



## Log Storage and Handling Yard

# Canfor Log Yard

## Fort St. John, British Columbia

For many years, Canfor's Fort St. John mill battled extreme muddy and contaminated soil conditions. Over time, the estimated 100 truck loads per day had turned the yard and access road into a thick black mud, particularly in the spring and fall seasons. Canfor's 988 Cat mobile loaders were unable to transfer logs to the mill during these times, resulting in disruptions to lumber production.

Paradox Access Solutions engineered, supplied and installed a turn-key reinforcement solution using Tough Cell® NPA geocells for the log yard storage and transfer areas.

The multi-million dollar project eliminated all downtime related to log supply soil conditions while improving mill production, employee morale, safety and reducing mobile equipment operating costs.

### FROM THE PLANT MANAGER:

"I've been managing mills across Canada for over 25 years. The Fort St. John log yard had the most challenging yard conditions that I've come across. The Paradox reinforcement solution is proving to be the only affordable long term solution."

- Mel Jones, Plant Manager, Canfor FSJ

# CASE STUDY



## LOAD SUPPORT

### PROJECT AT A GLANCE

#### APPLICATION:

Log Storage and Handling Yard

#### MARKET SECTOR:

Logging and Forestry

#### LOCATION

British Columbia, Canada

#### DATE OF INSTALL:

Phase 1 - April, 2013

Phase 2 - November, 2013

Phase 3 - June to September, 2013

#### CLIENT:

Canadian Forest Products Ltd.



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

#### CONSTRUCTION:

Paradox Access Solutions



The authorized Tough Cell® Master Distributor in North America, specializing in the supply and installation of high quality access solutions and services to customers in the pipeline, utility, municipal, general construction and oil & gas industries.

#### ENGINEERING DESIGN

Stratum Logics Inc.



Global geotechnical engineering design specialists exceptionally proficient in the deployment of cutting-edge geosynthetics for civil engineering across North America in all types of challenging soils and climates.



# Project Highlights

## Log storage and handling yard ground stabilization and reinforcement

### THE CHALLENGE

The yard had been in existence for more than 40 years. Excavation revealed broken logs, bark and other debris mixed with loose clay over underlying clay. Wet conditions, typically in spring and fall, made the yard extremely muddy and inhibited movement of heavy loader equipment. Deliveries and yard accessibility were severely compromised, preventing the transfer of logs to the mill and effectively halting production.

### THE SOLUTION

The project was conducted in three phases. All three phases utilized a double layer of 150 mm high Tough Cell® Geocells over a separation layer of geotextile. Existing surface was milled and compacted to maximum extent possible prior to installation.

**Total area, Phase 1:** 14,700m<sup>2</sup>

**Total area, Phase 2:** 27,900m<sup>2</sup>

**Total area, Phase 3:** 57,900m<sup>2</sup>

**Product(s):** Tough Cell® 330-150 Type C; and 330-150 Type D geocells; woven and non-woven geotextile

**Infill:** 550 - 600mm of 40-75mm gravel



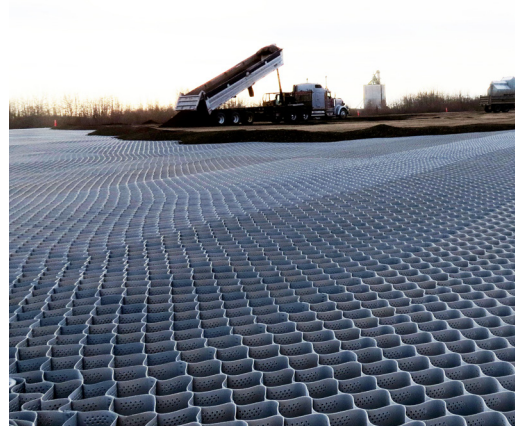
CAT 988 loader approaching hot deck prior to construction (Phase 1)



CAT 988 loader on completed Phase 1 surface



Phase 2 yard before prior to construction



Phase 2 yard, Tough Cell® installed and being infilled

### THE BENEFITS

Canadian Forest Products Fort St. John facility is now completely accessible year round by all equipment necessary to ensure uninterrupted production. The operation will realize estimated annual cost savings of \$50K in fuel, \$125K in loader maintenance and \$75K in tires and wearable parts, in addition to \$750K of avoided production losses.



(top) Phase 3 site preparation  
(bottom) Installation of geotextile and Tough Cell®



Completing Phase 3 infill