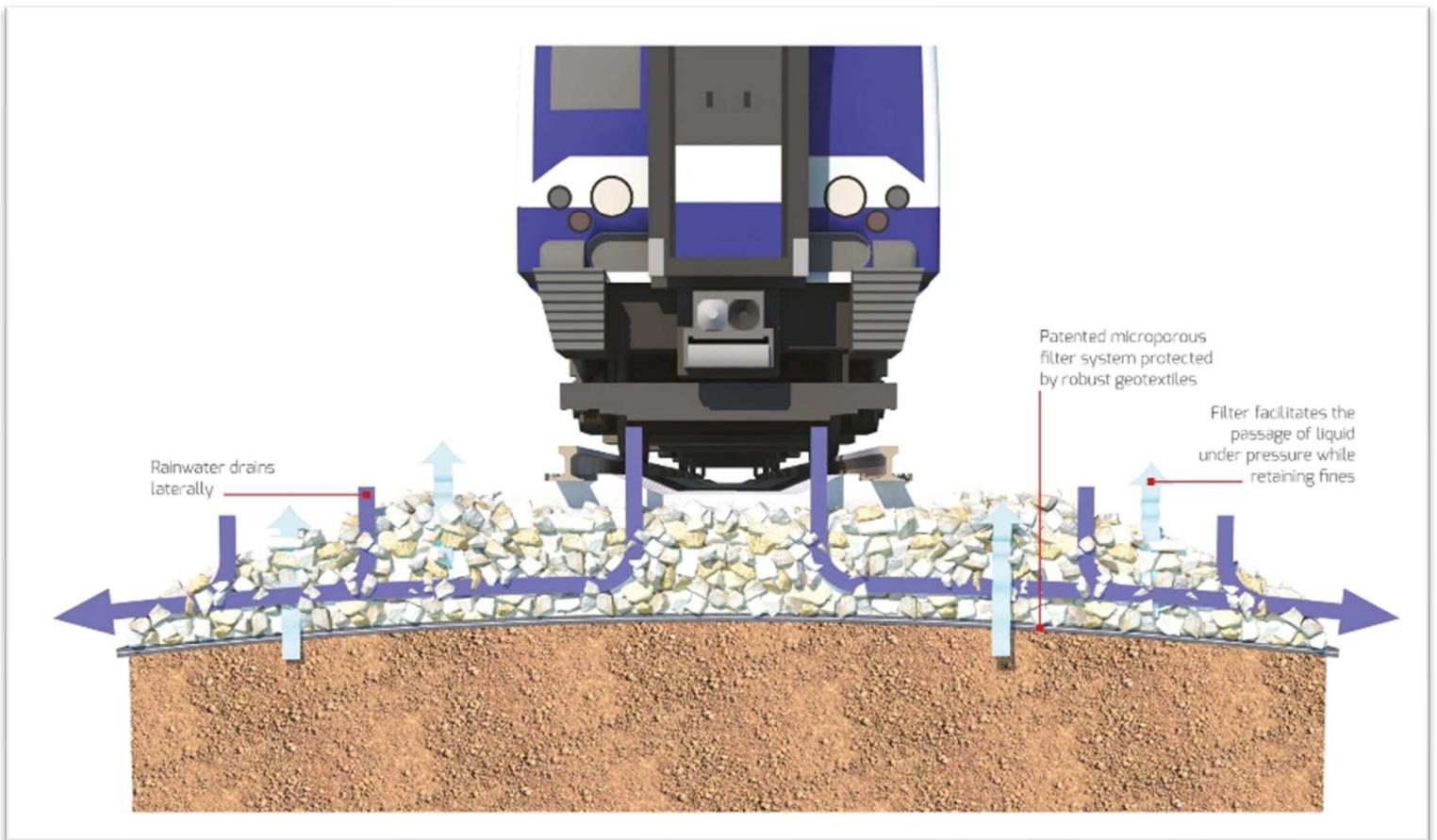
The use of TrackTex is the most cost-effective way of preventing and correcting mud pumping failure. Rainwater is unable to penetrate the microporous filter and is drained laterally to the side of the track

Porewater below TrackTex is relieved upwards under cyclic loading which aids residual slurry to dry out as the pore water is dissipated. TrackTex conforms to the surface depressions in the formation layer and prevents the creation of slurry pockets. Fast installation rates reduce the construction costs and possession time.

On this project the use of a geogrid above the geocomposite was incorporated to provide additional stability. TrackTex can be used in conjunction with a geogrid and on this occasion a large aperture 30kN geogrid was placed above the composite prior to placing new ballast.

TrackTex was installed without the need for any specialist equipment. On this installation a section of track was removed prior to installation however this is not always required. In most cases the track is simply lifted while the TrackTex is pulled into place.





TrackTex has been proven to extend maintenance intervals by more than 25 times over conventional geotextiles, it is for this reason that it is being increasingly specified and installed.

For more information on TrackTex please contact our Rail Sector Manager Eric Littel at elittel@geofabrics.com