Canadian Pacific

Comparative Site Evaluation

CP LOGISTICS PARK: VANCOUVER
PITT MEADOWS, BC

Prepared for:

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EXECUTIVE SUMMARY

CP is proposing to construct a multi-modal, multicommodity transload and logistics facility adjacent to its Vancouver Intermodal Facility in Pitt Meadows, B.C., to better service CP's rail customers and meet increased rail demand in Canada's largest trade gateway. The expansion will be named the CP Logistics Park: Vancouver, and it will be subject to regulatory approval. The expansion is proposed on approximately 41 hectares (101 acres) of CP-owned land (referred to as the Strategic Lands) on the south side of the existing facility, east of Kennedy Road, and is directly accessible by a major highway.

While the Strategic Lands meet minimum operational requirements necessary for a potential rail development, prior to making a significant investment in infrastructure to meet emerging market demand, CP undertook this comparative evaluation of the Strategic Lands against other sites that also meet such criteria. The objective of the evaluation was to assess the Strategic Lands, and alternative sites, against technical, operational, environmental and socio-economic considerations in order to confirm the existing site can efficiently support future operational needs while not resulting in substantial impacts to existing physical infrastructure, as well as socio-economic and environmental values that might be otherwise avoided by selecting an alternative location.

This evaluation included a two-phase methodology to first identify alternative sites that also meet minimum operational requirements, followed by an evaluation of all sites (including the Strategic Lands) against criteria related to physical infrastructure, as well as socio-economic and environmental values.

Overall, the comparative evaluation indicates that use of the Strategic Lands to support the proposed development will avoid or create minimal impacts to physical infrastructure (i.e., utility impacts and road crossings) and socio-economic values (i.e., distance from residential development and recreational amenities), most of which would occur if the development occurred at the alternative sites considered. With respect to existing environmental values, all sites demonstrated generally low potential impact to environmental values, due to general level of historic development that has occurred, such that the selection of an alternative site would not result in a substantial environmental benefit.

In addition to advantages associated with the Strategic Lands identified in the evaluation, the use of such lands to support the expansion of an existing facility (rather than the establishment of a new one) provides the most efficient use of land and represents an important consideration in an area with intense competition for land to support a diversity of users. The proposed approach is largely consistent with the Metro Vancouver Regional Industrial Lands Strategy Report (2020), which highlights the emerging industrial lands crisis in the Lower Mainland and the importance of densification of industrial lands with easy access to trucking routes, highways, railways, and ports.

For the limited number of criteria where the Strategic Lands had moderate constraints compared to alternative sites, development of the Project may represent an opportunity to address challenges associated with the existing operations through design and operational planning. Notwithstanding potential future refinements to infrastructure associated with existing CP infrastructure in Pitt Meadows (VIF), the Strategic Lands represent a sensible location to support CP's future operational needs.

1.0 INTRODUCTION

Canadian Pacific (CP) is proposing to expand operations alongside its existing Vancouver Intermodal Facility (VIF) in Pitt Meadows, British Columbia, with the two sites capable of meeting the projected rail growth in Canada's largest trade gateway. The expansion will be named the CP Logistics Park: Vancouver. The expansion is proposed to be located on approximately 41 hectares (101 acres) of CP-owned land (referred to as the Strategic Lands) on the south side of the existing facility, east of Kennedy Road, and is directly accessible by a major highway (Figure 2.1).

Canadian Pacific routinely invests in strategic land holdings across its network to support sustainable, profitable growth and alleviate capacity constraints. As the VIF is a primary interchange for the CP network, CP strategically acquired these Strategic Lands between 2011 and 2018 to provide the opportunity for potential future use by CP.

At the time of acquisition, the Strategic Lands acquired adjacent to VIF met several minimum operational requirements to support potential future use by CP including:

- Proximity to and ability to integrate into CP's existing facilities
- Parallel and adjacent to the CP mainline
- Appropriate size and grade to be able to accommodate a potential rail facility
- Proximity to critical transportation infrastructure such as ports and highways.

While the Strategic Lands meet the minimum operational requirements necessary for the rail development under consideration, prior to making a significant investment in infrastructure to meet emerging market demand, CP undertook this comparative evaluation of the Strategic Lands against other sites that also meet such criteria. The objective of the evaluation was to assess the Strategic Lands and alternative sites against technical, operational, environmental and socio-economic considerations in order to confirm that the existing site can efficiently support future operational needs while avoiding substantial impacts and risks that might be otherwise avoided by selecting an alternative location.

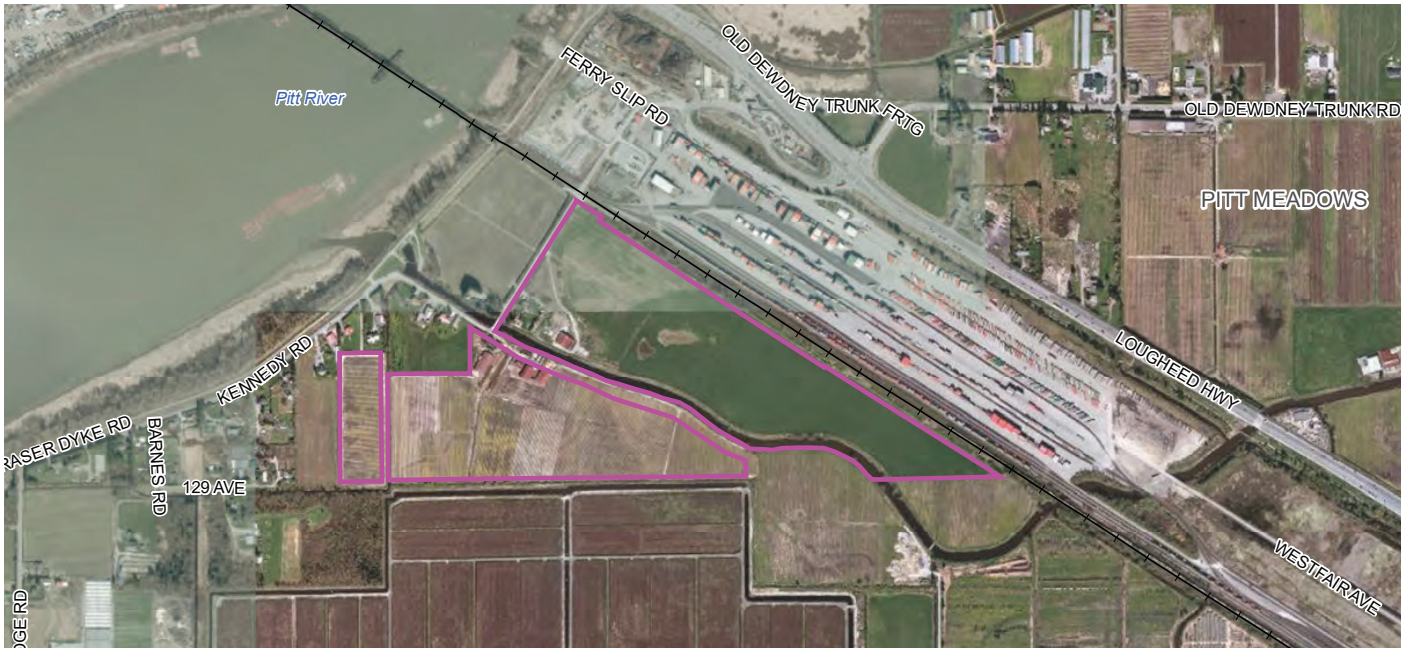
The following sections of this comparative evaluation include:

- Project background and rationale
- Approach and general methodology
- Methodology and results of the initial site screening against minimum operational requirements and
- Methodology and results of the comparative evaluation of all sites against evaluation criteria.

2.0 PROJECT RATIONALE

CP's nearby transload facilities are nearing capacity, and the proposed expansion project (the Project) is designed to alleviate those capacity issues with a world class, purpose-built expansion to the existing Vancouver Intermodal Facility. The Project will increase efficiencies across the network and allow CP to meet the future demand for the movement of goods. This proposed Project would create a critical piece of infrastructure to keep Canadian goods moving, create and sustain jobs, and build confidence in Canada's economy.

Figure 2.1 CP Logistics Park: Vancouver Location



The benefits of the Project include:

- Supporting economic recovery and strengthening Canada's competitiveness following the COVID 19 downturn;
- Helping Canadian producers access markets in Vancouver and abroad, supporting trade and economic development;
- Giving Canadian farmers the flexibility to ship products, abroad in custom amounts;
- Reducing GHG emissions and truck traffic on regional highways by moving more goods by rail; and
- Creating 150–250 full-time direct jobs on site, hundreds more in indirect employment growth, and hundreds of jobs during construction.

The proposed Project will strengthen the critical link between Canada's farmers and markets in Asia. A significant proportion of the goods handled at the expansion site will be agricultural products grown by Canadian farmers to be shipped abroad.

The proposed Project has three major rail and transload components:

1. Agricultural hub where Canadian agricultural products will be received by rail and transloaded to shipping containers for distribution in custom allotments around the world
2. Auto lot to receive by rail North American-made automobiles destined for local distributors and specifically designed to accommodate electric vehicles
3. Liquids transload and rail facility for transportation fuels and ethanol mainly to serve demand in Metro Vancouver.

The need for the proposed expansion Project is driven by growth in Canada's largest trade corridor, including the export demand for Canadian agricultural goods destined for Asia. CP has seen a continuous increase in demand for the shipping of agriculture products in recent years.

British Columbia's ports are growing to handle the expanding demand, and the CP Logistics Park: Vancouver will help maintain

a fluid supply chain. CP has a legislated mandate to move the goods and products produced and consumed in North America, and as demand grows, CP must grow its operations to meet the needs of Canadian shippers.

CP believes providing producers with expanded, innovative market opportunities is critical. A key goal of the Project is to give agricultural producers an alternative to the bulk export model that currently makes up much of agricultural exports out of British Columbia.

The Project will make it possible for Canadian farmers to access new markets and opportunities, giving them an important competitive advantage in the global marketplace as demand increases for speciality agricultural products.

Growth is also projected in Metro Vancouver's population, with over one million residents anticipated to move to the area in the next 30 years. More infrastructure capacity is needed to continue to supply the regional market. For example, CP constructed its VIF auto lot in 2019 and this space is already at capacity, and has significant additional interest from customers. Since opening on April 1, 2019 the current auto lot has received approximately 3,500 carloads of new vehicles. The site also averages close to 600 vehicles on the ground waiting for final transport to local dealerships each day.

The proposed Project will meet the needs of this growing market more efficiently by moving goods by rail rather than long-haul truck. Key products moved through the Project for local markets include:

- North American-made electric vehicles destined for sale in Metro Vancouver
- Custom fuel additives for distribution in the regional market, like ethanol, which is used to produce greener fuel.

The proposed Project will increase the efficiency of Canada's trade network by reducing the number of empty containers in circulation. It will provide suppliers with additional capacity in the case of disruptions and outages, further securing Canadian access to global supply chains. The Project is also largely consistent with the Regional Industrial Lands Strategy Report for Metro Vancouver (2020)[1], which highlights the emerging industrial lands crisis in the Lower Mainland precipitated by a constrained land supply and increasing pressures on existing industrial lands. The report warns that failure to sufficiently expand our regional capacity, including transportation capacity, could result in business, trade, and jobs leaving the region for other parts of Canada or the United States. This would have a long-term detrimental impact on the local economy in Metro Vancouver.

3.0 APPROACH

The approach employed to undertake this comparative site evaluation was two-phased and included the following steps to identify and assess potential alternative sites.

1. **Site Screening Phase (Section 4.0)** was focused on conducting a regional comprehensive review of available land based on the economic and logistical requirements for the intermodal transloading facility.
2. **Site Evaluation Phase (Section 5.0)** was focused on further evaluating the candidate sites identified from the Initial Site Screening Phase against further criteria regarding existing infrastructure, biophysical considerations, and socio-economic considerations.

The specific methods associated with each of these phases are discussed in the introductions of the following sections.

[1] Regional Industrial Lands Strategy Report (Metro Vancouver 2020), accessed August 2020 available at this hyperlink.

4.0 SCREENING PHASE

4.1 SITE SCREENING CONSIDERATIONS

Candidate sites that could potentially meet the minimum operational requirements of the required infrastructure were identified in the Site Screening Phase using the size, location, and logistical considerations outline in Table 4.1. This screening was done to identify potential alternative sites for evaluation against key environmental and socio-economic considerations.

Table 4.1 Rationale for Site Screening Considerations

Screening Criterion	Rationale for Inclusion
1. West of the District of Mission, British Columbia	The location must be proximal to the Vancouver marine port infrastructure. There are operational and environmental reasons for this, including CP's operational planning, reducing the distance short-haul trucks need to travel to access their destination, as well as reducing greenhouse gas emissions.
2. A minimum of 40 ha with a minimum length of 1,250 m	The site must be long enough to accommodate a minimum length of 1,250 m (~4100 ft) of track and be at least 40 ha (100 acres). This size is required to reduce the section of curved track which hinders railway operational efficiency.
3. Parallel and adjacent to the existing mainline	A yard parallel and adjacent to CP's mainline is safer and significantly reduces construction and operation costs. Ideally, the longest section of the site is parallel to the mainline. This layout minimizes the required land and infrastructure to construct a yard and maximizes the operational efficiencies from maintaining the parallel back and forward flow of trains in and out of the yard. In a non-parallel, non-adjacent yard scenario a train cannot as easily execute turns, creating additional shunting and velocity changes that increase community disturbance. Non-parallel, non-adjacent options increase derailment risk, wear-and-tear on the rails and train wheels, and are generally less operationally efficient.
4. Flat topography (Slope ≤ 0.5 %)	The topography of sites for rail activities is critically important. In general, flat grades are required to support safe and efficient rail car maneuvers within rail facilities. The proposed Project includes infrastructure where engines manually move cars between arrival tracks, breakdown tracks assembly tracks, and departure tracks. These movements are most efficient and safe when done on flat grades. Therefore, sites with flatter topography are the most desirable because they require less grading. Grading is the process of adding or removing dirt to level a site, which can be prohibitively expensive, create geotechnical instability, and result in additional traffic impacts to the community from trucks.

4.2 INITIAL SITE SCREENING METHODOLOGY AND RESULTS

A desktop review using geographic information systems (GIS) was conducted to identify candidate sites based on the considerations listed in Table 4.1. Land parcels that met criteria 1 through 4 were deemed to have met minimum operational requirements and selected for further consideration.

The selected parcels were further reduced based on a visual inspection of aerial imagery. For example, parcels with a buffer of less than 300 m from residential areas, or which contained community amenities such as parks or recreational facilities, were excluded. As a result of the site screening process, a total of seven candidate sites, parallel and adjacent to the existing mainline, were selected for further consideration (Table 4.2). A more detailed description of the seven sites follows. Another parcel, which was across from Site #6 would have been included as it met the operational requirements. However, it was excluded from the evaluation because it was strictly constrained by an overlapping recreational facility and adjacency to residences.

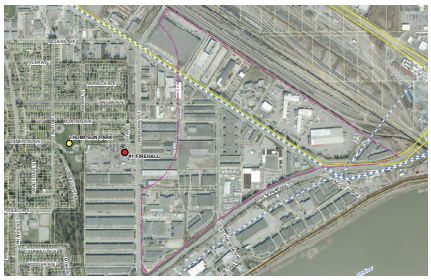
Table 4.2 Candidate Sites

Sites	West of Mission	Area	Length	Parallel and adjacent	Slope topography[2](%)
1. ***Strategic Lands (South of CP Facility), Pitt Meadows**	Yes	40.94 ha	1339 m	Yes	0.011
2. **Broadway Business Park, Port Coquitlam**	Yes	86.55 ha	1566 m	Yes	0.081
3. **North of CP Facility, Pitt Meadows**	Yes	106.70 ha	2135 m	Yes	0.053
4. **Southeast CP Facility McTavish, Pitt Meadows**	Yes	111.07 ha	1530 m	Yes	0.123
5. **North of CP Facility, Harris, Pitt Meadows**	Yes	51.52 ha	1323 m	Yes	0.081
6. **West of Lougheed Highway, Maple Ridge**	Yes	75.67 ha	2271 m	Yes	0.188
7. **South of Lougheed Highway, Mission**	Yes	192.03 ha	3301 m	Yes	0.302

[2] Slope topography calculated by utilizing LiDAR and/or Digital Elevation Models provided by the respective municipalities (Port Coquitlam, Pitt Meadows, Maple Ridge, Mission)

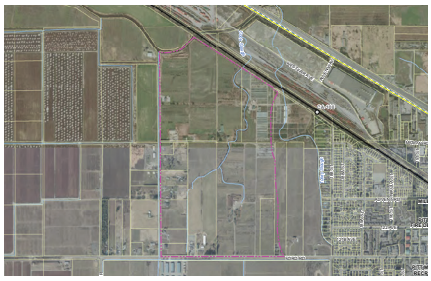
Description of Identified Sites:

1. **Strategic Lands (South of CP Facility, Pitt Meadows):** This is owned by CP and is the *proposed location for the Project. The site is directly south of the existing CP Vancouver Intermodal Facility and CP's mainline. The parcel is bounded by the mainline to the north and rural roads to the west and south, and a rural private parcel to the east. The land is bisected by Katzie Slough and is an undeveloped greenfield site that is currently leased for agricultural production. This is the smallest (41 ha excluding an undeveloped road allowance) of the land parcels identified in this evaluation.

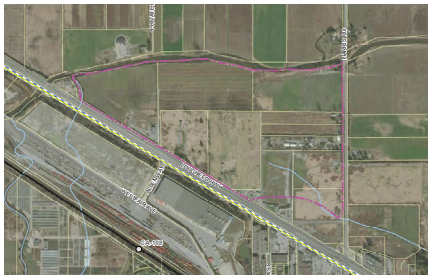


2. **Broadway Business Park, Port Coquitlam:** This parcel is adjacent and north of the Mary Hill Bypass, bounded to the north by the existing CP Cascade Subdivision Mainline and Broadway Street to the West. It can be accessed by the Trans Canada Highway via the Mary Hill Bypass and Lougheed Highway. This is a fully developed, mature business park and would require purchasing and reconfiguring existing commercial properties. The site includes a number of existing roads including Coast Meridian Road, Industrial Avenue, Kingsway Avenue, and Langan Avenue.

3. **North of CP Facility, Pitt Meadows:** This site is adjacent to the CP mainline on the north side of Lougheed Highway, which serves as the parcel's southwestern border. The parcel is bounded by Old Dewdney Truck Frontage Road, Harris Road, an archaeological polygon, and Katzie Slough. The land is mostly undeveloped and would be classified as greenfield.



4. **Southeast CP Facility, McTavish, Pitt Meadows:** This larger parcel lies to the south of CP's mainline, and is bounded by McTavish Road to the west, Ford Road to the south, and rural private property to the east. Cook Slough runs through the center of the property, and it includes a known archeological feature.



5. **North of CP Facility, Harris, Pitt Meadows:** This is the most eastern of the Pitt Meadows candidate sites. It lies west of Harris Road, south of Katzie Slough, and north of Lougheed Highway and CP's mainline.

6. **West of Lougheed Highway, Maple Ridge:** The one candidate site in Maple Ridge lies adjacent to 105 Avenue on the north bank of the Fraser River, and is bounded by the Lougheed Highway and a rail line to the north. The land is well developed with commercial properties, river transportation structures such as docks and berths, as well as a number of roads.

7. **South of Lougheed Highway, Mission:** This rural property in Mission is 192 ha and lies on the north bank of the Fraser River. It is bounded to the south by Silverdale Creek, and to the north by Lougheed Highway. The western section narrows to the point where it nearly intersects with CP's mainline. The property has a dyke that intersects through the middle of the parcel. A wood processing facility on the shoreline at the southern property line is currently in operation.

5.0 SITE EVALUATION PHASE

The primary objective of the Site Evaluation Phase was to evaluate the Strategic Lands and alternative sites against environmental and socio-economic considerations to confirm development of the Strategic Lands will not result in substantial impacts that could be avoided by selecting an alternative location that is both economically and environmentally feasible. This evaluation also considered the potential impacts of construction and operation of the Project on existing infrastructure associated with specific sites.

The candidate sites identified from the Initial Site Screening Phase were further evaluated against the following considerations:

Existing Infrastructure

- Utility crossings (Section 5.1.1)
- Road crossings (Section 5.1.2)
- Access to truck routes (Section 5.1.3)
- Access to regional road network (Section 5.1.4)
- Access to emergency services (Section 5.1.5)

Biophysical

- Presence of watercourses or wetlands (Section 5.2.1)
- Ecological attributes (Section 5.2.2)

Socio-Economic

- Distance from residential areas (Section 5.3.1)
- Proximity to community amenities (Section 5.3.2)
- Archaeology and cultural resources (Section 5.3.3)
- Presence of Crown tenures and Water Access (Section 5.3.4)

For each consideration, a three-level system was established to support the evaluation of the sites. The three categories within the evaluation system included the following:

- **No constraints** – sites that are expected to have little or no impact on related infrastructure, environmental, or socio-economic values.
- **Moderate constraints** – sites that are expected to result in some impact on infrastructure, environmental or socio-economic values that can be addressed through mitigation that is considered technically and economically feasible.
- **Substantial constraints** – sites that are expected to result in impacts that cannot be managed or mitigated in a technically or economically feasible way.

5.1 EXISTING INFRASTRUCTURE CONSIDERATIONS

The development of sites with existing infrastructure can result in a number of impacts including: physical impacts and costs associated with the relocation of such infrastructure, disruption in service provided by infrastructure, and impacts to the efficient function of infrastructure (e.g. congestion on roads). Optimal sites would have fewer potential impacts on existing infrastructure which could create additional costs or long-term impacts that could otherwise be avoided. Similarly, the ideal site would offer benefits by being near supporting infrastructure such as regional highways, which would reduce idling and traffic on local roads, as well as proximity to emergency services.

To support the evaluation of existing infrastructure considerations, each site was evaluated for the potential effects and benefits related to existing infrastructure, such as the number of utility crossings and road crossings, and the ease of access to truck routes, the regional road network, and emergency services.

5.1.1 Utility Crossings

The development of all sites has the potential to disrupt existing utilities including electrical transmission lines, water and sewer mains, and pipelines. While such impacts can be mitigated, the relocation or crossing of existing utility infrastructure can pose substantial costs and result in indirect effects on customers in terms of disruption of service as well as additional construction effects associated with utility relocations. The number of utility crossings was determined through geomatics analysis using data from the BC Integrated Land and Resource Registry and the relevant municipalities to identify the type and number of utility crossings at each site.

Table 5.1 is a summary of the evaluation of constraints related to the presence of existing publicly available information on utility infrastructure.

Evaluation criteria:

- **No constraints** – no utility constraints
- **Moderate constraints** – utility crossing that can be perpendicularly crossed, or it is likely feasible to move the utility or the utility constraint can otherwise be mitigated
- **Substantial constraints** – complex underground utility crossing or with substantial overlap such that the utility cannot feasibly be moved, or the utility constraint cannot be otherwise mitigated

Table 5.1 Summary of utility crossing constraints

Site	Utility Crossings	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	No utility constraints.	No constraints
Broadway Business Park, Port Coquitlam	Electrical transmission line and gas line running along Kingsway Avenue, bisecting parcel. Drainage, sanitary, and water main running along four roads.	Substantial constraints
North of CP Facility, Pitt Meadows	Electrical transmission line and gas line, and two water mains run offsite adjacent to site, will require crossing it to reach main rail line.	Substantial constraints
Southeast CP Facility McTavish, Pitt Meadows	Sanitary main extends into the site from the south side of the site. Water main runs along Green Road.	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Electrical transmission line and gas line runs offsite adjacent to site, will require crossing it to reach main rail line. A sanitary main runs along Golf Course Access Road that may require crossing to access rail line. Storm and water main pipes run along Lougheed Hwy, Allen Way, and Westfair Avenue and will require to be crossed to reach the rail line.	Substantial constraints
West of Lougheed Highway, Maple Ridge	Gas line running northwest in the middle of the site.	Substantial constraints
South of Lougheed Highway, Mission	Electrical transmission line runs offsite adjacent to site, will require crossing it to reach main rail line.	Moderate constraints

5.1.2 Road Crossings

The number of roads that intersect with a candidate site should be minimized to reduce disruptions to existing road traffic during construction and avoid the need for road diversions, closures or crossing upgrades. This will also minimize the disruption to traffic patterns after the Project becomes operational. The number of road crossings (Table 5.2) was determined through geomatics analysis using Integrated Land and Resource Registry data to identify perpendicular roads within the boundaries of each candidate site.

Evaluation criteria:

- **No constraints** – no road crossings
- **Moderate constraints** – candidate site includes road constraints that can be mitigated with a moderate level of effort and cost and would not require major changes to existing infrastructure
- **Substantial constraints** – candidate site includes road constraints that would require a substantial investment to modify existing infrastructure (i.e., realignment or crossing of a major road), or build new infrastructure, in order to mitigate impacts to the operation of the existing road network.

Table 5.2 Summary of road crossing constraints

Site	Road Crossings	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	No public roads intersect this site, but includes a right-of-way for future McTavish Connector.	No constraints
Broadway Business Park, Port Coquitlam	There are four roads that overlap with this parcel located south of the Port Coquitlam Transload Facility (Industrial Avenue, Langan Avenue, Kingsway Avenue, and Coast Meridian Road). These are all substantial corridors used to travel within and outside of the business park.	Substantial constraints
North of CP Facility, Pitt Meadows	Site requires trains to travel across Lougheed Highway to access the mainline, a significant constraint. There is a private driveway within the site boundary.	Substantial constraints
Southeast CP Facility McTavish, Pitt Meadows	Green Road intersects through the center of the parcel in an east-to-west orientation.	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Site requires trains to travel across Lougheed Highway to access the mainline, but no public roads overlap with this site.	Substantial constraints
West of Lougheed Highway, Maple Ridge	Site includes three substantial industrial roadways (236 Street, McKay Avenue, and Fisherman Road). In addition, trains would need to cross River Road to access the mainline.	Substantial constraints
South of Lougheed Highway, Mission	Three rural and industrial supporting public roads intersect this site (Chester Street, Cooper Avenue, and Nelson Street.).	Moderate constraints

5.1.3 Access to Truck Routes

To reduce potential traffic impacts, the site should have access to a number of designated truck routes within 1 km to bring traffic to a highway and optimize the number of routes available for trucks to travel. This will disperse and reduce traffic load on local roads, and ensure transport trucks are able to access the designated truck routes they are required by law to use. Truck routes are defined as major arterial roads that connect to the provincial highway network.

The number of recognized truck routes within 1 km of the candidate site ranges from one to four, it is summarized in Table 5.3.

Evaluation criteria:

- **No constraints** – access to more than one truck route within 1 km
- **Moderate constraints** – access to one truck route within 1 km
- **Substantial constraints** – no truck routes within 1 km

Table 5.3 Summary of access to truck route constraints

Site	Access to Truck Routes	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	Access to two truck routes: Lougheed Highway and Kennedy Road	No constraints
Broadway Business Park, Port Coquitlam	Access to four truck routes: Lougheed Highway, Mary Hill Bypass, Broadway/Coast Meridian, Kingsway Avenue.	No constraints
North of CP Facility, Pitt Meadows	Access to three truck routes: Lougheed Highway, Old Dewdney Trunk Road, Harris Road	No constraints
Southeast CP Facility McTavish, Pitt Meadows	Access to one truck routes: Lougheed Highway	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Access to two truck routes: Lougheed Highway, Harris Road	No constraints
West of Lougheed Highway, Maple Ridge	Access to two truck routes: Lougheed Highway, River Road	No constraints
South of Lougheed Highway, Mission	Access to two truck routes: Lougheed Highway, Gill Avenue	No constraints

5.1.4 Access to Regional Road Network

The site should ideally minimize the distance to a highway (i.e., road speed ≥80 km/hr and 2-lanes) via a truck route and maximize the routing options to the highway via truck routes. This will minimize the potential impact on the local road network. Readily accessible highways also help with supply chain fluidity, allowing for efficient transport of goods to market.

Distance to a highway, provided in Table 5.4, was measured by taking the closest point of intersection of the candidate site boundary and arterial road to the access point (entrance) of Lougheed Highway, which is the nearest highway for all sites.

Evaluation criteria:

- **No constraints** – direct access to regional road network
- **Moderate constraints** – access to regional road network within 1 km
- **Substantial constraints** – access to regional road network over 1 km

Table 5.4 Summary of access to the regional road network constraints

Site	Access to Regional Road Network of Lougheed Highway	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	815 m	Moderate constraints
Broadway Business Park, Port Coquitlam	519 m	Moderate constraints
North of CP Facility, Pitt Meadows	0 m	No constraints
Southeast CP Facility McTavish, Pitt Meadows	2096 m	Substantial constraints
North of CP Facility, Harris, Pitt Meadows	0 m	No constraints
West of Lougheed Highway, Maple Ridge	89 m	Moderate constraints
South of Lougheed Highway, Mission	83 m	Moderate constraints

5.1.5 Access to Emergency Services

For its facilities, CP develops Emergency Response Plans collaboratively with relevant municipal emergency planning officials such as emergency service providers. Reflecting this collaborative approach to emergency response planning, the distance to municipal fire stations was included in this evaluation process. Locations with proximal or multiple fire stations were weighted more favorably in the site evaluation process. Table 5.5 outlines the location of fire stations near the seven sites, and summarizes the distance from the site boundary to the nearest station or stations and the estimated travel times . The location evaluation criteria for access to emergency services is based on whether a location is serviced by a fire department staffed with career emergency staff, or a composite fire department staffed with both volunteer and paid on-call fire fighters. A location that meets National Fire Protection Association 1720 Standards, meaning it has a composite fire department, may require additional engineered or administrative controls to help manage emergency services.

Evaluation criteria:

- **No constraints** – National Fire Protection Association 1710 Standards are met as the public is serviced from a career fire department that provides the minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations.
- **Moderate constraints** – National Fire Protection Association 1720 Standards are met as the public is serviced from a composite, volunteer fire department that provides the minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations.

Table 5.5 Summary of access to emergency services constraints

Site	Access to Emergency Services	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 4.4 km, an approximately 6-minute emergency response time. The two proximate fire stations are Pitt Meadows Fire Department at 19240 122a Avenue, and Port Coquitlam Fire Hall #1, located at 1725 Broadway Street.	Moderate constraints
Broadway Business Park, Port Coquitlam	The location is serviced by a career fire department. Closest fire station: 1.3 km, an approximately 3-minute emergency response time. The nearest fire station is Port Coquitlam Fire Hall #1, located at 1725 Broadway Street.	No constraints
North of CP Facility, Pitt Meadows	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 3.3 km, an approximately 5-minute emergency response time. The two proximate fire stations are Pitt Meadows Fire Department at 19240 122a Avenue, and Port Coquitlam Fire Hall #1, located at 1725 Broadway Street.	Moderate constraints

[3] Estimated travel times were calculated using ESRI ArcGIS Find Closest Facilities, which finds one or more facilities that are closest from an incident based on travel time (heavy traffic hours selected) or travel distance and outputs the best routes, driving directions between the incidents and the chosen facilities.

Site	Access to Emergency Services	Results
Southeast CP Facility McTavish, Pitt Meadows	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 3.6 km, an approximately 6-minute emergency response time. The nearest fire station is Pitt Meadows Fire Department, 19240 122a Avenue.	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 1.6 km, an approximately 4-minute emergency response time. The nearest fire station is Pitt Meadows Fire Department, 19240 122a Avenue.	Moderate constraints
West of Lougheed Highway, Maple Ridge	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 4.1 km, an approximately 6-minute emergency response time. The nearest fire station is Maple Ridge Fire Department, 22708 Brown Avenue.	Moderate constraints
South of Lougheed Highway, Mission	The location is serviced by a composite fire department that may require additional engineered or administrative controls to manage emergency services. Closest fire station: 5.4 km, an approximately 8-minute emergency response time. The two proximate fire stations are Mission Fire Station #3 at 30435 Silverhill Avenue and Mission Fire Station #1 at 33330 7th Avenue.	Moderate constraints

5.1.6 Summary

Five of the seven potential sites had one or more substantial constraints. Four sites had significant road crossings that would not be able to be mitigated in a technically or economically feasible manner with one or more public roads crossing the sites that would create potential safety conflicts and should be avoided if possible. These four sites also have substantial utility constraints with power, gas, and water lines overlapping the parcels. One site is substantially constrained by its relative isolation from highway access, i.e., it is more than 1 km from the regional road network.

Two of the other sites either met or exceeded each standard related to existing infrastructure. The proposed Strategic Lands site in Pitt Meadows has sufficient access to truck routes, the regional road network, and emergency services, as well as no utility conflicts or road crossings. This makes it a reasonable site when considering constraints from existing infrastructure.

Table 5.6 Existing infrastructure considerations

Site	Utility Crossings	Road Crossings	Access to Truck Routes	Access to Regional Road Network	Access to Emergency Services
***Strategic Lands (South of CP Facility), Pitt Meadows**	No constraints	No constraints	No constraints	Moderate constraints	Moderate constraints
Broadway Business Park, Port Coquitlam	Substantial constraints	Substantial constraints	No constraints	Moderate constraints	No constraints
North of CP Facility, Pitt Meadows	Substantial constraints	Substantial constraints	No constraints	No constraints	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	Moderate constraints	Moderate constraints	Moderate constraints	Substantial constraints	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Substantial constraints	Substantial constraints	No constraints	No constraints	Moderate constraints
West of Lougheed Highway, Maple Ridge	Substantial constraints	Substantial constraints	No constraints	Moderate constraints	Moderate constraints
South of Lougheed Highway, Mission	Moderate constraints	Moderate constraints	No constraints	Moderate constraints	Moderate constraints

5.2 BIOPHYSICAL CONSIDERATIONS

The development and operation of sites has the potential to impact existing biophysical values during construction and operation (e.g., impacts to ecological values including fish and wildlife and supporting habitat). While such impacts can be mitigated, mitigation requires additional physical works and costs and may pose future operational constraints. As such, avoiding, and minimizing impacts on existing biophysical values is preferred.

Each site was evaluated against potential impacts to biophysical considerations including aquatic resources, as well as wildlife and habitat. None of the site is within 1 km of mapped ecologically protected land. The ideal site would minimize potential impacts to these biophysical features that CP, Indigenous groups, and the communities, have strong interests in protecting and enhancing.

5.2.1 Watercourses or Wetland

Each site was evaluated based on the potential impacts to nearby watercourses or wetland that provide habitat for fish as well as support broader ecological functions. The number of watercourses at each site was determined through geomatics analysis using iMapBC data. Minimizing contact with watercourses will reduce potential interactions and adverse environmental effects on fish and fish habitat during construction and future maintenance activities. With respect to identifying wetland areas, iMapBC and orthophoto review was used to identify wetland. Only the site in Mission has wetland features (Table 5.7), it is west of the sawmill. However, recent orthophotos suggest it has been seeded for forage crop.

Evaluation criteria:

- **No constraints** – no watercourses or wetland interacting with the site
- **Moderate constraints** – candidate site includes watercourses, or wetlands with low ecological values, for which potential effects can be effectively mitigated with a moderate level of effort and cost
- **Substantial constraints** – candidate site incudes watercourses with high fisheries and ecological values, or wetlands with high ecological value, which will require substantial effort and cost to effectively avoid or mitigate potential effects.

Table 5.7 Summary of watercourse or wetland constraints

Site	Number of Watercourses or Wetland	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	1: Katzie Slough (and agricultural ditch) No wetland	Moderate constraints
Broadway Business Park, Port Coquitlam	1: Drains to Broadway Creek, then Pitt River No wetland	Moderate constraints
North of CP Facility, Pitt Meadows	1: Katzie Slough No wetland	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	1: Cook Slough No wetland	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	3: Katzie and Tully sloughs, and Unnamed watercourse No wetland	Moderate constraints
West of Lougheed Highway, Maple Ridge	1: Kanaka Creek, and adjacent to Fraser River No wetland	Substantial constraints
South of Lougheed Highway, Mission	1: Chester Creek, and adjacent to Fraser River Potential historic wetland, currently tilled for hay field	Substantial constraints

5.2.2 Ecological Attributes

The evaluation of sites with respect to wildlife and wildlife habitat values focused on the identification of land with ecological value[4] and includes consideration of the geographic range and habitat suitability for federally listed Schedule 1 species at risk, meaning how many listed species could potentially occur at each site based on the British Columbia Conservation Data Centre (CDC) database (Appendix B NTD). A summary of these finding is below in Table 5.8.

Evaluation criteria:

- **No constraints** – fewer than five species at risk within range of the candidate site
- **Moderate constraints** – candidate site includes suitable habitat for more than five, but fewer than 15 species at risk, but no record of presence and no identified critical habitat
- **Substantial constraints** – candidate site includes suitable habitat for 15 or more species at risk, there are records of the presence of such species and/or the site supports critical habitat.

Table 5.8 Summary of ecological attribute constraints

Site	Ecological Attributes	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	Primarily agricultural land. Crosses Katzie Slough. This is within the range and habitat suitability for 14 species at risk.	Moderate constraints
Broadway Business Park, Port Coquitlam	Mostly paved with concrete or road surface, very little value to wildlife. Some street side trees and grass. This is within the range and habitat suitability for 4 species at risk.	No constraints
North of CP Facility, Pitt Meadows	Primarily agricultural, treed street sides. Katzie Slough borders the south. This is within the range and habitat suitability for 14 species at risk.	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	Primarily agricultural land with a watercourse connected to Katzie Slough through the middle of site. This is within the range and habitat suitability for 14 species at risk.	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Primarily agricultural land, south of Katzie Slough. This is within the range and habitat suitability for 14 species at risk.	Moderate constraints
West of Lougheed Highway, Maple Ridge	South section of site is industrial, north section contains 142,990 m^2 (14.3 ha) of forest, Site 6 is along Fraser River. This is within the range and habitat suitability for 15 species at risk with a recorded occurrence of a rare moss called Roell's brotherella (endangered). It overlaps proposed critical habitat for western painted turtle (Pacific coast population).	Substantial constraints
South of Lougheed Highway, Mission	Primarily agricultural land with a small patch of industry along the Fraser River. There is 245,276 m^2 (24.5 ha) of forested area north of sawmill with potential wetland and riparian area around Chester Creek. This is within the range and habitat suitability for 18 species at risk, and the area overlaps proposed critical habitat for western painted turtle (Pacific coast population). There was an occurrence of a Pacific water shrew (endangered) 67 m from site.	Substantial constraints

[4] No land was identified with Wildlife Habitat Areas, Ungulate Winter Range, Wildlife Management Areas, Provincial parks, ecological reserves, Old Growth Management Areas, or Important Bird Areas.

5.2.3 Summary

All the sites considered are, by design, relatively close to the existing CP mainline, and have some degree of previous development. Each site had generally low environmental values, including sites with low-valued watercourses. None of the sites support ecologically unique habitat or protected areas. Six of the seven sites, including the Strategic Lands, include habitat with the potential to support at least 14 species at risk though the presence of such species has not been confirmed. Six of seven sites, including the Strategic Lands, had at least one naturally occurring watercourse. The most noteworthy constraint are the two locations, Maple Ridge and Mission, that are located directly adjacent to the Fraser River, which are important watercourses for salmonids and sturgeons, and which would pose a real flood risk to adjacent lands.

Table 5.9 Biophysical considerations

Site	Watercourse or Wetland	Ecological Attributes
***Strategic Lands (South of CP Facility), Pitt Meadows**	Moderate constraints	Moderate constraints
Broadway Business Park, Port Coquitlam	Moderate constraints	No constraints
North of CP Facility, Pitt Meadows	Moderate constraints	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	Moderate constraints	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Moderate constraints	Moderate constraints
West of Lougheed Highway, Maple Ridge	Substantial constraints	Substantial constraints
South of Lougheed Highway, Mission	Substantial constraints	Substantial constraints

5.3 SOCIO-ECONOMIC CONSIDERATIONS

Each site was also considered against a variety of socio-economic considerations, including proximity to residential areas, community recreation amenities, cultural/archaeological resources, as well as considerations related to overlapping land uses. As a good neighbour, CP actively considers the potential impact of development and expansion on nearby communities. With this proposed Project, by necessity it must be near product destinations including port facilities and local distribution points, which means areas that are already impacted by nearby development. As planned, the facility is being proposed next to CP's existing Vancouver Intermodal Facility which is in an area that is already heavily industrialized.

5.3.1 Distance from Residential Areas

Where technically and economically feasible, CP prefers to develop new facilities outside of a 300 m buffer from existing residential areas. This buffer is consistent with the Guidelines for New Development in Proximity to Railway Operations (FCM-RAC 2013)[5], which are recommendations to local governments that they zone residential subdivisions at least 300 m away from a rail yard. The Canadian Transportation Agency (**Decision No. 69-R-2014**) supports the assertions that land use planning and applying distance buffers is the responsibility of the municipality.

As a reasonable neighbour, without an obligation to do so, CP is considering a similar buffer in this evaluation.

Evaluation criteria:

- **No constraints** – Greater than 300 m from nearest residential area.
- **Moderate constraints** – 300 m from nearest residential area.
- **Substantial constraints** – Less than 300 m from nearest residential area.

Table 5.10 Summary of residential constraints

Site	Distance from Residential Areas	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	1021 m	No constraints
Broadway Business Park, Port Coquitlam	300 m	Moderate constraints
North of CP Facility, Pitt Meadows	847 m	No constraints
Southeast CP Facility McTavish, Pitt Meadows	300 m	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	300 m	Moderate constraints
West of Lougheed Highway, Maple Ridge	300 m	Moderate constraints
South of Lougheed Highway, Mission	418 m	No constraints

[5] Guidelines for New Development in Proximity to Railway Operations, the Federation of Canadian Municipalities and the Railway Association of Canada, 2013. Accessed July 2020, available in this embedded link (or proximityissues.ca).

5.3.2 Proximity to Community Amenities

Each site was also evaluated against relative proximity to community amenities, namely recreational facilities, public or private schools, and hospitals. To minimize the potential challenges associated with locating the Project near these amenities, the site would ideally be located at least 1 km from such amenities. In the event a facility is located less than 1 km from a site, consideration is given to whether it is possible to technically and economically mitigate or manage potential impacts.

Evaluation criteria:

- **No constraints** – over 1 km from nearest community amenity.
- **Moderate constraints** – under 1 km from nearest community amenity but no anticipated permanent effect on public access beyond temporary minor delays or nuisance
- **Substantial constraints** – under 1 km from nearest community amenity with the potential for to permanently interfere with public access.

Table 5.11 Summary of community amenities constraints

Site	Proximity to Community Amenities	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	No conflicting community amenity within 1 km.	No constraints
Broadway Business Park, Port Coquitlam	Two amenities are less than 1 km away. 1) The Thompson Park and field, 400 m 2) Peace Park, 350 m southeast	Moderate constraints
North of CP Facility, Pitt Meadows	No conflicting amenity within 1 km.	No constraints
Southeast CP Facility McTavish, Pitt Meadows	No conflicting amenity within 1 km.	No constraints
North of CP Facility, Harris, Pitt Meadows	One amenity is less than 1 km away. Harris Road Park is approximately 500 m southeast. Access to these features will be more difficult because traffic delays will result as trains cross back and forth over the Lougheed Highway to access the Harris North site.	Substantial constraints
West of Lougheed Highway, Maple Ridge	One amenity is less than 1 km away. The Albion Sports Complex, with field, playground, pool, and waterpark, 300 m northeast.	Moderate constraints
South of Lougheed Highway, Mission	The Mission Golf and Country Club is approximately 600 m from the northeastern boundary of the parcel.	Moderate constraints

5.3.3 Archeological and Cultural Resources

The evaluation of potential overlap with known cultural or historic artifacts or resources is based on a search of the BC database for Remote Access to Archaeological Data (**RAAD**, accessed 14 May 2020). The archaeological or historical constraint for each site is summarized below. It must be recognized that RAAD only contains heritage site records that have been formally recorded and submitted to the BC Archaeology Branch. It is possible that unknown and unrecorded sites exist within the candidate parcels. The RAAD database details are confidential and do not consider Indigenous Traditional Knowledge. Indigenous Traditional Knowledge would be an important consideration when evaluating overlap with archeological resources. The details for historic features are referenced from public information sources where available, not from the RAAD.

Canadian Pacific wishes to avoid overlap with significant cultural heritage resources. Consideration for cultural heritage resources and potential effects would be completed in consultation with the affected Indigenous communities.

Evaluation criteria:

- **No constraints** – over 1 km from nearest known RAAD feature.
- **Moderate constraints** – More than 50 m and less than 1 km from nearest known RAAD feature
- **Substantial constraints** – 0 m to 50 m from nearest known RAAD feature.

Table 5.12 Summary of archaeological and cultural constraints

Site	Archaeological and Cultural Resources	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	Two archaeological features, one north of the Lougheed Highway and one on the banks of the Pitt River. Two historic residences (Sutton family)*.	Moderate constraints
Broadway Business Park, Port Coquitlam	Seven archaeological records, mostly to the south.	Moderate constraints
North of CP Facility, Pitt Meadows	Two historical records, the Pitt Meadows School House* and Blaney Residence*. Four archaeological features.	Substantial constraints
Southeast CP Facility McTavish, Pitt Meadows	One archaeological record. Three historic records (Sutton family homes*, and Japanese Canadian Meeting Hall**).	Substantial constraints
North of CP Facility, Harris, Pitt Meadows	Three archaeological records. Eleven historical records, varying from farm settlements, shops, a post office and community halls**.	Substantial constraints
West of Lougheed Highway, Maple Ridge	Four archaeological records. Three historic settlement records (Houston Residence and Milkhouse, and Karr/Mercer Barn*).	Moderate constraints
South of Lougheed Highway, Mission	Three archaeological records. Two ferryboats classified as historic shipwrecks are located at the parcel, but there are locally recognized as hazards+ and the Province and community wanted them removed.	Moderate constraints

Source: * historicplaces.ca; ** pittmeadows.ca; + missioncityrecord.com

5.3.4 Crown Tenure and Water Access

Each site was evaluated for overlapping crown tenures, water licenses, and potential land use conflicts. It is not uncommon for several tenures and water access permits to apply over the same area of land and water. While CP is federally regulated, and therefore not subject to the Agricultural Land Commission, CP intends to engage with agricultural stakeholders to understand their perspective on the proposed facility. Two of the evaluated parcels, namely the Port Coquitlam and Maple Ridge locations, are outside of the Agricultural Land Reserve.

In BC there is a policy of integrated resource use, whereby several activities may occur on the same land base, provided they are coordinated and consulted upon. The Province's guidance in the first step to avoid overlapping resource interests lies in applying due diligence. This report is demonstration of this first step to avoid or minimize conflicting interests. Where there are overlapping interests CP will consult with the affected parties.

Based on the information available from the Integrated Land and Resource Registry (accessed June 2020) and focussing our effort on overlapping water well licences, water point of diversion licenses, and Crown Tenures Table 5.13 describes the competing interests on Site 1 to Site 7. The land use constraints are defined as no constraints, moderate constraints, or substantial constraints.

Evaluation criteria:

- **No constraints** – no overlapping crown tenures, water licenses
- **Moderate constraints** – overlapping crown tenures, water licenses that can be managed in a technically and economically feasible way
- **Substantial constraints** – overlapping crown tenures, water licenses conflicts that cannot be managed in a technically and economically feasible way

Table 5.13 Summary of Crown Tenure Constraints

Site	Crown Tenure or Water Access Overlap	Results
***Strategic Lands (South of CP Facility), Pitt Meadows**	No overlapping water wells. Two active water licenses. No overlapping crown land tenures.	Moderate constraints
Broadway Business Park, Port Coquitlam	There are six overlapping private or commercial water wells. No active water licenses. No overlapping crown land tenures.	Moderate constraints
North of CP Facility, Pitt Meadows	No overlapping water wells. Two active water licenses (agricultural). No overlapping crown land tenures.	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	One overlapping water well (use unknown). No active water licenses. No overlapping crown land tenures.	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	No overlapping water wells. No active water licenses. No overlapping crown land tenures.	No constraints
West of Lougheed Highway, Maple Ridge	No overlapping water wells. No active water licenses. Seven active crown land tenures (commercial or utility).	Substantial constraints
South of Lougheed Highway, Mission	Seventeen overlapping water wells (domestic and commercial). No active water licenses. Three active crown land tenures (flood mitigation).	Substantial constraints

5.3.5 Summary

All seven sites evaluated met or exceeded the recommendation of 300 m buffer between a residential subdivision and the facility footprint, with the Strategic Lands being the furthest away from existing development (>1 km). This buffer represents a significant advantage with respect to limiting potential disturbance impacts such as noise and light. Similarly, the Strategic Lands are also greater than 1 km from any structured community amenity while five of seven other sites are closer than 1 km to such facilities. The Strategic Lands are also the furthest away (400 m) from known archaeological or heritage features while three of seven alternative sites are less than 60 m from such values. Two of six alternative sites have land use overlaps that cannot be managed in a technically and economically feasible way because they would be severely impacted by development. The Strategic Lands and the other Pitt Meadows parcels have water use challenges that are likely to be manageable through management and mitigation.

Table 5.14 Socio-economic considerations

Site	Residential	Community Amenity	Cultural resources	Crown / water
***Strategic Lands (South of CP Facility), Pitt Meadows**	No constraints	No constraints	Moderate constraints	Moderate constraints
Broadway Business Park, Port Coquitlam	Moderate constraints	Moderate constraints	Moderate constraints	Moderate constraints
North of CP Facility, Pitt Meadows	No constraints	No constraints	Substantial constraints	Moderate constraints
Southeast CP Facility McTavish, Pitt Meadows	Moderate constraints	No constraints	Substantial constraints	Moderate constraints
North of CP Facility, Harris, Pitt Meadows	Moderate constraints	Substantial constraints	Substantial constraints	No constraints
West of Lougheed Highway, Maple Ridge	Moderate constraints	Moderate constraints	Moderate constraints	Substantial constraints
South of Lougheed Highway, Mission	No constraints	Moderate constraints	Moderate constraints	Substantial constraints

6.0 CONCLUSIONS

As a result of the evaluation of the Strategic Lands and alternative sites against the criteria identified in Sections 5.1, 5.2 and 5.3, the following are some key conclusions that support the selection of the proposed site in Pitt Meadows south of CP's existing facility.

AVOIDANCE OF IMPACTS TO PHYSICAL INFRASTRUCTURE

The Strategic Lands site will avoid several impacts to physical infrastructure (i.e., utilities and road crossings) that nearly all the other sites do not. This is a significant benefit of the proposed site because it would not require the additional costs or mitigation that would be required at other evaluated sites. Entirely avoiding local or regional road impacts, for example, means less short and long-term traffic impacts.

DISTANCE FROM EXISTING NEIGHBOURHOODS AND AMENITIES

The proposed site also provides a significant buffer from existing residential communities and recreational amenities compared to some of the alternative sites evaluated. This additional distance would mean substantially less impacts to manage from rail related activities including noise, light, and air quality considerations.

EXPANSION VS. NEW SITE

In addition, to the advantages noted above associated with the Strategic Land, the use of the lands to support expansion of an existing facility, rather than the establishment of a new one, provides the most efficient use of land and represents another important consideration in an area with intense competition for land to support a diversity of users. This is also consistent with the Metro Vancouver Regional Lands Strategy Report (2020), which highlights the emerging industrial lands crisis in the Lower Mainland precipitated by a constrained land supply and increasing pressures on existing industrial lands. The report notes the importance of facilitating the densification of industrial lands, as well as the importance of lands with easy access to trucking routes, highways, railways, and ports.

For all sites, including the Strategic Lands, there would be the need to address challenges through design and operational planning.

OVERALL

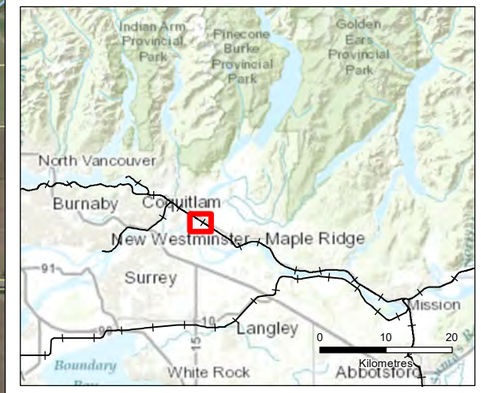
The Strategic Lands represent a reasonable location to support CP's future operational needs. With respect to existing environmental values, all sites demonstrated generally low environmental values because of previous development. The selection of an alternative site, rather than the Strategic Lands, would not result in any substantial environmental benefit.

APPENDIX A

MAPBOOK OF SEVEN SITE LOCATIONS

CP Logistics Park: Vancouver

Site #1



Legend

- Alternative Site Boundary
- Crossing
- Mile Marker
- Dike
- Electrical Transmission Line
- Gas Line
- Railway
- Property Parcel
- Watercourse
- Waterbody

Notes

1. All mapped features are approximate and should be used for discussion purposes only.
2. This map is not intended to be a "stand-alone" document, but a visual aid of the information contained within the referenced Report. It is intended to be used in conjunction with the scope of services and limitations described therein.

Sources

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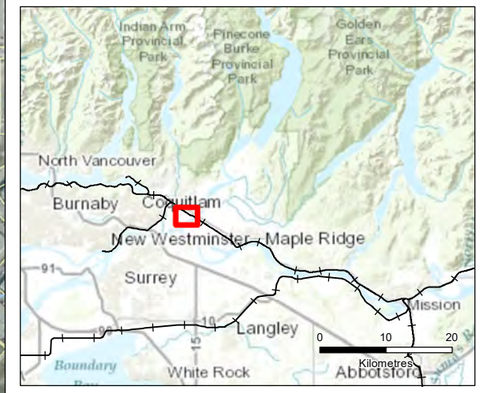
CP Logistics Park: Vancouver

Site #2



Legend

- Alternative Site Boundary
- Mile Marker
- Fire Hall
- Recreation Amenity
- Dike
- Electrical Transmission Line
- Gas Line
- Railway
- Property Parcel
- Watercourse
- Waterbody

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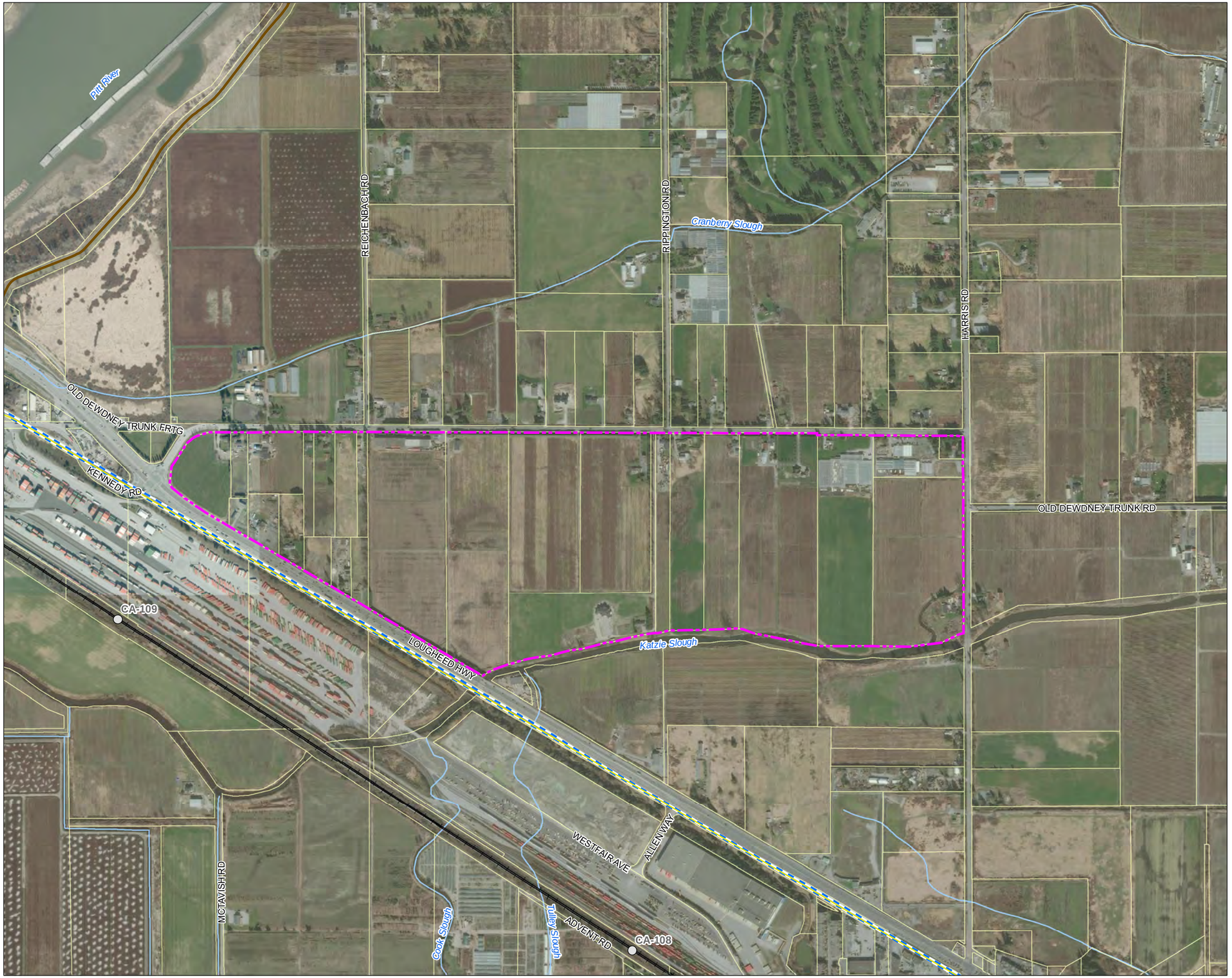

CP Logistics Park: Vancouver

Site #3

Legend

- Alternative Site Boundary
- Property Parcel
- Mile Marker
- Watercourse
- Dike
- Electrical Transmission Line
- Gas Line
- Railway

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CP Logistics Park: Vancouver

Site #4

Legend

- Alternative Site Boundary
- Crossing
- Mile Marker
- Fire Hall
- Recreation
- Dike
- Electrical Transmission Line
- Gas Line
- Railway
- Property Parcel
- Watercourse

Notes

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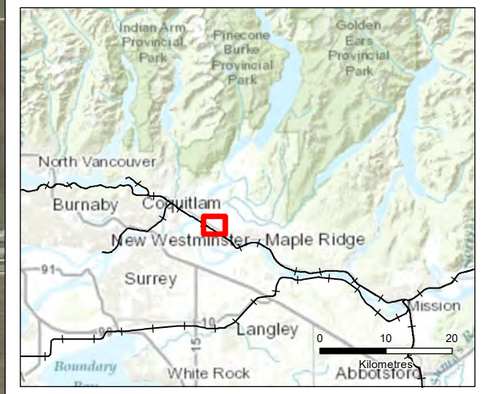
CP Logistics Park: Vancouver

Site #5



Legend

- Alternative Site Boundary
- Crossing
- Mile Marker
- Educational Facility
- Recreation
- Electrical Transmission Line
- Gas Line
- Railway
- Property Parcel
- Watercourse

Notes

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CP Logistics Park: Vancouver

Site #6

Legend

- Alternative Site Boundary
- Crossing
- Mile Marker
- Educational Facility
- Recreation Amenity
- Dike
- Electrical Transmission Line
- Gas Line
- Railway
- First Nation Reserve
- Property Parcel
- Watercourse
- Waterbody
- Wetland

Notes

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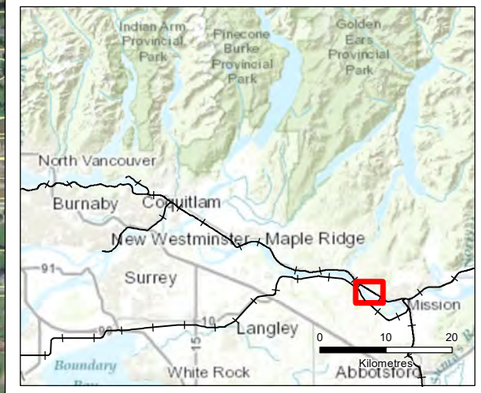
CP Logistics Park: Vancouver

Site #7



Legend

- Alternative Site Boundary
- Crossing
- Mile Marker
- Recreation Amenity
- Dike
- Electrical Transmission Line
- Gas Line
- Railway
- Property Parcel
- Watercourse
- Waterbody

Notes

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APPENDIX B

SPECIES AT RISK WITHIN GEOGRAPHIC RANGE

Common Name	Scientific Name	SARA Status	Potential for Species to Occur						
			Broadway Business Park, Port Coquitlam	North of CP Facility, Pitt Meadows	South of CP Facility, Pitt Meadows	Southeast CP Facility McTavish, Pitt Meadows	North of CP Facility, Harris, Pitt Meadows	West of Lougheed Highway, Maple Ridge	South of Lougheed Highway, Mission
Northern Red-legged Frog	Rana aurora	Special Concern	Low	High	High	High	High	High	High
Band-tailed Pigeon	Patagioenas fasciata	Special Concern	Low	High	High	High	High	High	High
Barn Owl	Tyto alba	Threatened	Low	High	High	High	High	Low	High
Barn Swallow	Hirundo rustica	Threatened	Low	High	High	High	High	Low	High
Common Nighthawk	Chordeiles minor	Threatened	High	High	High	High	High	High	High
Evening Grosbeak	Coccothraustes vespertinus	Special Concern	Low	Low	Low	Low	Low	High	High
Great Blue Heron, fannini subspecies	Ardea herodias fannini	Special Concern	Low	High	High	High	High	High	High
Olive-sided Flycatcher	Contopus cooperi	Threatened	Low	Low	Low	Low	Low	High	High
Peregrine Falcon, anatum subspecies	Falco peregrinus anatum	Special Concern	High	High	High	High	High	High	High
Short-eared Owl	Asio flammeus	Special Concern	Low	High	High	High	High	Low	High
Oregon Forestsnail	Allogona townsendiana	Endangered	Low	Low	Low	Low	Low	High	High
Audouin's Night-stalking Tiger Beetle	Omus audouini	Threatened	Low	High	High	High	High	High	High
Dun Skipper	Euphyes vestris	Threatened	Low	High	High	High	High	Low	High

Common Name	Scientific Name	SARA Status	Potential for Species to Occur						
			Broadway Business Park, Port Coquitlam	North of CP Facility, Pitt Meadows	South of CP Facility, Pitt Meadows	Southeast CP Facility McTavish, Pitt Meadows	North of CP Facility, Harris, Pitt Meadows	West of Lougheed Highway, Maple Ridge	South of Lougheed Highway, Mission
Little Brown Myotis	Myotis lucifugus	Endangered	Low	High	High	High	High	High	High
Pacific Water Shrew	Sorex bendirii	Endangered	Low	High	High	High	High	High	High
Roell's brotherella	Brotherella roellii	Endangered	Low	Low	Low	Low	Low	High	High
streambank lupine	Lupinus rivularis	Endangered	High	Low	Low	Low	Low	High	Low
Vancouver Island beggarticks	Bidens amplissima	Special Concern	High	High	High	High	High	High	High
Painted Turtle - Pacific Coast Population	Chrysemys picta pop. 1	Endangered	Low	High	High	High	High	High	High
		Total Potential Species	4	14	14	14	14	15	18

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