

NO: R185

COUNCIL DATE: July 23, 2018

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **July 20, 2018**

FROM: **General Manager, Planning & Development;  
General Manager, Engineering** FILE: **5650-20(FRPA)**

SUBJECT: **Application to Vancouver Fraser Port Authority by BHP Billiton Canada Inc. to  
Implement a Direct Transfer Potash Facility at the Fraser Surrey Docks**

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## RECOMMENDATION

The Planning & Development Department and the Engineering Department recommend that Council:

- 1) Receive this report for information;
- 2) Request that Vancouver Fraser Port Authority (“VFPA”) and Fraser Surrey Docks (“FSD”) address the following as part of the approval for the proposed potash export facility:
  - Provide assurances and response to the concerns expressed by the community during the Open House regarding the increased noise associated with the shunting of train cars, the blowing of train whistles at crossings throughout Surrey;
  - Ensure construction of the grade separation over the tracks adjacent to Elevator Road to provide direct access to the South Fraser Perimeter Road (“SFPR”) and reduce the wait times to access the FSD;
  - Provide the low noise initiatives outlined in the BKL Consultants report;
  - Ensure the construction of the facility does not continue to infringe on the City’s rights over the existing Surrey Dyking right-of-way (“ROW”) nor compromise the flood protection of the South Westminster area; and
  - Develop a plan to better flood-proof current vulnerabilities in FSD lands
3. Instruct the City Clerk to forward a copy of this report and related Council resolution to VFPA and FSD as the City’s formal comments on the application by BHP Billiton Canada Inc. (“BHL”) to install and operate a potash export facility at FSD.

## **INTENT**

The intent of this report is to seek Council authority to share the City's comments on the BHP's application to VFPA in order to allow a potash export facility operation at FSD.

## **BACKGROUND**

VFPA has received a project permit application from BHP for the construction of a new potash export facility at 11060 - Elevator Road. The applicant is proposing to receive potash from their proposed Jansen Mine in Saskatchewan via rail, store the products on-site, and load the potash onto bulk ocean-going vessels on the Fraser River. They anticipate that by 2030 approximately 8 million metric tonnes of potash will be transferred and trans-shipped annually from this facility.

VFPA held two open houses on Saturday, July 14, 2018 at LA Matheson Secondary School and on Monday, July 16, 2018 at the Inn at the Quay in New Westminster to provide the public and communities an opportunity to provide comments on the proposal. As well as the public consultation, VFPA has requested comments from the City on the proposal.

## **DISCUSSION**

### **About the Project**

Potash is a naturally occurring mineral salt and a key ingredient in agricultural fertilizer. It is non-flammable, non-combustible, and is considered non-toxic to aquatic species. BHP is proposing to construct an export facility to receive and store rail shipments of potash and load onto bulk ocean-going vessels. The proposed facility will include a covered area for the off-loading of the potash, and a conveyor belt system to load the material onto the vessels. BHP anticipates approximately eight to ten trains per week to supply the facility, with three to four sailings a week of filled trans-shippers.

VFPA has completed a number of studies to consider when evaluating the proposal during this initial phase of consultation. These studies can be summarized as follows:

- Environmental (air quality, flood protection, storm water pollution plan);
- Noise assessment and rail operations;
- Traffic impact study; and
- Noise assessment.

### **Preliminary Public Comment Period**

BHP had an initial round of engagement with the community and stakeholders in the form of an Open House to initiate dialogue about the proposal from October to November 2017. The attendees responded to a questionnaire, and their feedback reflected the following:

- Questions about air quality;
- Lighting impacts;
- Increased noise from train traffic, train whistles idling and shunting;
- Questions about the use of shore power to decrease the sounds of ships running engines;
- Questions about the corrosive nature of the commodity;
- Questions about protecting the salmon and spill response; and
- Questions about construction noise.

## **Traffic**

A Traffic Impact Study was prepared by Mott MacDonald to evaluate the impact that the additional rail traffic from this proposal will cause; however, when the new rail operations for the new grain, coal, and potash facilities were cumulatively calculated, it was determined there would be a substantial impact on the rail crossings.

The report estimated that the anticipated blockages caused by rail movements along Robson Road will be up 257% from current levels. With two level crossings along Robson Road, each crossing will be blocked 75 minutes per day. The consultants have recommended the construction of grade separation over the tracks adjacent to Elevator Road which will provide direct access to the SFPR, and reduce the wait times to access the FSD.

This section of Robson Road which will be impacted by the at grade rail crossings lies within the Ports lands. The congestion generated by the at grade rail crossings will only impact the truck traffic accessing the docks.

## **Noise**

BKL Consultants was commissioned to evaluate noise impacts related to the proposed Potash Facility at the FSD. In Surrey, two noise monitors were installed close to River Road and in Royal Heights to determine the existing noise levels generated at the South Fraser Perimeter Road and the current FSD operation. The existing baseline noise at these locations is approximately 69 dBA during the day and 60 dBA in the evening. The baseline noise levels were modelled to project the future noise levels of the current and proposed Port activities, and the increase in the traffic noise generated by the South Fraser Perimeter Road, and it is predicted that there will be a 3% growth rate in the noise levels at that time (71 dBA during the day and 61 dBA during the evening).

FSD has proposed low noise initiatives, which includes:

- Conveyor belts operating at a limited speed;
- Incoming railcars unloading in a continuous, steady action, thereby eliminating the need for shunting of the cars;
- Extending the rail track radius to minimize the rail squeal;
- Applying lubrication to the rail track to minimize rail noise;
- Installing low impact and soft landing chutes to minimize noise from impacting materials; and
- Non-emergency clean-up of the site will be limited to daytime hours.

The report noted that during construction of the potash facility, the noise from construction is predicted to exceed Health Canada noise criteria during the pile driving. The noise management procedures proposed include a communication plan for the residents to minimize the effects from the construction noise. The community had previously expressed concerns related to the noise generated by the construction of the facility. The soils in this area are soft, and piles are required in order to support the new building. Unfortunately, this pile driving for the building will contribute to the majority of the noise during construction.

It was noted that they are proposing to construct this facility from 7:00 am to 7:00 pm, seven days a week. The proposed hours of construction comply with Section C of *Surrey Noise Control By-*

law 1982 No. 7044 (“the Noise By-law”), with the exception of working on Sunday. Written permission from the City is required to allow for construction on this day. It is recommended that this request be granted, as it will allow for a shorter period of construction.

BHP included in the report additional low noise initiatives relating to noise reduction, such as:

- The minimization of openings in the rail car during unloading;
- Baffling the opening to the building; and
- Installing sound absorbing materials inside the building to reduce sound emission.

It is recommended that FSD include these measures into the design and construction of the unloading facility in order to mitigate the noise generated by the unloading of the potash.

The low noise initiatives proposed noted above will aid in reducing additional noise generated by the potash facility; however, the inclusion of the additional building noise reducing construction materials will further reduce the noise.

### **Environmental Considerations**

The potash will be removed from the train car in a covered unloading facility which will include dust control units. The material will then be moved by a conveyor belt into a fully enclosed product storage building, including materials handling and transfer equipment. The product will be loaded into the ship by a covered conveyor belt. Hemmera Envirochem Inc. was commissioned to conduct an environmental review related to the proposed Potash Facility at the FSD. To mitigate the environmental impact of potash on the surrounding drainage, the environmental report recommends the installation of additional storm water catch basins. Storm water which could be infused with the potash will be directed to these additional man holes, and separated from the regular water. The contaminated storm water will then be removed by a pumper truck. Potash is a salt, and a spill will cause a localized increase in salinity in the surrounding water which would dilute and dissipate rapidly. Potash is generally non-toxic. The salinity of the Fraser River varies with the tidal cycle and seasonal flows, which will minimize the risk in the water environment. The greatest risk is to the Gunderson Slough area as outlined in their report. Consideration of directing storm water away from the Gunderson Slough should be considered.

Potash is corrosive to metals, and there may be an increased risk of an incident as a result of deterioration of the metals that come into contact with the potash. The Hemmera Envirochem Inc. report suggests regularly scheduled inspections, testing, and maintenance will reduce the possibility of an incident. It is recommended that all equipment and structures need to be confirmed suitable for a potash environment. This may include the replacement of the flap gates on the stormwater system which protects the potash facilities surrounding area from backwater flooding.

The proposed works are within the Fraser River floodplain. An assessment of the flood elevations on the site was undertaken by BHP. In all cases the potash facility, including transfer tunnel, electrical substation and the building would experience some degree of flooding. There is a report suggesting some mitigative works which have not been provided to the City for review. The key concern for the City is the possibility of the proposed potash facility compromising the larger area flood protection and also introducing significant contaminants into the floodwaters if the facility should be inundated. Some of the proposed works are within an existing Surrey Dyking ROW. Any new works within the ROW area must require consultation with the City to

resolve the City's continued right over the Surrey Dyking ROW, which includes assurances of how the proposed works will improve existing flood protection for the area and also safeguard against potential contamination during a flood event.

### **Authority**

While the City does not have the jurisdiction to approve this application, FSD cannot disregard the City's continuing right over the Surrey Dyking ROW and must adhere to the City's noise, nuisance, and environmental protection requirements. Accordingly, FSD has provided consultants' reports with recommendations in order to resolve issues related to these matters including traffic management, which for the most part address these issues, provided that the recommendations provided by the consultants are implemented, specifically:

- Provide assurances and response to the concerns expressed by the community during the Open House regarding the increased noise associated with the shunting of train cars, the blowing of train whistles at crossings throughout Surrey;
- Ensure construction of the grade separation over the tracks adjacent to Elevator Road to provide direct access to the SFPR and reduce the wait times to access the FSD;
- Provide the low noise initiatives outlined in the BKL Consultants report;
- Ensure the construction of the facility does not compromise the flood protection of the South Westminster area; and
- Develop a plan to better floodproof current vulnerabilities in FSD lands.

### **SUSTAINABILITY CONSIDERATIONS**

The installation of a potash export facility at FSD has the potential to impact nearby neighbourhoods, and so the City was asked to provide comments on the application to VFPA. While the City does not have jurisdiction in relation to the approval of the facility, it is important that any benefits and concerns with the application are put forward to VFPA. This supports the following Desired Outcomes (DO) and Strategic Directives (SD) of our Sustainability Charter 2.0:

#### **Built Environment and Neighbourhoods**

- DO6:** Land is used efficiently and sensitively, and development minimizes the impacts on the natural environment, viewsapes, agricultural land and urban wildlife.
- DO7:** Exposure to natural hazards is minimized through appropriate location and design of development.

#### **Economic Prosperity and Livelihoods**

- DO1:** Diverse and meaningful employment and business opportunities are available close to where people live, and provide incomes that can support a high quality of life.
- DO3:** Job creation and entrepreneurship development are widely fostered.
- DO4:** Surrey's economy is diversified with a mix of service, industrial, agricultural and innovation-based businesses.

**DO6:** Efficient land use and well-managed transportation infrastructure are in place to attract businesses and support a thriving economy.

**DO8:** Economic activities recognize the importance of, and have minimal impact on the natural environment.

## CONCLUSION

An application by BHP to install a potash transfer facility at FSD is under consideration by VFPA. As part of the consultation process, the City has been asked to provide comments on the application.

Based on the above discussion, it is recommended that Council:

- Receive this report for information; and
- Instruct the City Clerk to forward a copy of this report and related Council resolution to Vancouver Fraser Port Authority and Fraser Surrey Docks as the City's formal comments on the application by BHP Billiton Canada Inc. to install and operate a potash export facility at Fraser Surrey Docks.

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