



LOAD SUPPORT

PROJECT AT A GLANCE

Application

Log storage and handling yard

Subgrade/Soil

Peat contaminated with mulch

Location

British Columbia, Canada

Installation

2012-14 in 3 phases

Client

Canfor



Canfor is a global leader in producing sustainable wood building solutions, supplying pulp, paper and lumber products, based in British Columbia, Canada.



Paradox Access Solutions, the authorized PRS distributor in North America, specializes in the supply and installation of high quality access solutions and services to customers in the pipeline, utility, municipality, general construction, and oil and gas industries in Western Canada.

ABOUT PRS

PRS is the world's leading supplier of cost-effective soil stabilization solutions. Combining unique proprietary technology with specialized engineering expertise, PRS delivers proven solutions for load support, slope and channel protection, earth retention and reservoir & landfill applications.

With a global network of subsidiaries and local distributors, PRS provides a full range of end-to-end support services. Since 1996, PRS has implemented thousands of successful projects in over 80 countries worldwide.



Improving Sawmill Log Yard Operations, Fort St. John, Canada

The logging yard at Canfor's Fort St. John sawmill is subject to extreme loading operations in the worst soil conditions. Saturated peat with a CBR < 1% and a high-water table is not the ideal subgrade for log handling operations – each log can weigh anywhere from 600 kg to 1000 kg.

Cat 988H loaders weighing more than 43,000 kg, heavy hauling trucks, and other mechanical equipment created heavy rutting in the soft soil. The logs, stockpiled in huge, 6-metre high stacks, were creating large settlement, which further impeded operations. Additionally, access of the log feeder to the sawmill suffered more since these were the most frequently trafficked. Coupled with a freeze-thaw cycle, they had the odds stacked against them.

Conditions at the yard meant that the sawmill could not operate at full capacity and struggled with severe degradation of the working areas. It needed constant, time-consuming and expensive maintenance.

Everything turned around for Canfor after they heard of PRS-Neoloy® (Tough Cell®) Geocells from Paradox Access Solutions for soil stabilization and soil reinforcement.





LOAD SUPPORT

Improving Sawmill Log Yard Operations, Ft. St. John, Canada



Photos showing log yard before (top and middle) and after (bottom) installation of Neology Geocell

Conventional Solution

Previously, Canfor was hauling and applying expensive gravel every year to maintain adequate structure for their log yard operations. In a span of three years, Canfor added more than 50 cm height of gravel to the entire site, only to watch as it failed not long after each and every placement.

Neology Solution Designed by Stratum Logics

The design was based on one layer on the subgrade to improve the bearing capacity and another layer to reinforce the base and increase its modulus.

PRS-Neology 330-150-96-C was used as a construction layer on top of the subgrade. This layer was in-filled using locally available sand. On top of this layer the gravel base layer was reinforced using PRS-Neology 330-150-96-D.

A non-woven geotextile was laid over the subgrade and a woven geotextile laid over the subbase layer for layer separation in the saturated conditions.

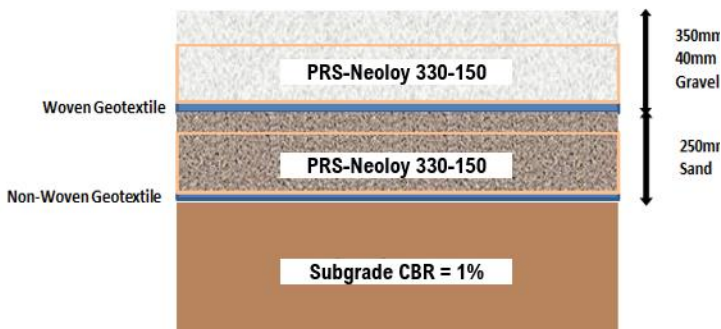
Client's Operational Benefits

Neology Geocell made a "world of difference" in the words of the yard manager:

- Eliminated downtime caused by soil conditions
- Increased production enabled the addition of another shift for 24-hour operations
- Improved mill production, staff morale, safety
- Reduced equipment yearly operating costs:
 - \$50,000 in fuel savings
 - \$125,000 in loader maintenance
 - \$75,000 in tyres and parts
- Avoided production loss of \$750,000

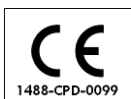
Construction Benefits

- Utilized local marginal granular infill reducing hauling costs
- Easy logistics and fast installation
- Significantly reduced repairs and maintenance costs
- Higher modulus improvement factor than any other geogrid or geocell



Section of Neology Geocell solution

EN-CS-LS-1039



ISO- 9001
ISO-14001
ISO-18001

