

**Fraser Surrey Docks
Direct Transfer Coal Facility Project Proposal
Phase 2 – Consideration Memo**

Fraser Surrey Docks (FSD) is a multi-purpose marine terminal located on the Fraser River in Surrey, BC. It handles containers, forest products, steel, agricultural products and other items. FSD has been an integral and responsible part of the community since 1962.

FSD's existing business has decreased significantly since 2009 and we are looking for opportunities to serve new customers. As a result, FSD is proposing to construct a direct transfer coal handling facility (the Project) on the existing terminal site and has applied to Port Metro Vancouver (PMV) for approval. The Project would allow FSD to maintain and increase employment opportunities, increase export revenues for BC, and generate other local economic benefits. While pursuing these goals, FSD recognizes its responsibility to protect the local environment and minimize the impact of our operations.

FSD is committed to maintaining a strong relationship with the local community and engaging in an active dialogue regarding the Project.

In September 2012, FSD began its community engagement regarding the Project through sharing information with local residents and businesses, municipal, provincial and federal government staff and elected officials, and First Nations groups. Feedback gathered during Phase 1 of the community engagement process has been summarized in an Engagement Summary Report, which is available on the PMV website and also on the FSD website (www.fsd.bc.ca/index.php/company/community-outreach). Phase 2 of the community engagement was conducted from May 13th through June 7th, 2013. Phase 2 was designed to provide updated Project information and to communicate the mitigation measures FSD will implement to address concerns raised during Phase 1 of the community engagement, including those related to coal dust, noise, traffic impacts, coal barge impacts, potential coal impact on marine life, and the emergency preparedness. In addition, Phase 2 was intended to gather feedback from the public and community stakeholders both in the immediate neighbourhood and wider community.

The following is a high level summary of input from feedback forms and written submissions received during Phase 2 of the community engagement. A summary of how FSD is considering each feedback item is also included. This table presents feedback in eight separate categories. The first category includes construction phase considerations and sections two through seven cover operational phase considerations: (ii) dust/air quality, (iii) noise, (iv) lighting, (v) vehicle traffic effects, (vi) marine environment, and (vii) emergency response. The eighth section outlines how community feedback is incorporated into the process. A detailed summary of all Phase 2 feedback, including non-Project specific comments that have not been addressed in this consideration memo, is provided in the Phase 2 Community Engagement Summary Report.

#	Engagement Input	Consideration of Input
<i>Construction Phase Impacts</i>		
1.	Participants expressed concern about potential noise generated by construction activities, particularly related to pile driving.	Construction activity will take place in accordance with City of Surrey noise bylaws, which require that most activity occur between 7:00 am and 10:00 pm on Monday to Saturday. Generally, all construction work will be completed between 7:00 am and 6:00 pm on weekdays only.

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		<p>The pile driving work is expected to last for approximately two weeks and will be performed in accordance with the <i>Best Management Practices for Pile Driving and Related Operations – BC Marine and Pile Driving Contractors Association, March 2003</i>. A vibratory driving process, rather than a hammer driving process, will be used to reduce noise.</p> <p>Apart from pile driving, the construction activities, such as concrete forming and assembly of the conveyor system, are generally considered low impact and are not expected to produce excess noise.</p>
2.	Participants asked questions about potential local traffic impacts during the Project construction phase.	All construction traffic will enter and exit the FSD site at pre-arranged times to best coordinate around regular traffic patterns to and from the terminal area. When public traffic routes are affected, it will be done during off peak times wherever possible and will be done with full traffic flagging. Public notice of expected traffic impacts will also be posted one week in advance.
<i>Dust/Air Quality</i>		
3.	Participants expressed concerns about potential dust emissions from coal rail cars en route to FSD, from unloading operations at FSD and from coal barge movements.	<p>Potential coal dust from railcars will be managed using the Burlington Northern Santa Fe Railway (BNSF) Coal Loading Rules. These rules require that all mines loading coal (i) apply a topper coating or surface stabilizer to the loaded coal and (ii) profile the loaded coal in accordance with a loading template, such that it is as smooth and as aerodynamic as possible.</p> <p>At the FSD site, potential dust will be managed using a number of mitigation strategies, including an enclosed rail car unloading area equipped with water sprayers, an enclosed conveyor system to transport the coal from the rail car unloading pits to the waiting barges and a variable height barge loader to reduce coal drop height to the extent practical during loading. If an emergency circumstance arises which requires the temporary use of the coal stockpile area, dust will be suppressed using water spray equipment and a concrete wall around the stockpile area to reduce airflow. The majority of water expected to be used for spraying coal in the conveyor system or in the stockpile area will be recycled water, rather than freshwater.</p> <p>Potential dust emissions from the coal barges will be managed through limiting barge speed to 7 knots per hour, load profiling to remove uneven surfaces that could catch the airflow more easily and spraying the barges with water pre-departure if weather conditions have created an increased dust risk.</p>
4.	Participants asked how potential dust emissions will be monitored, how results will be interpreted, and how corrective action will be taken.	Project air quality impacts will be monitored via four air quality monitoring stations: two air quality monitors installed on barges used for the Project coal movements, one permanent station on the Terminal and one permanent station just outside the terminal near the Port Authority Rail Yard. Prior to the start of construction, FSD will establish an air quality baseline

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		<p>with the two on-land monitoring stations. This baseline will be used for comparison purposes during Project construction and operation.</p> <p>Air quality experts Levelton Consultants Ltd (Levelton) are expected to administer the monitoring program. Levelton will conduct monthly site visits to perform visual inspections and will report the results of the visual inspections and of the monitoring stations on a quarterly basis, including to Port Metro Vancouver.</p> <p>Should any issues be identified by Levelton through the onsite inspections or monitoring stations results, FSD will work with Levelton, Port Metro Vancouver and other stakeholders to develop appropriate mitigation strategies. Once mitigation strategies are identified, FSD will produce a quarterly scorecard demonstrating its progress in meeting key objectives and implementing any corrective actions. The scorecard will be provided to and reviewed by Port Metro Vancouver.</p>
<i>Noise</i>		
5.	Participants expressed concern regarding a potential increase in train noise at FSD.	<p>FSD and its rail partner BNSF intend to minimize rail noise through several mitigation measures, including:</p> <ul style="list-style-type: none"> - Limiting the speed of rail movements within FSD and the adjacent Port Authority Rail Yard to 3 miles per hour or less; - Using an electronic rail positioner to move railcars through the unloading pits, avoiding the need to couple and decouple cars and associated noise that can be experienced when using a locomotive; - Using continuously welded rail for the new rail segments; and - Ensuring that the turning angles of all new Project rail installed at FSD are 12 degrees or less in order to minimize noise created by the steel railcar wheels. If excess wheel noise does occur, FSD will install track lubricators to minimize the impact.
6.	Participants expressed concern regarding potential noise from coal unloading and conveyance at FSD.	FSD has designed the Project to minimize unloading and conveyor noise through utilizing shallow unloading pits, such that the coal will only drop three feet or less, and enclosing the unloading pits and the conveyor system. All conveyors will be operated via electric motors with direct drives in order to minimize noise output.
7.	Participants expressed concerns regarding increased train whistle noise on the BNSF tracks between the US border and FSD.	Locomotives are required by Transport Canada to announce arrival at certain road crossings via whistles of certain noise level and duration. However, FSD is committed to working with key stakeholders, including BNSF and local municipal governments, to investigate reducing train whistle noise where practical.
<i>Lighting</i>		

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8.	Participants expressed concern that new Project related lighting would impact nearby residences.	<p>FSD does not plan to install any new low or high mast lights for the Project. If any additional lighting is required on a temporary basis, it will be focused directly on the Project infrastructure and will be directed away from residences.</p> <p>FSD does not intend to operate the Project during the third shift (between midnight and 8am) under normal operations. Project operations would only occur during this shift if required due to logistics chain disruptions or some other unforeseen event.</p>
<i>Vehicle Traffic Impacts</i>		
9.	Participants expressed concern that the Project related rail traffic would cause further congestion at at-grade crossings in the lower mainland.	<p>The Project is expected to result in an increase of approximately 10% in Surrey rail traffic. Trains are generally expected to arrive at FSD between 4:00 am and 8:00 am and to depart between 5:00 pm and 9:00 pm, although individual train arrivals and departures could occur at any time of day, on both weekdays and weekends. This schedule is anticipated to reduce the potential for increased vehicle wait times because it is outside of heavy road volume periods.</p>
10.	Participants asked about the Project's impact on Elevator Road and access to the industrial properties adjacent to FSD.	<p>The Project construction will not affect existing vehicle access to the terminal on Elevator Road, nor traffic accessing and exiting Alaska Way, Robson Road or Gunderson Road. Part of the existing asphalt on Elevator road will be removed in order to accommodate the realigned rail track loop, but it will not affect the ability of traffic to enter and exit the area via Elevator Road.</p> <p>The existing access to Bekaert Steel will be closed as a result of the Project. FSD has developed an alternative access in conjunction with Bekaert Steel and PMV. FSD will be constructing this alternative if the Project permit is approved.</p> <p>Upon completion of the South Fraser Perimeter Road (SFPR), the Elevator Road access from River Road will be closed and all vehicle traffic to FSD and the adjacent properties will need to access the area via an alternative route. This change in traffic pattern does not relate to the FSD Project.</p>
<i>Marine Environment</i>		
11.	Participants expressed concern over marine traffic safety and the potential for coal barge accidents.	<p>FSD commissioned marine experts Det Norske Veritas (DNV) to conduct an assessment of potential marine navigational risks, public safety risks and other considerations on the Fraser River associated with the coal barge movements. DNV and FSD also conducted a workshop with seven other Fraser River stakeholders to discuss the proposed operations and potential risks and mitigation strategies.</p> <p>Both DNV and the Fraser River stakeholders concluded that the proposed barge movements do not present any risk factors that are not already being considered and managed on the</p>

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		<p>Fraser River and that the operations are not expected to create meaningful additional risk exposure.</p> <p>For existing risk factors that also apply to other Fraser River traffic, FSD has developed several mitigation strategies, including, but not limited to:</p> <ul style="list-style-type: none"> - Only conducting barge operations in low wind conditions; - Using compartmentalized barges, so that a puncture and leak in one compartment does not make the barge inoperable; and - Utilizing a berth at FSD that is not directly open to the main shipping channel. <p>Many of the barges that are expected to be used in Project operations are already in transit on the Fraser River. Using these barges wherever practical will help reduce overall Fraser River traffic.</p>
12.	<p>Participants expressed concern regarding the potential effect of coal on the marine environment, in the event of a spill.</p>	<p>FSD and its barge operator partner, Lafarge Canada Inc, are confident we can largely eliminate the potential of a coal spill through the Project marine risk mitigation measures. However, there is the potential for coal to enter the Fraser River or other water. In the water along the proposed barge route, the coal being transported would be considered largely inert and non-toxic.</p> <p>The potential physical effects of coal in the water would be similar to that of suspended sediments, such as disturbed clay or sand and can include reduced availability of light, abrasion, smothering, and clogging of respiratory and feeding organs. The swift moving waters along the proposed barge route would make these effects less prevalent.</p> <p>The potential chemical effects of coal in the water along the proposed barge route would be expected to be minimal due to the relatively neutral pH of the water, quick moving current and large water volume. Coal does have chemical attributes that can be harmful to aquatic life in specific conditions, but these conditions are not generally found along the proposed barge route.</p>
<i>Emergency Response</i>		
13.	<p>Participants asked about FSD's preparedness for a Project related emergency, such as a fire on the terminal.</p>	<p>FSD has worked with independent experts and our operational partners to develop detailed emergency response procedures for the Project. For emergency preparedness at the FSD site, we have worked with RKMS Group to ensure that applicable standards and best industry practice are followed. Example fire mitigation measures include fire taps with valves installed at regular intervals in the conveyor system and the use of fire retardant hydraulic fluids and belting.</p>

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		During the Project construction and start up phase, FSD will engage with the City of Surrey and Corporation of Delta emergency responders to present the Project emergency response plans and make any required or suggested amendments.
14.	Participants expressed concern about the potential for coal trains to block emergency responder road access to FSD and the adjacent businesses.	FSD's rail operating partner, BNSF, has a policy for providing immediate access at railway crossings during emergency situations. FSD and BNSF have been successfully operating under the policy for decades. The access plans are also approved and monitored by Transport Canada.
<i>Consultation Process</i>		
15.	Participants expressed concern regarding the scope of FSD's public outreach on the Project and asked whether community concerns have been taken into account.	<p>FSD began public consultation regarding the Project in September 2012 and has communicated directly with dozens of local stakeholder organizations, including local municipalities, First Nation groups, residents' associates, local businesses and others. FSD has also received and responded to comments from individual local residents throughout the permit application process.</p> <p>FSD has carefully considered the feedback received and, in collaboration with independent experts and PMV, has designed mitigation measures to address the concerns identified. Feedback has also been shared directly with PMV for consideration in their Project permit decision.</p>