

Welcome

Thank you for attending this information session about Fibreco's Terminal Enhancement Project.

We welcome you to:

- Learn more about Fibreco
- View the display boards and learn about the proposed Project
- Meet and speak with members of the Project team
- Provide your input and find out how to stay informed about the Project

We are collecting feedback from April 26 to May 24, 2017.

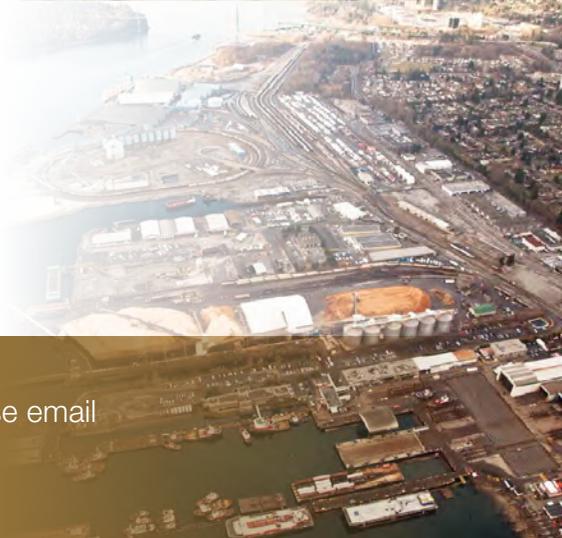
Online at: fibrecoterminalenhancement.com

In person: at today's open house

By email: terminalenhancement@fibreco.com

By mail: 1209 McKeen Avenue, North Vancouver B.C. V7P 3H9

For more information and to sign up to receive project updates, please email [**terminalenhancement@fibreco.com**](mailto:terminalenhancement@fibreco.com)



About the Project

Fibreco plans to upgrade and enhance our facility at 1209 McKeen Avenue in North Vancouver so that we can diversify our operations to capture existing underserved demand for food ingredients like grains and pulses for international agri-trade.

Key Project components:

- Replace wood chip piles with 56 new, efficiently designed agricultural product steel storage silos with a combined capacity of 171,200 tonnes
- Improved railcar handling and receiving equipment and rail yard improvements that would make loading and unloading quieter, safer and more efficient including:
 - Remove the rotary car dumper and enclose the railcar dumper to reduce noise and increase efficiency of unloading
 - More on-site railcar storage to reduce number of rail deliveries
 - Added dust control measures
- Equipment improvements, including new, covered conveying systems to control dust and reduce product spillage, and retrofitting the wood pellet silo feed conveyor system to better manage dust and improve safety and efficiency
- New shiploader and berth improvements to increase efficiency, accommodate bigger ships, and better manage dust

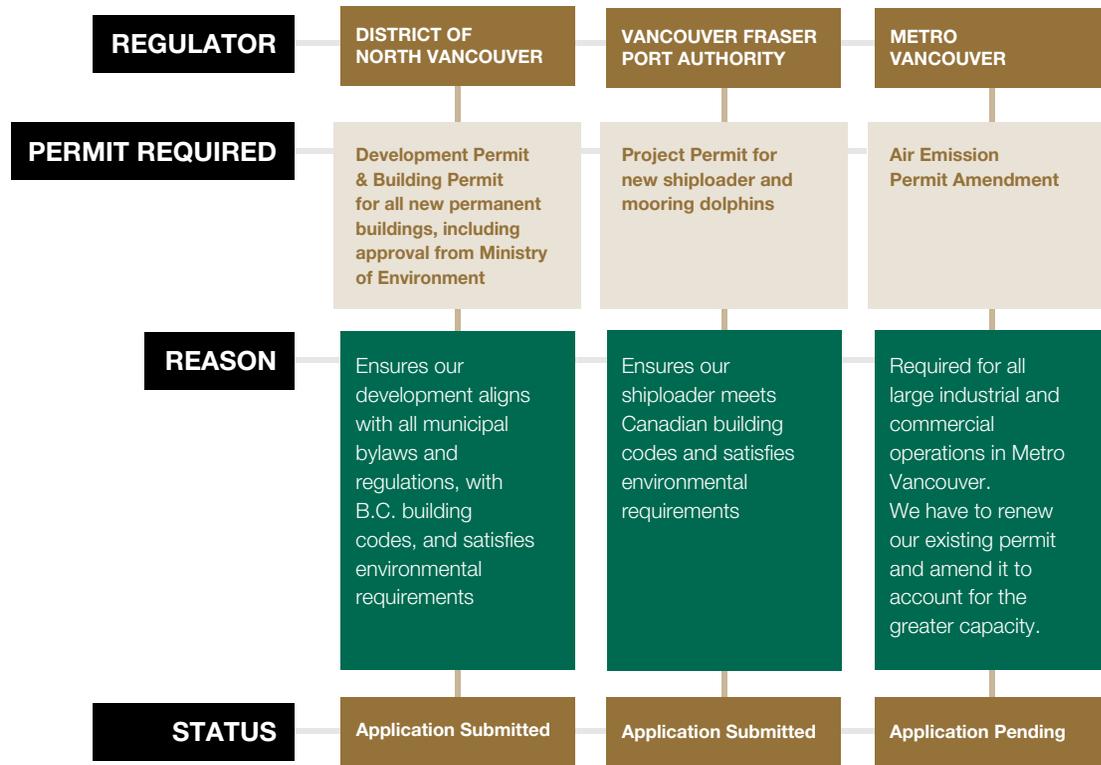


B.C. owned and operated, Fibreco has successfully served the western Canadian forest industry by moving wood chips and wood pellets to customers throughout the world for nearly 40 years.

Located in the North Shore Trade Area, Fibreco is the largest wood pellet handling facility in the world and a vital component of the Asia-Pacific Gateway.

Project Permitting & Approvals

The Project site lies within both the District of North Vancouver municipal boundary and the Vancouver Fraser Port Authority jurisdiction. As a result, a number of permits and approvals are required, as shown below.



Anticipated Project Benefits

- **Less noise** from rail unloading and from plant operations including bulldozer back-up beepers.
- **Less dust**, helping to improve local air quality.
- **Improved safety** for workers and our community, with modern equipment and better efficiency.
- **Sustainability for a local business and job security for B.C. workers**, through product diversification.
- **Local economic benefits** with a \$15 million direct injection to the local economy, and anticipated annual indirect contributions of \$45 million annually.
- **National agri-trade benefits** with improved customer service through better turnaround times and by providing relief to Canadian agricultural producers and railroads with an additional outlet to export agricultural and food ingredient products, such as wheat, peas, and lentils to emerging Asia-Pacific markets.
- **More attractive site** with physical improvements, newer equipment set back to best maintain existing viewsapes and reduced light impacts.
- **Environmental benefits**, including more efficient power usage and improved stormwater management.

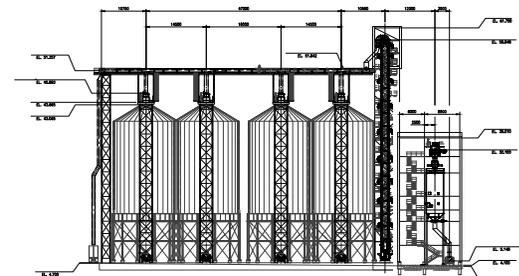
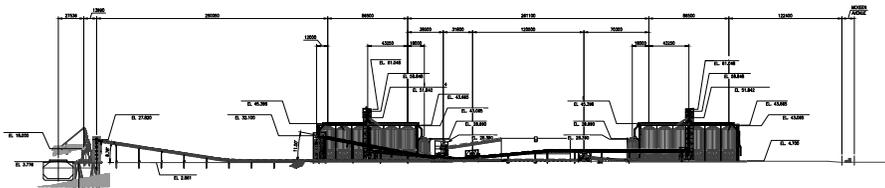


Conceptual Design

BEFORE



AFTER



Fibreco is committed to maintaining the highest level of safety by adhering to best in class practices to ensure safe and sustainable operations.

Transportation Plans

The proposed Project includes changes to marine, rail, and transportation operations that are designed to improve safety and efficiency. These transportation improvements would also reduce dust and noise. Increased efficiency and product diversification would also help return annual tonnage throughput volumes to 2012 conditions, which was higher than today. However, we will be able to achieve this with the same number or fewer train and vessel trips.

Rail:

- Improved railcar handling and receiving equipment and rail yard improvements would make loading and unloading quieter, safer and more efficient.
- Because wood chip volume is half the weight of wood pellets and agri-products, fewer rail cars would be required per tonne handled. This, combined with a new site design that provides more on-site railcar storage would reduce the number of rail deliveries.

Marine:

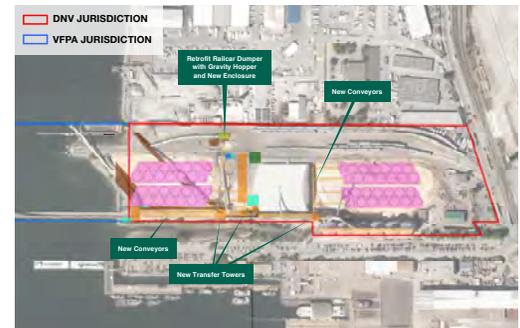
- Upgrading the shiploader would increase efficiency, accommodate bigger ships and manage dust.

Transportation & Parking:

Key transportation changes include:

- Improved site access for vehicle traffic, including a larger turning area for trucks, providing safe and efficient traffic movements.
- Increased on-site parking for employees, visitors, and contractors, leaving street parking for local use, including electric vehicle stations.
- Larger ships (Panamax sized vessels) and longer unit trains, to handle more volume with fewer trips.
- The new design also eliminates shipments by barge, meaning less marine activity.

- Pending approval to proceed, Fibreco would implement the following traffic management measures during construction to minimize disruption for road users and the community:
 - Ensure construction staging and truck access is within Fibreco's property
 - Transport large construction equipment and materials to our site by barge (some smaller deliveries would arrive by truck, using designated truck routes, and where possible, outside of peak traffic periods)
 - Monitor traffic and proactively respond to congestion
 - Maintain emergency access at all times

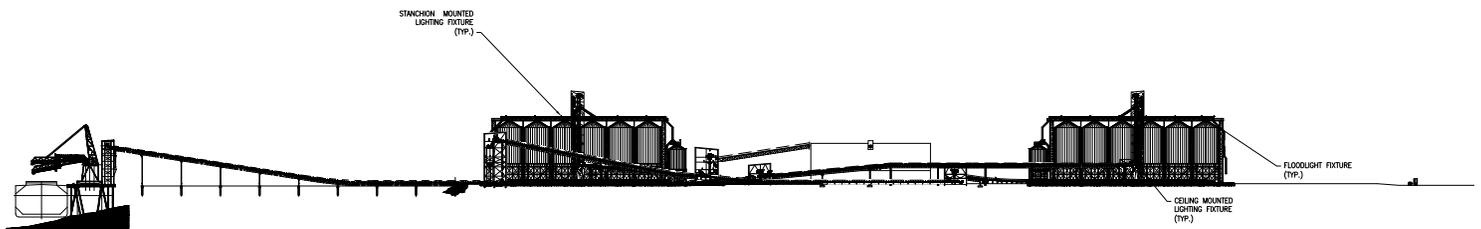


Lighting

A lighting plan was developed to determine future conditions with the proposed Project.

To minimize light impacts for our neighbours, Fibreco would:

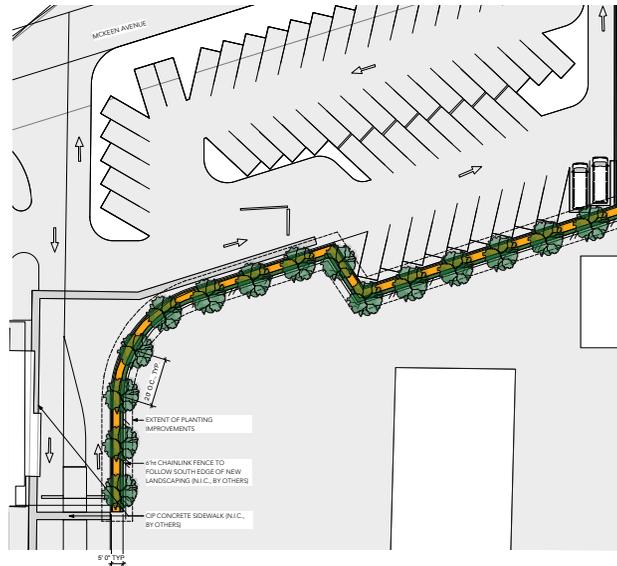
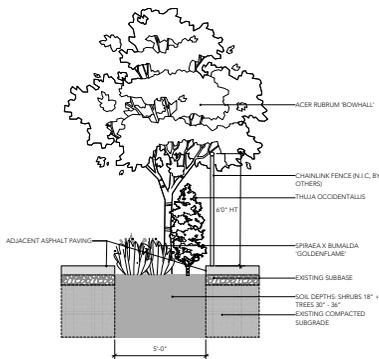
- Use the minimum amount of floodlights necessary for safe and secure operations
- Use LED lighting which produces a softer light
- Direct lighting towards the Fibreco site and away from the community



Landscaping

Fibreco's Landscape Plan includes the addition of native trees, hedges and shrubs, consistent with the B.C. Landscape Nursery Association guidelines, on the south side of the parking area, and along the east side of the new sidewalk entrance. This would provide a visual screen against industrial activity and enhance the street view of the Fibreco property.

FIBRECO PLANTING LEGEND				
TREES				
BOTANICAL NAME	COMMON NAME	SIZE / SPACING	NOTES	
15 <i>Acer rubrum</i> 'Bowhall'	Bowhall red maple	7cm cal., as shown	E-B	
152 <i>Thuja occidentalis</i>	Eastern white cedar	5 1/2" x 18" o.c.	E-B	
SHRUBS				
BOTANICAL NAME	COMMON NAME	SIZE / SPACING		
202 <i>Spiraea x bumalda</i> 'Goldflame'	Goldflame spirea	#2 Pot, 2' o.c.		



**BOWHALL
RED MAPLE**



**EASTERN
WHITE CEDAR**



**GOLDFLAME
SPIREA**

Construction

– What to Expect

Our Goal:

Keep our neighbours informed and minimize disruption for nearby residents and businesses.

Pending approval to proceed, construction will take approximately 18 months to complete. Fibreco would continue to conduct our wood pellet operations throughout construction.

Construction:

Details of construction staging will be confirmed by the construction contractor; however, based on standard construction staging for projects like ours, we anticipate:

- All construction staging, including deliveries and assembly would take place within Fibreco's property (no offsite storage)
- When installing the new silos, we would build from north to south so that the first silos installed can act as a noise buffer between the remaining construction site and local residences

Supplies and Equipment Delivery:

Large deliveries would arrive by barge, to avoid impacts on local road traffic.

Delivery hours would be subject to prevailing tides, so some could take place at night.

Some smaller deliveries would access our site by road using designated truck routes. The volume of deliveries would be small, to minimize impacts to our neighbours.

Noisy Work:

Some existing equipment and structures would have to be removed to make way for the new. Once silos are installed, cladding would be bolted into place using pneumatic drills. All efforts would be made to do this work during daytime hours.

Wherever possible, work would take place in accordance with the District of North Vancouver's Noise Regulation Bylaws and the port authority's standard construction hours. To help shorten the construction period, we may apply to the District and the port authority for variances and authorization that would, subject to approval, allow us to work earlier on Saturdays and on Sundays from time to time. In these instances, we would work with our construction contractor to ensure that noisy work is done between Monday and Friday.

During construction, we would provide neighbouring residents and businesses with advance notice of any noisy work and would keep our Project website updated with current information about construction progress.

Visual Quality

The visual quality assessment and shadow analysis determines how the proposed Project could affect existing views and shadowing in the community. The following locations were used to create renderings:

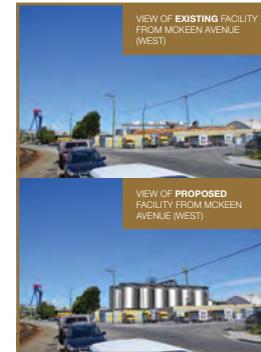
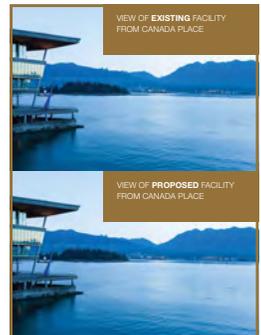
- Pemberton Heights (Keith Road West)
- Norgate Community (Elementary School and McBride Street at Pinewood Crescent)
- Adjacent commercial and industrial properties
- Stanley Park at Brockton Point Lighthouse
- Canada Place

To minimize potential visual impacts for residents, our proposed design, including the height of our new silos, is consistent with the height profile of our industrial neighbours.

Views from Pemberton Heights and Norgate Community would not be significantly affected by the proposed Project because most of the views are obscured by trees.

The proposed silos would be visible from the properties adjacent to the Fibreco site, the Vancouver side of the harbor, West 1st Street, Pemberton Avenue, and the Philip Avenue Overpass; however, the Project would result in a more attractive site with the removal of the open wood chip piles.

No impact to shadow views.



Site Safety

Safety is a key priority for the Fibreco Terminal Enhancement Project.

A key goal is to develop the Project to the highest level of fire prevention, detection and response, including:

Fire Prevention

- Modern dust control at rail receiving, transfers, storage and shiploader
- Purpose-built, enclosed transfers and conveyors
- Modern dust suppression shiploading spout
- New electrical systems

Early Detection

- Fire-fly spark detection at critical transfers
- Automatic sprinkler systems
- Systems to ensure continuous monitoring for fire and smoke

Emergency Response

- Emergency vehicle access
- Involving North Vancouver Fire Department in system design and implementation

The Spill Prevention and Emergency Response Plan outlines our commitment to environmental protection in all aspects of operations, including:

- Emergency response contacts and protocols
- Environmental spill prevention measures
- Investigation, reporting, and response



Dredging

Fibreco's Dredging Plan describes the maintenance dredging required to return the Fibreco berth to the original design depth of 13.5 metres, the amount and nature of dredge material, and the most environmentally effective way to dispose of it.

Key elements of the Dredging Plan include:

- **How:** Cable clamshell dredger with a barge, or a barge-mounted modified excavator and dewatering system
- **When:** During the Fisheries and Oceans Canada (DFO) allowable in-water work window between August 15 and February 28
- **What:** Core samples are taken from the dredge area and lab tested to determine the nature of the material
- **Where:** Dredged sediment would be disposed of using a combination of at-sea, for material considered suitable, and upland for any material considered contaminated.



A Waste Approval Application and Disposal at Sea permit are required.



Managing Stormwater

What is it?

Stormwater: Rain that mixes with other surface water and flows into the storm drain system.

Why it's important:

To manage water flow and prevent groundwater pollution

Fibreco is committed to protecting the environment throughout construction and operations.

Fibreco's Stormwater Management Plan ensures the effective removal of potential contaminants, including solids, oil, and grease that may occur within the site to ensure groundwater and surrounding waterways are kept clean.

It is expected that the proposed Project would help improve stormwater quality by removing the wood chip pile and installing the new covered storage system, which prevents product from spilling into the water system.



Air Quality

Fibreco retained technical experts to undertake an air quality assessment in accordance with the Vancouver Fraser Port Authority's Project & Environment Review (PER) Guidelines (July 2015). The air quality inventory considered Fibreco's operations, including marine and rail traffic, with and without the proposed Project.

The key air quality indicators relating to our operations is particulate matter – primarily dust, but also black carbon. Study findings suggest that with the proposed Project, air quality in the area would improve.

Key project features designed to reduce dust and improve air quality include:

- Upgrade our shiploader – emissions from our current shiploader represent the largest source of particulate matter
- Install covered conveying systems and dust collectors throughout our site, from railcar delivery to vessel loading for export
- Upgrade our railcar dumper with a new enclosure for improved dust control and collection
- Remove open stockpiles of wood chips
- Eliminate use of bulldozers, which would reduce black carbon and other combustion-related emissions
- Use larger Panamax ships, reducing the need for increased ship traffic and related emissions



KEY FINDINGS

With the proposed Project, combustion-related emissions would be well below Metro Vancouver Ambient Air Quality Objectives.

By using a cascading chute on the new shiploader, the wood pellets and agri-products would travel more slowly, eliminating the dust created from a free fall drop.

Noise

A key Project objective is to help reduce the effects of rail activity, including noise, for our surrounding neighbours. The noise assessment determined current sources of noise and noise levels, forecast future noise levels with and without the proposed Project and identifies appropriate noise mitigation measures where required.

Noise Sources

The assessment considered noise sources from Fibreco, local road traffic, and CN Rail operations. Fibreco noise sources included wood chip operations, barge operations, and rail activity.

Key project features designed to reduce noise levels include:

- Rail track realignment
- Consolidated railcar deliveries
- No more wood chip operations, including bulldozer back-up beepers
- Barge operations eliminated
- Unloaded railcars would no longer roll freely and impact stationary cars
- New dust fans equipped with silencers

Key Findings

Preliminary results suggest that:

- Fibreco-generated noise levels would marginally increase, but our rail noise would decrease
- Shipboard generator noise emissions would increase in proportion to increased throughput
- Overall, the proposed Project will have no noticeable effect on average daily noise levels compared to today
- Short but loud noises from rail shunting and railcar impacts would decrease



Fibreco Baseline Noise Measurement Locations

Biophysical Survey

What is a biophysical survey?

A biophysical survey is a survey of the biological and physical conditions of marine environments and/or terrestrial habitats undertaken by a Qualified Environmental Professional.

Why it's important:

The study determines likely presence and quality of plant and animal species of interest, the potential effects of a project on these species and opportunities to avoid or mitigate for these effects.

Key Findings:

- No adverse impacts to wildlife, vegetation, marine habitats or species
- Proposed upgrades to the berthing docks would provide additional structural habit for fish and sessile invertebrates, such as mussels and barnacles
- Proposed maintenance dredging would remove historic wood waste and sediments that otherwise, over the long term, could have resulted in water contamination



Fibreco's Construction Environmental Management Plan includes best management practices, and environmental monitoring to ensure the Project leaves the biophysical environment better than it was.

Environmental Management Plan

Sustainability is one of our key values – and it includes economic, community and environmental sustainability. Our proposed Project provides an opportunity to adopt updated environmental management plans that are based on leading best practices.

Our goals are to continually reduce our water consumption and waste, and to lower Greenhouse Gas Emissions and energy use. Key plans that have been built into the Project are:

Greenhouse Gas Emission Reduction

Fibreco's Greenhouse Gas Emission Reduction Plan outlines our current policies and practices, and additional reduction measures. Key greenhouse gas reduction measures include:

- Eliminate use of bulldozers, which we currently use to manage our wood chip piles. Bulldozers are the largest diesel consumers on our site
- New railcar indexer would reduce the amount of fuel required per tonne when receiving railcars
- Fixed electric welding outlets would reduce the need for portable diesel welding machines
- New air quality monitoring program as part of our Metro Vancouver Air Quality Permit amendment
- Commitment to meeting the requirements of the new, more stringent permit

Water Conservation

Fibreco's Water Conservation Plan outlines Fibreco's ongoing commitment to reducing water consumption. Since 2013, we've reduced our overall water use on site by 30%. Additional water conservation initiatives include:

- Using air instead of water when cleaning systems to prepare for a change in product storage
- New, covered conveyors and dust collection system would reduce site clean up requirements
- Using drought-resistant plant species for landscaping
- Reducing the use of misters as dust control

Waste Management

Fibreco already has a comprehensive recycling program that includes green waste, electronics, lighting equipment, office supplies, electrical equipment, organics, and machinery.

With the proposed Project, additional waste management measures include collecting agricultural dust byproduct and repackaging it as grain pellets for local feed market sale.