

## **PART C - ABORIGINAL INFORMATION REQUIREMENTS**

This section considers Aboriginal Information Requirements as described in the Application Information Requirements/EIS Guidelines (AIR/EIS Guidelines) for the Proposed Project. Section 10.0 provides background information for all Aboriginal Groups listed in the Section 11 Order issued by BC EAO or by CEA Agency in subsequent correspondence. As none of the Aboriginal Groups identified in the AIR/EIS Guidelines have established treaty rights, Section 11.0 considers only asserted or established Aboriginal Rights (“Aboriginal Rights”), and potential effects of the Proposed Project on the ability to exercise those Aboriginal Rights. As part of this analysis, Section 11.0 also considers potential effects on the current use of lands and resources for traditional purposes (“current use”) by Aboriginal peoples, including intangible cultural heritage considerations, in the Proposed Project Area. Section 11.2 considers potential effects of the Proposed Project on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, while Section 11.3 considers potential effects of the Proposed Project on the Aboriginal Rights and associated current use of Tsleil-Waututh Nation, Musqueam Indian Band, Stz’uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia.

Section 12.0 provides an assessment of potential environmental, economic, social, heritage and health effects of the Proposed Project on other Aboriginal interests not included in Section 11.0, where these other interests were identified through consultation with the Aboriginal Groups identified in the Section 11 Order. Section 13.0 describes the consultation activities that BURNCO undertook with the identified Aboriginal Groups during the pre-Application stage, including summaries of information discussed, comments received, and concerns and interests raised during those activities where such information is not considered confidential. Section 13.0 also presents proposed consultation activities for the Application Review stage and subsequent to the issuance of the EAC. Section 14.0 summarizes the information provided throughout Part C.

## 10.0 BACKGROUND INFORMATION

This section describes the potentially affected Aboriginal Groups named by the BC EAO Section 11 Order or as otherwise identified by the CEA Agency.

As set out in the Section 11 Order for the Proposed Project, issued by the BC EAO on June 1, 2010, the following Aboriginal Groups were identified as potentially affected by Proposed Project:

- *Skwxwú7mesh* (Squamish) Nation; and
- Tsleil-Waututh Nation.

In a letter dated November 12, 2013, which was prepared in response to the Proponent's October 2, 2013 marine barge shipping analysis, the CEA Agency subsequently identified information requirements to be included in the EAC Application/EIS for the following Aboriginal Groups:

- Musqueam Indian Band;
- Stz'uminus First Nation;
- Cowichan Tribes;
- Halalt First Nation;
- Lake Cowichan First Nation;
- Lyackson First Nation;
- Penelakut Tribe; and
- Métis Nation British Columbia.

### 10.1 Aboriginal Regional Setting

This section provides background information for each of the identified Aboriginal Groups. Information regarding Indian Reserves, Treaty Settlement Areas, Consultation Areas, if applicable, and spatial extent of each Aboriginal Groups' territorial interests, are provided in this section, along with information pertaining to population, language, governance, land use planning, and economic interests, where available. Maps of the traditional territories of the identified Aboriginal Groups, including the location of Indian Reserves, traditional territories or consultation areas based on information currently available, are provided in Figure 10-1 through Figure 10-7. The information was obtained from Aboriginal Groups through consultations on the Proposed Project or from the following publicly available sources:

- Aboriginal Groups' websites or publications;
- BC Treaty Commission;
- Aboriginal Affairs and Northern Development Canada (AANDC);
- Applications for other projects posted on the BC EAO and the CEA Agency websites; and

■ First Peoples’ Heritage, Language and Culture Council (FPHLCC).

The ancestral languages of the Aboriginal Groups identified by the BC EAO and by the CEA Agency (with the exception of Métis Nation British Columbia), belong to the Coast Salish language family, and more specifically the Central Coast Salish branch of that family. The *Skwxwú7mesh* People speak the *Skwxwú7mesh Snichim* (Squamish language). The “Downriver” dialect of Halkomelem, or *Hə́ŋqəmiḥə́m*, is associated with nations along the Fraser River from its mouth to the Stave River, including, Musqueam and Tsleil-Waututh (FPHLCC 2015). The “Island” dialect of Halkomelem, or *Hul’qumi’num*, is associated with nations based on southeastern Vancouver Island from north of Mill Bay to Qualicum, including Cowichan Tribes, Halalt, Lake Cowichan, Lyackson, Penelakut, and Stz’uminus (FPHLCC 2014). Downriver and Upriver dialects have been collectively described as Mainland Halkomelem. The term “Cowichan” has been reportedly used ethnographically to refer to all speakers of the Island Halkomelem dialect, and in some cases, to speakers of both Island and Mainland Halkomelem (EAO and PMV 2012). The ancestral language of Métis is Michif, which has several dialects (Métis 2015a).

Aboriginal ties to the Proposed Project Area and its surrounding area specifically, and Howe Sound generally, is reflected in, for example, named places, origin stories, transformation sites (where, long ago, ancestors were transformed into animals and natural features of the landscape), and life histories. Some of the place names in the vicinity of the Proposed Project Area are listed in Table 10-1. The place names reported below may not reflect the full range of named places in the vicinity of the Proposed Project known to the Aboriginal Groups, and in particular to *Skwxwú7mesh* Nation.

**Table 10-1: Place Names in the Vicinity of the Proposed Project**

Name	Meaning/Resource Reference	Aboriginal Group(s)	Location	Reference
<i>Chaich-ph</i>	Known as a good place to hunt deer	<i>Skwxwú7mesh</i> Nation	Keats Island	Reimer 2011
<i>Ch’axay</i> <i>Ch’axa’y</i>	“Sizzling Water” Herring spawned here in March	<i>Skwxwú7mesh</i> Nation	Southern edge of Howe Sound in Horseshoe Bay	Kennedy and Bouchard 1976a in Millennia Research Ltd. 1997; Reimer
<i>Ch’a’7elism</i>	“Some Kind of Little Fish Always Goes There” – spot to intercept fish moving up and down Howe Sound	<i>Skwxwú7mesh</i> Nation	On the eastern shore of Gambier Island	Reimer 2011
<i>Ch’ekchkekts</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Small stream up the Squamish	Kennedy and Bouchard 1976a in Millennia Research Ltd. 1997
<i>Ch’ich’elxwikw</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Seymour Creek	Kennedy and Bouchard 1976a in Millennia Research Ltd. 1997
<i>Ch’kw’elhp</i>	Place of origin of Squamish people	<i>Skwxwú7mesh</i> Nation	Southwestern edge of Howe Sound	Reimer 2011

Name	Meaning/Resource Reference	Aboriginal Group(s)	Location	Reference
<i>Elksen</i>	Sturgeon taken here	<i>Skwxwú7mesh</i> Nation	Point Grey	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997
<i>Jol-gul-hook</i>	Unknown	Tsleil-Waututh Nation	Seymour Creek	Morin 2015
<i>Kw'émkw'em</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Defense Islands	Kennedy and Bouchard 1976a in <i>WLNG</i> 2014
<i>kw'ech'tenm</i>	"fish cutting place"	<i>Skwxwú7mesh</i> Nation	McNab Creek	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997
<i>Kwtsa7stsutsin</i>	"Island at mouth" – known for spawning herring in March	<i>Skwxwú7mesh</i> Nation	Shannon Bay	Kennedy and Bouchard 1976a in <i>WLNG</i> 2014
<i>lyelshen</i>	Sturgeon taken here	<i>Skwxwú7mesh</i> Nation	English Bay	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997
<i>Lháxwen</i> <i>Lhaxwn</i>	Where transformed sea serpent lived	<i>Skwxwú7mesh</i> Nation	Anvil Island	Kennedy and Bouchard 1976a in <i>WLNG</i> 2014; Reimer 2011
<i>P'ap'k</i>	In late August coho available here	<i>Skwxwú7mesh</i> Nation	Stream in Lion's Bay	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997
<i>Senakw</i>	Temporary settlement for access to fishing grounds	<i>Skwxwú7mesh</i> Nation	False Creek	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997
<i>Skwiwitsut</i>	"place plentiful in surf scooters"	<i>Skwxwú7mesh</i> Nation	Point Atkinson	Kennedy and Bouchard 1976b in <i>Millennia Research Ltd.</i> 1997
<i>(Selilwetulh)</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Head of Indian Arm	<i>Millennia Research Ltd.</i> 1997
<i>Stamas</i> <i>Sta'mis</i>	"Winter village at the head of Howe Sound	<i>Skwxwú7mesh</i> Nation	Head of Howe Sound	<i>Millennia Research Ltd.</i> 1997; Reimer 2011
<i>Tl'etl'ch'a'lk'm</i>	"To Stalk up on Something" – excellent hunting for deer, elk, and mountain goat	<i>Skwxwú7mesh</i> Nation	Eastern shore of Howe Sound	Reimer 2011
<i>Tsi'tsusm</i>	"They had a big Potlatch There"	<i>Skwxwú7mesh</i> Nation	Mouth of Potlatch Creek – western shore of Howe Sound	Reimer 2100
<i>Xa7elcha</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Lynn Creek	Kennedy and Bouchard 1976a in <i>Millennia Research Ltd.</i> 1997



Name	Meaning/Resource Reference	Aboriginal Group(s)	Location	Reference
<i>Xwemelch'etsten</i>	Not reported	<i>Skwxwú7mesh</i> Nation	Capilano River	Kennedy and Bouchard 1976a in Millennia Research Ltd. 1997

**10.1.1 *Skwxwú7mesh* (Squamish) Nation**

For centuries people of the *Skwxwú7mesh* (Squamish) Nation have lived in villages throughout their territory and managed their lands and waters. From the Nation’s perspective the lands and waters of their territory have always been theirs, and they have always had the right to use and control these lands and waters, and enjoy the benefits that arise from the territory. *Skwxwú7mesh* oral history consistently describes the Nation’s ties to the territory, and numerous *Skwxwú7mesh* spiritual, settlement, resource, and travel sites provide evidence of *Skwxwú7mesh* occupation and use since the earliest times (Traditions 2015a).

Prior to and following the arrival of Europeans in the late 1700s the lands and waters used and occupied were as follows: from Point Grey on the south to Roberts Creek on the west; then north along the height of land to the Elaho River headwaters including all of the islands in Howe Sound and the entire Squamish valley and Howe Sound drainages; then southeast to the confluence of the Soo and Green Rivers north from Whistler; then south along the height of land to the Port Moody area including the entire Mamquam River and Indian Arm drainages; then west along the height of land to Point Grey out to, and including, the Fraser River (SN 2013a).

A map of *Skwxwú7mesh*’s traditional territory and consultation area can be found in Figure 10-4. Today, as it always has been, this is the territory of the *Skwxwú7mesh* Nation (SN 2013a). *Skwxwú7mesh*’s territory is 6,732 square kilometers and includes present day cities of cities of Vancouver, Burnaby and New Westminister, all of the cities of North Vancouver and West Vancouver, Port Moody and all of the District of Squamish and the Municipality of Whistler. These boundaries embrace all of Howe Sound, Burrard Inlet and English Bay as well as the rivers and creeks that flow into these bodies of water and the various islands located in Howe Sound.

The *Skwxwú7mesh* are the only Aboriginal people identified in the documentary record as occupying northern Howe Sound and the only Indian Reserves established by the Crown in Howe Sound in the late nineteenth century were allocated to the *Skwxwú7mesh* (Traditions 2015b). *Skwxwú7mesh* links to these lands and waters are numerous and *Skwxwú7mesh* place names exist throughout the area. In many instances, a location has particular meaning to *Skwxwú7mesh* people because of the existence of oral traditions that explain that place in the *Skwxwú7mesh* universe and *Skwxwú7mesh*’s relationship to the land.

The component groups that make up the *Skwxwú7mesh* Nation take their names from their winter villages located on the Squamish River drainage. In the nineteenth century there were at least 16 winter villages, with summer residences on Howe Sound and Burrard Inlet (Boas [1886]; Suttles 1990:453). These settlements contained large post and beam houses and were the base sites for economic and social activities.

The *Skwxwú7mesh* Nation has been in the territory since time immemorial, with a society that has always been organized with a system of complex laws and rules governing all forms of social relations, economic rights and relations with other First Nations (SN 2013a). The modern era of *Skwxwú7mesh* *Úxwumixw* (Squamish Nation) was declared on July 23, 1923 through the “Prayer of Amalgamation” which amalgamated sixteen *Skwxwú7mesh*

speaking tribes. Today, the *Skwxwú7mesh* Nation's government is comprised of sixteen elected councillors, for four-year terms plus an elected Band Manager. The sixteen elected councillors elect Co-Chairs of the Council instead of a Chief. The *Skwxwú7mesh* Nation governance model is unique (SN 2013b). The Council works closely with the *Skwxwú7mesh* Nation Administration, which administers more than 150 programs and services for its membership (SN 2013b).

*Skwxwú7mesh stelmexw* (Squamish people) continue to reside in the area now described as the Lower Mainland of British Columbia (SN 2013c). The total registered population of *Skwxwú7mesh* Nation is 4,141, with 2,239 registered members living on their own reserves and the remainder living off reserve and on other reserves (AANDC 2015). The largest proportion of *Skwxwú7mesh* members reside on several urban reserves in the city of Vancouver, North and West Vancouver and the municipality of Squamish (SN 2013c).

Throughout *Skwxwú7mesh* territory the Crown has set aside 24 Indian Reserves for the *Skwxwú7mesh* (AANDC 2015; see Figure 10-1). However, many of the areas throughout the *Skwxwú7mesh* territory where *Skwxwú7mesh* settlements existed were never set as Indian Reserves (SN 2013a).

The *Skwxwú7mesh* Nation is involved in treaty negotiations through the BC treaty process, is at Stage Three of the six-stage process, and is negotiating a Framework Agreement with Canada and the Province of BC. *Skwxwú7mesh* Nation's traditional territory is described in their Statement of Intent (Figure 10-4) filed with the BC Treaty Commission (BCTC), and is described above.

Legislation, land alienations, development, and industrial operations have polluted *Skwxwú7mesh* territory and denied the Nation access to many spiritual, resource harvesting and settlement sites. *Skwxwú7mesh* territory has been transformed by extensive development authorized throughout the territory without the Nation's consent, heavily degrading the health of *Skwxwú7mesh* lands and waters and the ability of *Skwxwú7mesh* members to access, harvest, and use the resources contained therein (Traditions 2015a; Traditions 2015b). The health of the Northern Howe Sound ecosystem and marine environment is currently rebounding through a downturn in major industrial activity and active revitalization efforts (Traditions 2015a; Traditions 2015b).

*Xay Temixw* (sacred land), the Nation's Land Use Plan, describes *Skwxwú7mesh*'s vision for the future of the forests and wilderness of the traditional territory to ensure the land is protected and managed for the benefit of present and future generations (SN 2001). *Xay Temixw* establishes four land use zones, a forest stewardship zone, sensitive areas, restoration areas, and *Kwa kwayx welh-aynexws* (wild spirit places). *Xay Temixw* also sets management objectives that define how the lands, waters, and territory must be managed. These designations and objectives constrain development in *Skwxwú7mesh* territory. *Skwxwú7mesh* is also undertaking marine use planning for the Howe Sound area. These plans are an exercise of the Nation's governance rights to manage their territory in a way that sustains *Skwxwú7mesh* culture today and for future generations, they also set aspirations for the revitalization of the territory and the ecosystems contained therein.

Today, the *Skwxwú7mesh* Nation continues to enjoy and occupy *Skwxwú7mesh* territory, enjoying economic benefits from their lands and waters and proactively using and managing parts of their territory. However, the Nation continues to strive towards the goal of managing its territory in accordance with its traditional laws. In addition to the benefits that flow from harvesting and using traditional resources, sources of revenue for the Nation include taxation, leases, and *Skwxwú7mesh*-owned businesses. For example, the Squamish Nation Marine Group owns and operates the Mosquito Creek and Lynnwood Marinas. The Park Royal Shopping Centre, International Plaza, and Greater Vancouver Storage Sewage Plant, are a few examples of existing tenants on *Skwxwú7mes*

Nation lands. The *Skwxwú7mesh* Nation is also planning to develop parcels of land at Seymour, Capilano, Kitsilano, Chekwelp, and Stawamus (SN 2013c). The *Skwxwú7mesh* Nation is a vibrant and dynamic Coast Salish Nation, with a strong culture, rich history and bright future (SN 2013c).

### **10.1.2 Tsleil-Waututh Nation**

Tsleil-Waututh Nation's main community is located in North Vancouver, BC on the shore of Burrard Inlet, between Maplewood Flats and Deep Cove at Burrard Inlet Indian Reserve (IR) 3 (AANDC 2015). Evidence indicates that Tsleil-Waututh Nation had inhabited a village at the Burrard Inlet IR 3 site for millennia (at least 3000 years) prior to the historic era (Morin 2015:198) and is only one of up to 12 villages occupied by Tsleil-Waututh people prior to contact (Morin 2015). Of 577 registered Tsleil-Waututh members, 288 reside on their own reserves, with the remainder living on the reserves of other First Nations or off-reserve (AANDC 2015).

The Tsleil-Waututh Nation has three reserves comprising 110.7 ha of land, as shown on Figure 10-1 and Figure 10-2. In addition to the main reserve of Burrard Inlet IR 3, which comprises 108.2 ha on the north shore of Burrard Inlet, approximately 40 km from the Proposed Project Area, Inlailawatash IR 4 (0.50 ha) and Inlailawatash IR 4A (2.0 ha), are located near the head of Indian Arm, approximately 38 km and 37 km, respectively, from the Proposed Project Area (AANDC 2015).

Tsleil-Waututh's consultation area extends approximately from Mount Garibaldi in the north, the 49<sup>th</sup> parallel and beyond to the south, west towards Gibsons and east towards Coquitlam Lake (TWN 2008, 2009; PMV 2015; WLNG 2015). The Tsleil-Waututh Nation has established a consultation area (Figure 10-5) that encompasses the area for which documented Tsleil-Waututh use and occupancy information exists and within which the Tsleil-Waututh Nation seeks consultation on proposed land and resource policies, plans, and developments for the purpose of assessing potential effects (TWN 2009).

Tsleil-Waututh people are Coast Salish and speak a dialect of Halkomelem called Hun'qumyi'num (FPHLCC 2015). The name Tsleil-Waututh means "People of the Inlet" (2015a). Tsleil-Waututh Nation's Declaration, as outlined in their Stewardship Policy states, in part (2009):

We are the Tsleil-Waututh First Nation, the People of the Inlet.  
We have lived in and along our Inlet since time out of mind.  
We have been here since the Creator transformed the Wolf  
into the first Tseil-Wautt, and made the Wolf  
responsible for this land.

We have always been here and we will always be here.  
Our people are here to care for our land and water.  
It is our obligation and birthright.  
To be the caretakers and protectors of our Inlet. ...

The Tsleil-Waututh Nation is governed jointly by an elected Chief and Council and a Traditional Council, which is a family-based system of representation by all nine family groups that comprise the Nation. The elected and traditional councils work collectively to ensure that the Nation is governed according to the Nation's vision (TWN 2015b). The Tsleil-Waututh established an Economic Development Department in 1992. The Nation owns and operates several businesses, including Takaya Developments Ltd. (real estate development), Takaya Tours

(cultural tourism), TWN Wind Power Inc. (small wind turbine distribution), Inlailawatash Forestry Limited Partnership (forestry consulting firm), and SPAL General Constructors, a project management company co-owned with Tsawwassen First Nation (TWN 2015d).

The Tsleil-Waututh Nation is involved in treaty negotiations and is at Stage Four of the six-stage process. The Nation signed a Framework Agreement with Canada and the Province of BC and is negotiating an Agreement-in-Principle (BC Treaty Commission 2009b). Outside of the treaty process, the Tsleil-Waututh Nation has formal agreements with provincial ministries and the District of North Vancouver concerning co-management and resource use within its consultation area.

### **10.1.3 Musqueam Indian Band**

The Musqueam Indian Band community is based in the south-west corner of Vancouver, BC, approximately 38 km from the Proposed Project Area. The registered population of the Musqueam Indian Band is 1,367 members, of which 667 primarily live on Musqueam IR 2, with the remaining members living off reserve or on the reserves of other First Nations (AANDC 2015).

Musqueam Indian Band has three reserves, comprising 254.20 ha of land, as shown on Figure 10-2. Their main reserve, Musqueam IR 2, is located on 190.40 ha in south Vancouver, on the north side of the North Arm of the Fraser River. Their two other reserves, Sea Island IR 3 (6.50 ha) and Musqueam IR 4 (57.30 ha) are also located along the lower Fraser River, approximately 41 km and 58 km, respectively, from the Proposed Project Area (AANDC 2015). Sea Island IR 3 fronts the southeast side of MacDonald Slough, adjacent to the City of Richmond and is currently unoccupied. Musqueam IR 4 supports two residences and is within the municipal boundaries of the Corporation of Delta (AANDC 2015). At one time, the Musqueam had a fourth reserve (the first reserve set aside for them) further up the Fraser River at *Qiqéyt* (Brownsville), on the south shore of the Fraser River, across from New Westminster, adjacent to a reserve for the Kwantlen (Crockford 2010, MIB 1976, MBC 1984).

The Musqueam Declaration dated June 10, 1976 describes Musqueam's traditional territory as follows:

The lands, lakes and streams defined and included by a line commencing at Harvey Creek in Howe Sound and proceeding Eastward to the height of land and continuing on the height of land around the entire watershed draining into English Bay, Burrard Inlet and Indian Arm; South along the height of land between Coquitlam River and Brunette River to the Fraser River, across to the South or left bank of the Fraser River and proceeding downstream taking in the left bank of the main stream and the South Arm to the sea, including all those intervening lands, islands and waters back along the shore to Harvey Creek, AND, the sea, its reefs, flats, tidal lands and islands adjacent to the above described land and out to the centre of Strait of Georgia (MIB 1976).

Musqueam's asserted traditional territory encompasses the mouth of the south Fraser River and extends north into the mouth of Howe Sound (WLNG 2015). Musqueam's ancient name is *X'muzk'i'um*, meaning "People of the River Grass and relates back to the grass (məθkʷay) that grows in the Fraser Estuary in the tidal flats and marshes" (MFN 2011). Figure 10-6 presents Musqueam's asserted traditional territory as shown on the Statement of Intent (SOI) filed with the BCTC (BCTC 2009b).

The Musqueam people are part of the Coast Salish linguistic group and speak the downriver dialect of Halkomelem (FPHLCC 2015). The Council of the Musqueam Indian Band are the elected officials of the Band, under Section 74 of the *Indian Act*. Section 81 of the *Indian Act* grants the Council the powers to make by-laws over reserve lands, and the Band Council is entrusted by the Band Membership to represent the Band's perspectives and goals at the reserve, district, provincial, and national levels. Ultimately, the Council answers to the Band Membership and the Minister of Aboriginal Affairs and Northern Development Canada (AANDC) (MIB 2011a).

The Musqueam Indian Band is involved in treaty negotiations, and is at Stage Four of the six-stage BC treaty process. Having signed a Framework Agreement with Canada and the Province of BC, Musqueam is negotiating an Agreement-in-Principle (BCTC 2009b).

In 2008, Musqueam and the Province of British Columbia entered into a Reconciliation, Settlement and Benefits Agreement, which transferred several land parcels to the Musqueam in fee simple, including but not limited to areas in Pacific Spirit Regional Park and the University Golf Course in Point Grey, and along Bridgeport Road in Richmond, at the confluence of the North and Middle Arms of the Fraser River, known as the "Bridgepoint Lands" (MARR 2014b). The Bridgepoint Lands are immediately to the west of the south end of the Oak Street Bridge, at the northern end of the Highway 99 corridor, outside the scope of the Proposed Project.

Musqueam produced a comprehensive community development plan in 2011 that, in part, guides decision-making for the Nation's reserve and fee simple lands (MFN 2011). A year later, Musqueam established the Musqueam Capital Corporation (MCC) the economic development branch of the Musqueam First Nation. The MCC is mandated to oversee revenue generating assets owned by the Musqueam and produce annual revenue stream from profits realized through business operations, capital appreciation and leases and/or property management revenues. The MCC's priorities include managing the assets that Musqueam gained back in 2008 as part of the Reconciliation, Settlement and Benefits Agreement with the Province of British Columbia (the "Province"). MCC also assists with development of business interests, providing support to Musqueam businesses, entrepreneurial opportunities and long-term employment for Members (MIB 2011b).

#### **10.1.4 Stz'uminus First Nation**

The Stz'uminus (formerly known as Chemainus) First Nation community is located near Ladysmith, BC, approximately 64 km from the Proposed Project Area. The registered population of Stz'uminus First Nation is 1,262, of which 690 members live on their own reserves, with the remainder living on the reserves of other First Nations or off-reserve (AANDC 2015).

The Stz'uminus First Nation has four reserves on Vancouver Island, comprising 1,226.20 ha of land, as shown on Figure 10-3. Their largest reserve is Chemainus IR 13 (1,138 ha), located between Ladysmith Harbour and Stuart Channel, approximately 64 km from the Proposed Project Area. The other reserves are Oyster Bay IR 12 (97.60 ha), situated at the head of Ladysmith Harbour approximately 68 km from the Proposed Project Area; Squaw-Hay-One IR 11 (30.70 ha), located southeast of the community of Chemainus approximately 76 km from the Proposed Project Area; and, Say-La-Quas IR 10 (4.60 ha), located on the Chemainus River, approximately 77 km from the Proposed Project Area (AANDC 2015). Stz'uminus explains that their approximately 11 km of waterfront reserve lands, creates "an intimate relationship between Stz'uminus and the marine environment and the rivers and creeks that run into it, which acts as their front yard, their grocery store and their highway" (SFN 2015).



The Stz'uminus First Nation's asserted traditional territory extends from southeastern Vancouver Island, near the Town of Ladysmith, to the lower Fraser River eastwards to Yale (SFN 2015a). The Stz'uminus First Nation has been affiliated with the Hul'qumi'num Treaty Group, whose member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7) (BCTC 2009d). The Hul'qumi'num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

The Stz'uminus First Nation is part of the Coast Salish linguistic group and speak the dialect Hul'qumi'num (FPHLCC 2015). Stz'uminus First Nation is governed by an elected Chief and Council, which forms the authorized government and legal authority on their reserves (SFN 2015b).

The Coastal Salish Development Corporation is the economic development agency of the Stz'uminus First Nation and is responsible for advancing growth strategies through partnerships and relationships with the business community and other Aboriginal Groups. Governed by a board of governors that reports to the Stz'uminus Band Council, the Corporation is currently managing several projects, including recreational, tourism, infrastructure, and fisheries (e.g., Coast Salish Aquaculture Resources Ltd.) developments (Coast Salish Development Corporation 2011).

### **10.1.5 Cowichan Tribes**

Cowichan Tribes, also known as Cowichan Indian Band (within the meaning of the *Indian Act*), is the largest single First Nation in British Columbia (AANDC 2015). The registered population of Cowichan Tribes is 4,796, of which 2446 members live on their own reserves, with the remainder living on other reserves or off-reserve (AANDC 2015).

Cowichan Tribes have nine reserves totalling 2,427.1 ha, located on southeast Vancouver Island as shown on Figure 10-3 and as listed below:

- Cowichan IR 1 (2291.30 ha), located in the Cowichan and Quamichan districts, approximately 88 km from the Project area;
- Cowichan IR 9 (17.90 ha), located near the mouth of Koksilah River at the head of Cowichan Bay, approximately 91 km from the Proposed Project Area;
- Est-Patrolas IR 4 (27.90 ha), located to the south of Cowichan Bay, approximately 95 km from the Proposed Project Area;
- Kil-Pah-Las IR 3 (20.60 ha) and Theik IR 2 (30.30 ha), both located on the south shore of Cowichan Bay and approximately 92 km and 92 km from the Proposed Project Area, respectively;
- Kakalatza IR 6 (8 ha) and Tzart-lam IR 5 (6.5 ha), both located on the Cowichan River and approximately 94 km and 94 km from the Proposed Project Area, respectively;
- Skutz IR 7 (7.30 ha), located on Cowichan River at Skutz Canyon, approximately 95 km from the Proposed Project Area; and

- Skutz IR 8 (14.90 ha), located at the head of Skutz Canyon, approximately 95 km from the Proposed Project Area (AANDC 2015).

Members of the Cowichan Tribes are descendants of various local groups or “tribes” within the historic Cowichan Nation (CT 2014). Currently, the term Cowichan Tribes specifically denotes those Cowichan Nation communities who trace their ancestry to local groups with winter villages on the Cowichan and Koksilah Rivers and Cowichan Bay (Cowichan Tribes n.d. a), including the following:

- Quamichan (Kwa”mutsun);
- Comiaken (Qw”umiyiqun);
- Koksilah (Xwulqw”selu);
- Somena (S”amuna”);
- Clemclemluts (Lhumlhumuluts”);
- Khenipsen (Xinupsum); and
- Cowichan Bay (Ti’lulpalus).

Members of the Cowichan Tribes are part of the Coast Salish linguistic group and speak the dialect Hul’qumi’num (FPHLCC 2015). An elected Chief and twelve councillors govern the Cowichan Tribes (Cowichan Tribes n.d. b).

Cowichan Tribes report their traditional territory extends from southeastern Vancouver Island east through the Southern Gulf Island and across the Strait of Georgia to the south arm of the Fraser River, including its mouth and upriver (CT 2014). The Cowichan Tribes has been affiliated with the Hul’qumi’num Treaty Group, whose member bands collectively assert a core territory or “title lands” and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7) (BCTC 2009b). The Hul’qumi’num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

In 1993, the Cowichan Tribes founded the Khowutzun Development Corporation (KDC) to deliver overall business and financial management to the Khowutzun group of companies and to facilitate business development. KDC’s values are: sustainability, respect, future focused, and connected to tradition (Khowutzun Development Corporation n.d.).

### **10.1.6 Halalt First Nation**

The main Halalt First Nation community is located near Crofton, BC, on Vancouver Island, approximately 78 km from the Proposed Project Area. The registered population of Halalt First Nation is 210, of which 87 registered members live on their own reserves, with the remainder living on the reserves of other First Nations or off-reserve (AANDC 2015).



The Halalt First Nation has two reserves on Vancouver Island as shown on Figure 10-3. The largest reserve, Halalt IR 2 (109.20 ha), is situated on the right bank of the Chemainus River, approximately 78 km from the Proposed Project Area; Halalt Island IR 1 (56.50 ha) is located on Willy Island in Stuart Channel at the mouth of the Chemainus River, approximately 75 km from the Proposed Project Area (AANDC 2015).

Halalt First Nation members are part of the Coast Salish linguistic group and speak the dialect Hul'qumi'num (FPHLCC 2015). The Halalt First Nation is governed by an elected Chief and Council (HFN n.d. a).

Halalt First Nation members report that they originate from the village of *xeláltxw* ("marked houses" or "painted houses"). This village was once located in the Cowichan Valley, at the south-eastern edge of the city of Duncan, BC (HFN n.d. b). Their asserted traditional territory includes the Cowichan Valley at the southeastern edge of the City of Duncan on Vancouver Island as well as Willy Island. They report that historically they used Bonsall Creek, Chemainus River, and the Salish Sea, including the Strait of Georgia.

Halalt First Nation has been affiliated with the Hul'qumi'num Treaty Group, whose member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7) (BCTC 2009d). The Hul'qumi'num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

### **10.1.7 Lake Cowichan First Nation**

The main Lake Cowichan First Nation community is located adjacent to Cowichan Lake, BC. The registered population of Lake Cowichan First Nation is 20 with 12 of 20 registered members living on their own reserve, the remainder living on reserves of other First Nations or off-reserve. Lake Cowichan First Nation has one reserve on Vancouver Island, comprising 39 ha of land along the north shore of Cowichan Lake, approximately 95 km from the Proposed Project Area as shown on Figure 10-3 (AANDC 2015).

Members of Lake Cowichan First Nation descend from the Ditidaht and Cowichan (Somenos) peoples (BC and PMV 2012). The Lake Cowichan people are part of the Coast Salish linguistic group and speak the dialect Hul'qumi'num (FPHLCC 2015). The name Cowichan comes from a Halkomelem word meaning "warm country" or "land warmed by the sun." They explain that at one time both Cowichan Lake and settlement were referred to as "Kaatza" for "big lake" (LCFN 2013a). The First Nation reports that Cowichan Lake has always been their primary home, and that their traditional territory is centred on the lake, taking in surrounding lands, streams, and other waters, including the uppermost part of the Cowichan River. They state that their use of this territory has continued to the present day (LCFN 2015).

Chief and Council is comprised of a Hereditary Chief, who has held the position for the past 38 years, and two Councillors. They are the primary decision makers of the Lake Cowichan First Nation (LCFN 2013b).

Lake Cowichan First Nation has been affiliated with the Hul'qumi'num Treaty Group, whose member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7) (BCTC 2009d). The Hul'qumi'num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

### **10.1.8 Lyackson First Nation**

The Lyackson First Nation has three reserves, all on Le'eyqsun, which lies directly opposite the mouth of the Fraser River in the Strait of Georgia. The registered population of Lyackson First Nation is 212 members, of which 16 live on Lyackson First Nation reserves, with the remainder living on the reserves of other First Nations or off-reserve (AANDC 2015).

The Lyackson First Nation Indian Reserves on Le'eyqsun comprise 744.6 ha of land, as shown on Figure 10-3. The largest reserve, Lyacksun IR 3, is located on 710.60 ha near the north end of Le'eyqsun (Valdes) Island, approximately 54 km from the Proposed Project Area. The other reserves are Portier Pass IR 5 (2 ha) situated at the south tip of Le'eyqsun on Porlier Pass, approximately 62 km from the Proposed Project Area, and Shingle Point IR 4 (32 ha), situated on the west shore of Valdes Island approximately 60 km from the Proposed Project Area.

The Lyackson people are part of the Coast Salish linguistic group and speak the dialect Hul'qumi'num (FPHLCC 2015). They describe Le'eyqsun as their homeland and ancestral territory, one in which they continue to engage in traditional practices on a seasonal basis (LFN 2015). Lyackson First Nation maintains that it enjoys Aboriginal title and rights interests in the southern Gulf Islands, specifically Le'eyqsun; the south-east coast of Vancouver Island in and around Cowichan Valley; along the south arm of the Fraser River; and throughout the Salish Seas (Strait of Georgia) (LFN 2015).

Lyackson First Nation is has been affiliated with the Hul'qumi'num Treaty Group, whose member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7) (BCTC 2009d). The Hul'qumi'num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

### **10.1.9 Penelakut Tribe**

Penelakut Tribe has not reviewed this Part C Aboriginal Information Requirements of the EAC Application/EIS. Penelakut Tribe has not provided information to the Proponent and does not support the use of publicly available information in the Application to support the assessment.

The main Penelakut Tribe community is located on Penelakut Island, BC, approximately 66 km from the Proposed Project Area. The registered population of Penelakut Tribe is 940, of which 524 live on Penelakut Tribe reserves, with the remaining members living on other reserves or off reserve (AANDC 2015).

The Penelakut Tribe has four reserves on the central east side of Vancouver Island, comprising 635.79 ha of land as shown on Figure 10-3. Their main and largest reserve, Penelakut Island IR7, is located on Penelakut Island (556.70 ha) (formerly known as Kuper Island) in Stuart Channel, approximately 66 km from the Proposed Project Area. The other reserves are:

- Galiano Island IR 9 (29 ha), located on the northwest tip of Galiano Island in Porlier Pass, approximately 62 km from the Proposed Project Area;
- Tent Island IR 8 (34.40 ha), located on Tent Island, approximately 72 km from the Proposed Project Area; and

- Tsussie IR 6 (15.50 ha), located at the mouth of Bonsail Creek in Stuart Channel, approximately 78 km from the Proposed Project Area (AANDC 2015).

The Penelakut people are part of the Coast Salish linguistic group and speak the dialect Hul'qumi'num (FPHLCC 2015). They are governed by an elected Chief and Councillors (Government of Canada 2015).

The term "Penelakut" is used to refer to all the Hul'qumi'num people, who at one time, inhabited Penelakut Island. The word itself originates from the Hul'qumi'num name for this place, "Pune'laxutth", which means "log buried on the beach." Historically, there were three permanent village on Penelakut Island, located at Penelakut Spit, Telegraph Harbour, and Lamalchi Bay. Villages were also located at Chemainus Harbour and on Galiano Island (PT 2015).

The Penelakut Tribe has been affiliated with the Hul'qumi'num Treaty Group, whose member bands collectively assert a core territory or "title lands" and a wider marine or fishing territory, as described in its Statement of Intent to the BCTC (Figure 10-7; BCTC 2009d). The Hul'qumi'num Treaty Group, is participating in Stage Four of the six-stage BC treaty process (BCTC 2009d).

#### **10.1.10 Métis Nation British Columbia**

The office of the Métis Nation British Columbia is located in the Lower Mainland area of British Columbia. The Métis Nation British Columbia reports there are more than 11,000 provincially registered Métis citizens, and approximately 70,000 self-identified Métis people (Métis 2015a, b). Within the Lower Mainland, there are six Métis community associations which are identified as follows:

- North Fraser Métis Association, located in Richmond, approximately 49 km from the Proposed Project Area;
- Fraser Valley Métis, located in Abbotsford, approximately 98 km from the Proposed Project Area;
- Golder Ears Métis Society, located in Maple Ridge, approximately 69 km from the Proposed Project Area;
- Chilliwack Métis Association, located in Chilliwack, approximately 112 km from the Proposed Project Area;
- Waceyá Métis Association, located in Abbotsford, approximately 97 km from the Proposed Project Area; and
- Nova Métis Heritage Association, located in Surrey, approximately 57 km from the Proposed Project Area; (Métis 2015c).

The Métis people are descended from First Nations and European fur-traders, and share an ancestral language called Michif, which has several dialects (PMV 2015).

- The Métis Nation British Columbia is not involved in treaty negotiations. In 2006, Métis Nation British Columbia and the Province of British Columbia signed the Métis Nation Relationship Accord to signify a positive working relationship for the nearly 70,000 self-identified Métis in BC (Métis 2015d).

## 11.0 ASSESSMENT OF POTENTIAL EFFECTS ON ABORIGINAL RIGHTS, INCLUDING CURRENT USE

- In accordance with the approved AIR/EIS Guidelines, this section:
  - Provides a non-confidential summary of past, present, and anticipated future uses of lands and resources in the Proposed Project Area by Aboriginal Groups identified in Section 10.0, including but not limited to current use of lands and resources for traditional purposes (“current use”);
  - Identifies, in consultation with Aboriginal Groups identified in Section 10.0, any specific established treaty rights and/or asserted or established Aboriginal Rights, including Aboriginal Title, in the Proposed Project Area where this information is provided by these identified Aboriginal Groups;
  - Identifies any potential effects of the Proposed Project on the uses (including current use) and asserted and/or established Aboriginal Rights of Aboriginal Groups identified in Section 10.0; and
  - Describes mitigation measures proposed to avoid or limit Project effects to uses (including current use) and asserted and/or established Aboriginal Rights of Aboriginal Groups identified in Section 10.0.

For the purposes of the effects assessment presented in Section 11.0, Aboriginal Rights is understood to include asserted and established Aboriginal Rights, including Aboriginal Title, but excludes Treaty Rights, as none of the Aboriginal Groups identified in relation to the Project are Treaty Nations. This assessment also considers current use of lands and resources for traditional purposes and intangible cultural heritage that are linked to the exercise of those rights.

The section excludes consideration of outdoor recreation by Aboriginal people (see Volume 2, Part B - Section 7.3: Non-Traditional Land and Resource Use), Aboriginal marine commercial use (see Volume 2, Part B - Section 7.3: Non-Traditional Land and Resource Use), and physical heritage (see Volume 2, Part B - Section 8.1: Heritage Resources). Aboriginal health considerations, including reliance on country foods, are presented in Section 9.1 Public Health.

A regulatory overview is provided in Section 11.1. Section 11.3 provides the effects assessment, including methodology, on *Skwxwú7mesh* Nation Aboriginal Rights. Section 11.4 provides the effects assessment, including methodology, on Tsleil-Waututh Nation, Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia Aboriginal Rights, including current use.

### 11.1 Regulatory Overview

Section 11.0 presents the analyses of potential effects to Aboriginal Rights, including current use, in a way that is responsive to both common law requirements regarding asserted and established Aboriginal and treaty rights in Canada, pursuant to Section 35 of the *Constitution Act, 1982*, and the statutory requirements of subsection 5(1)(c) of the *Canadian Environmental Assessment Act, 2012*.

With respect to common law, the *Constitution Act, 1982* states “The existing Aboriginal and treaty rights of the Aboriginal peoples of Canada are hereby recognized and affirmed.” Aboriginal Rights refer to practices, traditions and customs that distinguish the unique culture of each First Nation and were practised prior to European contact (BCTC 2015). Aboriginal Title is a subcategory of Aboriginal Rights that is a unique interest in land (BC EAO 2013). Treaty Rights refer to Aboriginal Rights that are set out in a treaty (BCTC 2015).

Treaties are constitutionally protected, government-to-government agreements that define certain rights and create long-term, mutually binding commitments between the parties. Treaties were signed with Aboriginal peoples in Canada between 1701 and 1923, which are commonly referred to as historic treaties, while treaties negotiated today are known as modern treaties. Modern treaties are being negotiated in areas of Canada where treaties were never signed with Aboriginal peoples. Treaty negotiations in British Columbia are following the six stage BC treaty process (BCTC 2015). Although none of the Aboriginal Groups that may be affected by the Project has negotiated Treaty Rights, most are participating in the BC treaty process as noted in the background information in Section 10.0.

Aboriginal Rights, including Aboriginal Title, have also been clarified through case law in BC and Canada since the early 1970s. Landmark decisions include (following Eyford 2015):

- In *Calder* (1973), the Supreme Court of Canada (SCC) acknowledged the existence of Aboriginal Title, but was divided on whether it continued to apply to BC.
- In *Sparrow* (1990), the SCC recognizes that the Musqueam Indian Band has an Aboriginal Right to fish for food, social and ceremonial. *Sparrow* also established the test for justifiable infringement of Aboriginal rights.
- In *Delgamuukw* (1997), the SCC confirmed that Aboriginal Title continued to exist in BC and that title is a right to the land itself. *Delgamuukw* also established the test for proving title.
- In *Haida* (2004), the SCC confirmed that the Crown must consult, and where appropriate, accommodate Aboriginal Groups where a Crown decision may have an adverse effect on their rights.
- In *Manitoba Métis Federation Inc.* (2013), the Court held that the honour of the Crown requires the Crown to diligently fulfill the implementation of constitutional obligations to Aboriginal people.
- In *Tsilhqot'in* (2014), the SCC declared, for the first time an Aboriginal group's Aboriginal Title to a specific area of land, in BC's interior.
- Métis people also hold Aboriginal Rights under Section 35(1) of the *Constitution Act, 1982*, pursuant to Section 35(2). The SCC set out a legal test to determine Métis rights in *R. v. Powley*, which consists of 10 steps. Seven of the steps relate to determination of the existence of a right, and the other three steps refer to determination of whether a right, once established, has been extinguished or infringed. The seven steps relating to determination of a right are identified as follows:
  1. Characterization of the right;
  2. Identification of the historic rights-bearing community;
  3. Identification of the contemporary rights-bearing community;

4. Verification of the claimant's membership in the relevant contemporary community;
5. Identification of the relevant time frame;
6. Determination of whether the practice is integral to the claimant's distinctive culture; and
7. Establishment of continuity between the historic practice and the contemporary right asserted.

Métis rights are collectively held and grounded in the existence of both a historic and contemporary rights-bearing community. The Supreme Court of Canada defined a Métis community as “a group of Métis with a distinctive collective identity living together in the same geographic area and sharing a common way of life” (*R. v. Powley*, paragraph 12). A historic community can be identified through demographic evidence, proof of shared customs, traditions and a collective identity. There must be some continuity and stability with the historic community to establish a contemporary rights-bearing community, although the criteria should be viewed with some flexibility. A present-day Métis right must have been an existing practice at the time when “Europeans effectively established political and legal control” in the area (*R. v. Powley*, paragraphs 12, 37).

In addition to constitutional rights, this section also addresses potential Project-related effects under CEAA 2012 subsection 5(1)(c)(iii) relating to the current use of lands and resources for traditional purposes and aspects of subsection 5(1)(c)(ii) and 5(1)(c)(iv) relating to intangible cultural heritage (collectively referred throughout Section 11.0 as “current use” for brevity). For detailed assessments of the former CEAA subsection 5(1)(c) factors other than current use, see Volume 2, Part B – Sections 9.1 Public Health for potential health-related effects on Aboriginal peoples; Sections 6.1 Sustainable Economy, 7.1 Social Conditions, 7.2 Marine Transportation, 7.3 Land and Resource Use, and 7.4 Visual Resources for potential socio-economic-related effects on Aboriginal peoples; and Volume 2, Part B - Section 8.1: Heritage Resources for potential effects on Aboriginal peoples as a result of a change to physical heritage or to any structure, site or thing of historical, archaeological, paleontological, or architectural significance.

Aboriginal Rights, including current use, are assessed using the methods applied to the assessment of VCs in Part B of the Application. Both Aboriginal Rights and associated 5(1)(c) factors are assessed in Sections 11.3 Assessment of Potential Effects on *Skwxwú7mesh* Nation Aboriginal Rights and 11.4 Assessment of Potential Effects on Tseil-Waututh Nation and other Aboriginal Groups.

## **11.2 Traditional Ecological Knowledge and Community Knowledge Incorporation**

Traditional ecological and community knowledge (TEK/CK) information provided by Aboriginal Groups or obtained through secondary sources informed the description of existing conditions and influenced (or was otherwise integrated into) the assessment of potential adverse effects on Aboriginal Rights, including current use, and the development of mitigation measures. TEK/CK information was sought in accordance with the reference guide, *Considering Aboriginal traditional knowledge in environmental assessments conducted under Canadian Environmental Assessment Act, 2012*. The general principles included in the reference guide were considered in determining what may be considered TEK/CK and how such information should be incorporated into the existing conditions and effects assessments for relevant VCs (CEAA 2013).



Two Project-specific studies were undertaken by *Skwxwú7mesh* (Squamish Nation) and provided to the Proponent prior to the time of writing this Application. Information from *Squamish Occupation and Use of Swiyat (Woodfibre/Mill Creeks) and Northern Howe Sound and Indian River Regions* (Traditions 2015a) and *Skwxwú7mesh Occupation and Use of Kw'ech'tenm (McNab Creek) and the Howe Sound region* (Traditions 2015b) was incorporated into Section 11.3, as appropriate.

In addition to these reports, TEK/CK information was also sought from a variety of publicly-available sources, including, but not limited to:

- An expert report produced on behalf of Tseil-Waututh Nation for another project (Morin 2015);
- Regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., Eagle Mountain – WGP 2015 a,b; PMV 2015; WLNG 2015; EAO and PMV 2012; TMPL 2014);
- The Provincial Heritage Register; and
- Available ethnographic, archaeological, and historical reports (e.g., CT 2014; HTG 2005 a,b; Kennedy and Bouchard 1976a; MIB 1984; Millennia Research 1997; Reimer 2011).

TEK/CK information was considered in the identification of Aboriginal Rights, including current use, the description of relevant existing conditions, the assessment of potential adverse effects on Aboriginal Rights, including current use, and the development of appropriate mitigation measures.

Relevant TEK/CK information was also incorporated into the existing conditions and effects assessments for VCs in Part B. A summary of how TEK/CK information was considered for VCs in Part B is provided in Table 11-1.

**Table 11-1: Incorporation of Traditional Ecological and Community Knowledge (TEK/CK) in Part B of the Assessment**

VC Section	Relevant Section	Method of Incorporation
Fisheries and Freshwater Habitat	Section 5.1.4.1	TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment. TEK/CK sources provided information on species of interest to Aboriginal Groups; however, TEK/CK available at the time of writing provided limited specific information on harvest locations, abundance or quality of anadromous fish, or other environmental knowledge regarding anadromous fish or freshwater habitat in the RSA, including changes to these resources over time.. A general summary of Aboriginal Groups' harvesting of freshwater fish within Howe Sound is included in Section 5.1.
Marine Resources	Section 5.2.4.1	TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment. TEK/CK sources provided information on species of interest to Aboriginal Groups; however, TEK/CK available at the time of writing provided limited specific information on harvest locations, abundance or quality of marine resources, or other environmental knowledge regarding marine resources in the RSA, including changes to these resources over time. A general summary of Aboriginal Groups' harvesting of marine resources within Howe Sound is included in Section 5.2.



VC Section	Relevant Section	Method of Incorporation
Terrestrial Wildlife and Vegetation	5.3.1.4.1. and 5.3.2.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform Existing Conditions and this effects assessment.</p> <p>TEK/CK sources provided information on species of interest to Aboriginal Groups; however, TEK/CK available at the time of writing provided no specific information on harvest locations, abundance or quality of terrestrial wildlife and vegetation, or other environmental knowledge regarding terrestrial wildlife and vegetation harvested in the RSA, including changes to these resources over time. A general summary of Aboriginal Groups' harvesting of terrestrial wildlife and vegetation resources within Howe Sound is included in Section 5.3.</p>
Geotechnical and Natural Hazards	Section 5.4.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on geotechnical hazards.</p>
Surface Water Resources	Section 5.5.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on harvest locations, abundance or quality of, or other environmental knowledge regarding resources potentially affected by Project-related activities in the RSA, including changes to these resources over time. Section 5.5 includes a general summary of Aboriginal Groups' harvesting of resources potentially affected by Project-related effects on surface water resources within Howe Sound.</p>
Groundwater Resources	Section 5.6.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on groundwater resources.</p>
Climate Change	Section 5.8.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on climate change.</p>
Marine Transportation	Section 7.2.4.1	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on specific routes used for marine transportation in the RSA. A general discussion of Aboriginal Groups' use or marine transportation routes within Howe Sound is included in Section 7.2.</p>
Non-traditional Land and Resource Use	Section 7.3.4.2	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on non-traditional land or resource use in the RSA.</p>

VC Section	Relevant Section	Method of Incorporation
Heritage Resources	Section 8.1.4.1	<p>TEK/CK information was sought from publicly-available sources in the process of conducting a heritage resources overview assessment (HROA) to characterize archaeological and historical baseline conditions for the Heritage Resources VC, and to plan for the archaeological impact assessment (AIA). These sources included the Provincial Heritage Register and available ethnographic, archaeological, and historical reports. The HROA and the results of the AIA informed this effects assessment on heritage resources.</p> <p>All TEK/CK information, including the sources noted in this section, available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>These TEK/CK sources did not provide any additional specific information that would affect the existing conditions or effects assessment for the Heritage Resources VC. A summary of general information related to cultural heritage was included in Section 8.1.</p>
Public Health	Section 9.1.4	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>TEK/CK sources available at the time of writing provided no specific information on harvest locations, abundance or quality of country foods, or other environmental knowledge regarding country foods harvested in the RSA. A general discussion of Aboriginal Groups' harvesting of marine resources within Howe Sound was included in Section 9.1.</p>
Noise	Section 9.2.4.2	<p>TEK/CK information available at the time of writing was reviewed to inform existing conditions and this effects assessment.</p> <p>Aboriginal Groups consulted on the Proposed Project noted concerns regarding the potential effects of noise from the Proposed Projects on their experience while using Howe Sound.</p> <p>Receptor locations were chosen in areas where there are seasonal, semi-permanent and permanent residences surrounding the Proposed Project, as well as a location across the Thornbrough Channel from the Proposed Project and at unoccupied locations 1.5 km from the Proposed Project. These locations were considered adequate to provide information on potential effects of noise in areas of use by Aboriginal Groups.</p>

### 11.3 Assessment of Potential Effects on *Skwxwú7mesh* Nation Aboriginal Rights, including Current Use

#### 11.3.1 Methodology

This section provides a description of the assessment methodology used to prepare Part C of the Application related to potential effects of the Proposed Project on *Skwxwú7mesh* Nation's Aboriginal rights, including the current use of lands and resources for traditional purposes and associated intangible cultural heritage. The assessment methodology generally follows typical EA practice for the assessment of VCs, as detailed in Volume 2, Part B - Section 4.0: Assessment Methods of this Application, with input from *Skwxwú7mesh* to the Proponent to address, where necessary, constraints and to capture *Skwxwú7mesh*'s unique rights and interests in the Proposed Project.

It is *Skwxwú7mesh* Nation's opinion that the methodology adopted here is appropriate for this Project only and the specific circumstances surrounding this assessment, but must not be construed as a general methodology that would be available to categorize impacts on the Nation's Aboriginal Rights from different projects.

Pursuant to input from *Skwxwú7mesh* Nation, the following steps were undertaken in collaboration with *Skwxwú7mesh* Nation to assess potential effects of the Proposed Project on *Skwxwú7mesh* Nation's Aboriginal Rights, including current use:

**Step 1:** Define sub-components of Aboriginal Rights that are relevant for *Skwxwú7mesh* Nation's purposes and are pertinent to the Proposed Project. Also, define indicators that will be used to convey the past, present and anticipated future status of the sub-components (Section 11.3.1.2).

**Step 2:** Define spatial, temporal and administrative boundaries that will inform the effects assessment (Section 11.3.1.3).

**Step 3:** Describe the status of *Skwxwú7mesh* Nation's Aboriginal Rights, with particular emphasis on the subcomponents and indicators adopted, and according to the boundaries defined for the assessment (Section 11.3.2).

**Step 4:** Describe potential effects that the Project may have on the sub-components of *Skwxwú7mesh* Nation's Aboriginal Rights (Section 11.3.3).

**Step 5:** If closer review in Step 4 reveals that the potential effects pathways can reasonably be expected to create adverse effects, then additional mitigation specific to *Skwxwú7mesh* Nation's concerns will be explored (Section 11.3.4).

**Step 6:** Characterize the residual effects that will exist after the development of Nation-specific mitigation (Section 11.3.5).

The methods identified above were agreed to between the *Skwxwú7mesh* Nation and the Proponent, and the assessment is largely based on content provided by the Nation to the Proponent for each of the steps identified. The *Skwxwú7mesh* Nation subsequently reviewed a draft of Part C prior to submission to confirm that the content provided by the Nation had been appropriately integrated into the Application.

### **11.3.1.1 Valued Component Selection and Rationale**

The AIR/EIS Guidelines requires an assessment of potential effects of the Proposed Project on *Skwxwú7mesh* Nation asserted and/or established Aboriginal Rights, including current use.

### **11.3.1.2 Measurable Indicators**

The subcomponents and indicators chosen for the assessment of potential effects on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, and the rationale for their selection are presented in Table 11-2. *Skwxwú7mesh* Nation states that where possible, this set of proxies is used to convey the current and predicted future status of *Skwxwú7mesh* Nation's use and occupation, as they pertain to the Proposed Project.

It is *Skwxwú7mesh* Nation's opinion that the indicators listed in Table 11-2 are a compromise imposed by the administrative process for assessment under the BC *Environmental Assessment Act*. The indicators are not endorsed by the Nation as broadly encompassing the potential interactions between the Proposed Project and *Skwxwú7mesh* Nation's Aboriginal Rights. It is *Skwxwú7mesh* Nation's opinion that the indicators only represent a sub-set of *Skwxwú7mesh* rights that may be impacted by the Proposed Project, and for which baseline data and

Project details allow at least some level of meaningful effects assessment. Notwithstanding these limitations, *Skwxwú7mesh* Nation agrees that the indicators illustrate aspects of the Nation’s Aboriginal Rights that extend beyond strictly resource-focused activities of hunting, fishing and trapping.

**Table 11-2: Assessment Subcomponents and Measurable Indicators for *Skwxwú7mesh* Nation Aboriginal Rights**

Assessment Subcomponent	Rationale for Selection	Measurable Indicator(s)
<p><b>Terrestrial Resources</b></p>	<p>Abundance of resources is a pre-condition to any resource-harvesting activity or other practice of Aboriginal Rights. Given the Project setting, the terrestrial resources of highest concern for traditional harvest practices are ungulates (particularly deer and elk) and their habitats.</p>	<ul style="list-style-type: none"> <li>▪ Change in ungulate habitat quality and quantity</li> </ul>
<p><b>Aquatic Resources</b></p>	<p>Abundance of resources is a pre-condition to any resource-harvesting activity or other practice of Aboriginal Rights. Direct impacts to freshwater fish, marine fish, marine mammals, or indirect impacts via habitat damage, are potential effects pathways.</p>	<ul style="list-style-type: none"> <li>▪ Change in freshwater habitat quantity and quality</li> <li>▪ Change in marine habitat quantity and quality</li> </ul>
<p><b>Governance of <i>Skwxwú7mesh</i> Nation Lands</b></p>	<p>This assessment component and the effects assessment was completed by <i>Skwxwú7mesh</i> Nation.</p> <p><i>Xay Temíxw</i> sets out explicit land use objectives for certain sections of <i>Skwxwú7mesh</i> Nation territory and general objectives for its entirety. These objectives represent <b>some</b> of <i>Skwxwú7mesh</i> Nation’s long term views for balancing cultural and economic development of the territory, particularly the terrestrial base. Projects that are inconsistent with these objectives therefore undermine the ability of <i>Skwxwú7mesh</i> Nation to fulfill this collective vision.</p> <p><i>Skwxwú7mesh</i> Nation asserts the right to make governance decisions regarding land use proposals in its territory. Submitting a project through Crown regulatory processes, including provincial and federal EAs, renders the <i>Skwxwú7mesh</i> Nation a “consulted stakeholder” of other governments’ decision making and potentially builds on existing adverse cumulative impacts on these governance rights.</p>	<ul style="list-style-type: none"> <li>▪ Consistency with land use objectives set out in <i>Xay Temíxw</i></li> <li>▪ Decision making authority for land use proposals within <i>Skwxwú7mesh</i> Nation territory</li> </ul>

Assessment Subcomponent	Rationale for Selection	Measurable Indicator(s)
<p><b>Impacts to Use and Occupancy of <i>Skwxwú7mesh</i> Nation Territory</b></p>	<p>This assessment component and the effects assessment was completed by <i>Skwxwú7mesh</i> Nation.</p> <p><i>Skwxwú7mesh</i> Nation’s Aboriginal Rights, including Aboriginal Title, are protected by section 35 of the <i>Constitution Act, 1982</i>. <i>Skwxwú7mesh</i> Nation, on behalf of its membership, asserts and protects these rights throughout its territory and consultation area (Figure 10-4). Members have always exclusively used and occupied the Proposed Project Area for the practice of such rights.</p> <p>Where terrestrial or marine areas are directly alienated from members, this reduces the ability to practice Aboriginal Rights, including current use, and to exercise the rights associated with the Nation’s title interests.</p> <p>Where marine or terrestrial activities by non-members interfere with freedom of movement to preferred areas of use, this interferes with Aboriginal Rights, including title.</p> <p>Sensory disturbances due to industrial activities by non-members may also adversely affect the practice of Aboriginal Rights, including current use, where factors such as solitude or viewscape are integral to the overall practice of this right.</p>	<ul style="list-style-type: none"> <li>▪ Direct alienation of land and marine areas through Project footprint or exclusion areas</li> <li>▪ Indirect alienation of land and marine areas due to accessibility challenges</li> <li>▪ Sensory disturbances to existing or potential future areas for practice of Aboriginal Rights</li> </ul>
<p><b>Transmission of <i>Skwxwú7mesh</i> Nation Culture and History</b></p>	<p>This assessment component and the effects assessment was completed by <i>Skwxwú7mesh</i> Nation.</p> <p>The mouth of McNab Creek is an ancestral village, <i>kw’ech’tenm</i>. The physical attributes of the Proposed Project Area may impact future revitalization of <i>kw’ech’tenm</i>, and thus retention and growth of <i>Skwxwú7mesh</i> culture and history, based on diminished or lost use of the area.</p> <p>More broadly, heritage resources (including but not limited to those defined by the <i>Heritage Conservation Act</i>) may be present within the Project footprint, or along marine areas subject to vessel wake.</p>	<ul style="list-style-type: none"> <li>▪ Change in biophysical and geophysical attributes of <i>kw’ech’tenm</i> and any other cultural history sites</li> </ul>

**11.3.1.3 Assessment Boundaries**

The following section describes the spatial and temporal boundaries of the effects assessment on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, as well as any administrative or technical boundaries that may apply.

**11.3.1.3.1 Spatial Boundaries**

The Local Study Area (LSA) and Regional Study Area (RSA) for the effects assessment on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, are defined in Table 11-3. The spatial boundaries provided below were defined based on input from *Skwxwú7mesh* Nation to the Proponent.

**Table 11-3: Spatial Boundaries: *Skwxwú7mesh* Nation**

Spatial Boundary	Description of Assessment Area
Local Study Area (LSA)	The LSA for this assessment is the proposed BURNCO development property ( <i>kw'ech'tenm</i> ) plus a 3 km buffer, and the proposed barging route with a 3 km buffer (Figure 10-8).
Regional Study Area (RSA)	The RSA for this assessment is the Howe Sound region (Figure 10-8).

**11.3.1.3.2 Temporal Boundaries**

The effects assessment on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, used the following temporal boundaries, developed with input *Skwxwú7mesh* Nation provided to the Proponent:

- From the pre-contact period (late 1700s) to present day, to establish trends, context and current status of the indicators adopted for Aboriginal Rights.
- Eighteen years from the onset of construction through to completion of operations, to assess potential effects during the construction/operations period. (Due to the similar nature of construction and operations, these two time periods are overlaid for the effects assessment.)
- In keeping with guidance from *Xay Temíxw* (Squamish Nation 2001), evaluation of a project must plan ahead seven generations, or approximately 200 years, from the start of closure and reclamation, to assess long-term residual impacts that extend beyond operations. Effects on assessment sub-components extending beyond 200 years will be considered permanent.

**11.3.1.3.3 Administrative Boundaries**

Aboriginal use of lands and resources is constrained by laws, government regulations, policies and procedures, and agreements between governments and specific Aboriginal Groups (e.g., Comprehensive Fisheries Agreements).

It is *Skwxwú7mesh* Nation’s opinion that a significant administrative boundary is provincial and federal EA policy for assessing effects on Aboriginal Rights, including current use. Current Crown policy requirements are reflected in the approved AIR/EIS Guidelines for this Application. Section 11 of Part C (e.g., this section) is required to “identify any potential effects of the Proposed Project on ... asserted and/or established rights of Aboriginal groups”. The general intent of this assessment matches the parallel assessment for VCs defined for Part B of the Application, to achieve the necessary compliance with Crown EA policy. However, unlike VCs defined in Part B, the *Skwxwú7mesh* Nation is of the view that there is no defined framework developed through the AIR/EIS Guidelines for indicators or assessment methods for Part C. The *Skwxwú7mesh* Nation report that this framework was therefore relegated to post-hoc development, and is generally reliant on data collected for other disciplines, with no clear objectives for how those data can support a thorough assessment of Aboriginal Rights. During regulatory review of the draft AIR/EIS Guidelines for the Proposed Project, *Skwxwú7mesh* Nation raised concern with this fundamental administrative boundary, and requested that Aboriginal Rights and Traditional Land Use both be included as VCs in the effects assessment (i.e., within Part B; see dAIR review comments 206 and 207 from Technical Working Group Comments v1.0, dated 22-Feb-2013). The Proponent responded to this comment



by adding Aboriginal Interests as a VC , but subject to a caveat that the resulting effects assessment would remain in Part C, and with what the *Skwxwú7mesh* Nation characterize as the undefined assessment framework that is consistent with current federal and provincial policies.

The net result in *Skwxwú7mesh* Nation's opinion is that, despite a compromised sub-set of indicators for Aboriginal Rights, including current use, conclusions can be drawn only on a small number of the indicators where they directly overlap with VCs used elsewhere in the Application. For other indicators, relevant effects pathways can be drawn but conclusions are limited to very general statements, subject to technical and administrative boundaries.

#### **11.3.1.3.4 Technical Boundaries**

The assessment of potential effects on *Skwxwú7mesh* Nation Aboriginal Rights is constrained by the technical limitations identified for the VC assessments linked to this assessment (Terrestrial Wildlife and Vegetation, Fisheries and Freshwater Habitat, Marine Resources, Heritage Resources) as well as the data collection and reporting methodologies employed in existing information sources used to support this assessment.

### **11.3.1.4 Assessment Methods**

#### **11.3.1.4.1 Describing Existing Conditions**

A non-confidential summary of past, current, and anticipated future uses of lands and resources in the Study Area (i.e., LSA and RSA) by *Skwxwú7mesh* Nation and the identification of *Skwxwú7mesh* Nation Aboriginal Rights, based on input provided to the Proponent by *Skwxwú7mesh* Nation, is presented in Section 11.3.2, and forms the existing or 'baseline' conditions for the assessment of potential Project effects on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, beginning in Section 11.3.3. Limitations on the information informing the 'baseline' conditions are referenced throughout Section 11.2 where appropriate.

#### **11.3.1.4.2 Identifying Project Interactions, Effects, and Mitigation**

A preliminary evaluation of identified interactions between the various physical works and activities and the selected subcomponents and indicators across all spatial and temporal phases of the Proposed Project was undertaken to characterize interactions as:

- a) Positive, none or negligible adverse effects expected - no further consideration warranted; or
- b) Potential adverse effects expected - further consideration and possibly additional mitigation warranted.

This evaluation on Aboriginal Rights, including current use, is presented in Section 11.3.3.1. Rationale is provided for all determinations of no or negligible interaction where no further consideration is required. For those interactions that may result in potential effects requiring further consideration, the nature of the effects (negative or positive) arising from those interactions is described. Potential effects include direct, indirect and induced effects.



Identification of Proposed Project interactions with *Skw̓x̓wú7mesh* Nation Aboriginal Rights, including current use, is based on input from *Skw̓x̓wú7mesh* Nation provided to the Proponent. The assessment of potential effects from the Proposed Project considered:

- a) The rationale for inclusion of the sub-component and indicators chosen (as identified in Table 11-2).
- b) The interaction pathways between Proposed Project components and the subcomponents identified for this effects assessment. The pathways considered the various phases of the Project (construction, operations, post-closure).
- c) The overall seriousness of the potential effects that may manifest through the pathways, taking into account the environmental mitigation measures that have already been identified in Part B of the Application.

Mitigation measures proposed for VCs assessed in Part B are evaluated in Section 11.3.4 for effectiveness at also addressing potential Project-related effects on Aboriginal Rights and associated current use. Where the measures identified in Part B are considered insufficient to address these potential effects, or no applicable measures could be identified in Part B, additional mitigation measures to specifically address potential Project-related effects on Aboriginal Rights, including current use, are also proposed.

#### **11.3.1.4.3 Evaluating Residual Effects**

Following the evaluation of the effectiveness of proposed mitigation measures to avoid, reduce, or otherwise manage potential Project effects on Aboriginal Rights, including current use, any expected residual effects were categorized as either less than measurable (i.e., negligible) or as measurable. Negligible residual effects were not considered further in the assessment. Measurable residual effects on *Skw̓x̓wú7mesh* Nation Aboriginal Rights, including current use, are characterized in Section 11.3.5.

Where possible, measurable residual effects on *Skw̓x̓wú7mesh* Nation Aboriginal Rights, including current use, are characterized in Section 11.3.5 based on:

- a) **Context:** the current and future sensitivity and resilience of the component being assessed, throughout the entire RSA. Context considers the extent to which the component is already stressed or impacted and intrinsically is tied to cumulative effects. Where the context of a component of Aboriginal Rights, including current use, shows high sensitivity to change and/or low resilience, then even small impacts may have disproportionately high concern for the Nation.
- b) **Magnitude:** the expected size or severity of the residual effect. Where possible, magnitude is conveyed with quantitative or semi-quantitative parameters. Where this is not possible, magnitude may be conveyed in qualitative terms such as “low”, “medium” and “high”.
- c) **Geographic Extent:** the spatial scale over which the residual effect is expected to occur. Residual effects may be described as site-specific, local (contained within the LSA), sub-regional (greater than the LSA but not across the entire RSA), regional (throughout all of the RSA), or beyond regional (beyond the RSA).

- d) **Frequency:** how often the residual effect will occur. Frequency may be described in specific terms (e.g., number of events per unit time) or in general terms (e.g., once, rare, infrequent, frequent or continuous).
- e) **Duration:** the length of time the residual effect will persist. The duration of a reversible potential effect is described as short-term, medium-term, or long-term. These terms are defined units of time (i.e., Hours, days, weeks, months or years).
- f) **Reversibility:** whether or not the residual effect can be reversed. A residual effect may be defined as fully reversible, partially reversible (e.g., one or more of magnitude or geographic extent will be decreased) or irreversible.
- g) **Likelihood:** whether or not a residual effect is likely to occur. Where likelihood is discussed in qualitative terms (low, medium, high), qualifiers are provided.
- h) **Significance:** whether or not a residual effect will significantly and adversely affect *Skwxwú7mesh* Nation's Aboriginal Rights. In practical terms, significance is often tantamount to acceptability of an impact according to some pre-defined threshold limit for each indicator. For the purposes of this assessment, significance determination for some individual subcomponents of *Skwxwú7mesh* Nation's Aboriginal Rights is impossible due to administrative or technical boundaries. However, a general significance determination is provided, for overall impacts on *Skwxwú7mesh* Nation's Aboriginal Rights.
- i) **Confidence:** a qualitative account of certainty for the conclusions provided.

In some cases, some or all of the steps above have been separately undertaken in Part B of this Application, in relation to VCs informing the Part C assessment. Where this is the case, cross-referencing is provided rather than re-presenting the same material.

#### **11.3.1.4.4 Evaluating Significance of Residual Effects and Level of Confidence**

The significance of potential residual adverse effects on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, has been determined collectively at the component level, rather than for each subcomponent, based on input provided by *Skwxwú7mesh* Nation. The determination of significance of potential residual effects on Aboriginal Rights, including current use, are provided in Section 11.3.6.

#### **11.3.1.4.5 Level of Confidence**

The level of confidence for each predicted effect is discussed to characterize the level of uncertainty associated with both the significance and likelihood determinations. Level of confidence is typically based on professional judgement and is characterized as:

- **Low** - judgement hampered by incomplete understanding of cause-effect relationships or lack of data;
- **Moderate** - reasonable understanding of cause-effect relationships and adequate data; or
- **High** - good understanding of cause-effect relationships and ample data.

Prediction confidence or the level of certainty associated with the assessment of Project-related effects on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, is informed by the extent of consultation with *Skwxwú7mesh* Nation, the sources of information used to inform the assessment, and experience with similar projects in similar environmental contexts.

### **11.3.2 Existing Conditions**

#### **11.3.2.1 *Skwxwú7mesh* Nation Use and Occupancy in the Study Areas**

Key sources relied upon for this summary are input from *Skwxwú7mesh* Nation directly to the Proponent (e.g., Traditions 2015b, a *Skwxwú7mesh* occupation and use study undertaken specifically for *Kw'ech'tenm* (McNab Creek)) and publicly available sources referenced throughout this section, including: *Skwxwú7mesh* Nation's own *Xay Temixw* (Sacred Land) Land Use Plan (2001).

The only Aboriginal people that have occupied Howe Sound are the *Skwxwú7mesh* (Traditions 2015b). The *Skwxwú7mesh* had numerous settlements and resource sites throughout the region, and the only Indian Reserves set aside by the Crown in Howe Sound during the late nineteenth and early twentieth centuries were allocated to the *Skwxwú7mesh*. The *Skwxwú7mesh* continue to use and occupy the lands and waters throughout their territory, including the Howe Sound area, despite numerous land alienations and industrial operations. *Skwxwú7mesh* people have strong historical and cultural ties to, and continue to harvest resources throughout, the territory.

The west side of Howe Sound is a particularly significant region for *Skwxwú7mesh* territory, and was central to the Nation's seasonal round, which is described below (Traditions 2015b). Western Howe Sound is known for its protected waters and consequently rich environment for marine species. The sheltered waters were also favoured by orcas for calving and the lower reaches of the rivers and creeks in this area supported rich salmon runs, including coho, chum, pink and spring salmon. The beaches throughout Howe Sound were rich clam beds, with adjacent eel grass areas supporting herring spawning and juvenile fish, including salmon. The wide foreshore on the western side of lower Howe Sound was an important habitat for waterfowl such as ducks and geese (AMEC 2010). The valleys throughout Howe Sound provided habitat for deer, elk, bear, grouse and other wildlife. Plants, their berries and roots, and medicines were also harvested throughout Howe Sound. Trails in the valleys lead to the higher elevations where mountain goats are hunted and their wool is collected.

There are a large number of archaeological sites in western Howe Sound attesting to the significance of the region for *Skwxwú7mesh* ancestors. Further evidence of the long ties of *Skwxwú7mesh* to the Howe Sound area is provided by the hundreds of place names, habitation sites and resource areas in the region, many with associated histories including origin and ancestral stories (Traditions 2015b). *Skwxwú7mesh* ancestral village sites are located throughout the west side of Howe Sound, including *tsitsusm* (Potlatch Creek), *k'ik'elxn* (Port Mellon), *ch'kw'elhp* and *schenk* (Gibsons) and *kw'ech'tenm* (Kwitctenem/McNab Creek). *Skwxwú7mesh* families still visit their ancestral villages annually to conduct ceremonies and offer food and prayers as well as to clean-up the village sites. Several *Skwxwú7mesh* chiefs trace their chieftainships to the villages on the western side of Howe Sound, including to *kw'ech'tenm*.

*Kw'ech'tenm* was recorded as a village site in 1900 (Traditions 2015b) and was a significant resource area for *Skwxwú7mesh* ancestors. The name *kw'ech'tenm* means fish cutting, but may also refer to the fact that the north side of the valley was the source location for the slate that was used to make fish cutting knives. Various species

of salmon and trout were harvested in McNab Creek, and various aquatic resources were harvested in the surrounding waters. Deer, elk and blue grouse were hunted in the lower reaches of the valley. Plants, including their roots, berries and medicines, were harvested throughout the valley. Mountain goats were hunted in the higher elevations.

*Skw̓xwú7mesh* use of western Howe Sound and McNab Creek has been severely impacted by land alienation, industrial developments and pollution over the past century. Recently, lower contamination levels mean that *Skw̓xwú7mesh* people are now able to return to harvesting resources in the region. Current resource use includes, but is not limited to, a fall elk hunt in the McNab Creek valley, crab harvesting on the flats in front of McNab Creek, and harvesting salmon throughout Thornbrough Channel. More recently *kw'ech'tenm* has become one of the stopover places for the youth annual cultural journeys by canoe. The Nation has aspirations to return the valley to its full stewardship and control and manage the resources contained therein for the future benefit of the Nation in accordance with the Nation's traditional laws.

A report commissioned in relation to the Project, titled the *Skw̓xwú7mesh* Occupation and Use of *kw'ech'tenm* (McNab Creek) and the Howe Sound Region (Traditions 2015b) (referred to as the OUS) reported 367 identified and documented *Skw̓xwú7mesh* traditional use and occupancy sites in the RSA, with 47 of these sites<sup>1</sup> in the Local LSA<sup>2</sup>. These sites were identified through preliminary interviews with selected contemporary *Skw̓xwú7mesh* members<sup>3</sup> and a review of previous studies and published and unpublished reports and documentation. *Skw̓xwú7mesh* use and occupation documented in the OUS has been classified into six categories (see Table 11-4):

- **Settlement Activity** - this category includes sites related to traditional *Skw̓xwú7mesh* settlement where one or more of the following site “activities” may be recorded: dwelling, preparation, manufacture, burial, archaeological site, named place or traditional history. There are 107 dwelling sites within the RSA, and five within the LSA. These sites include archaeological sites, villages, campsites and bases for resource gathering, economic activities and cultural events.
- These sites provide evidence that the RSA and LSA have been intensely occupied and used by the *Skw̓xwú7mesh* people and their ancestors for a long period of time.
- **Culture History** - this category includes sites related to traditional *Skw̓xwú7mesh* culture and history where one or more of the following site “activities” is recorded: named place, traditional history, burial, ceremonial/sacred site, legendary being, conflict, medical/therapeutic site or archaeological site. Of the cultural history sites in the RSA there are over 200 named places, and countless history sites, illustrating the high cultural and historical value of the region to the *Skw̓xwú7mesh* (Traditions 2015b).
- **Aquatic Resources** - this category includes sites related to traditional *Skw̓xwú7mesh* use of aquatic resources where one or more of the following site “activities” is recorded: fishing, seafood gathering, hunting (for aquatic resources), water supply or archaeological site.

<sup>1</sup> This is not a final number of use and occupation sites nor is it representative of all information about the Nation's interests in the area.

<sup>2</sup> Geographic descriptions and maps of these boundaries are provided in Section 11.3.1.3.1.

<sup>3</sup> Only six *Skw̓xwú7mesh* were interviewed for the OUS.

There are significant aquatic resources within the RSA and LSA, with 21 aquatic resource categories sites in the LSA alone. The RSA and LSA are important for harvesting fish, seafood and marine mammals, amongst other things. Small game and fur-bearing mammals hunted or trapped from aquatic environments included beaver, muskrat, otters, and mink. Some dwelling sites and archaeological sites are included in the aquatic resources category because many of the villages and camps in the areas were associated with the collection of aquatic resources.

In addition to harvesting seafood and marine mammals, *Skwxwú7mesh* harvest a multitude of aquatic plants, including seaweeds, cattails that are gathered and made into mats, the down of fireweed plants that is woven into blankets, cranberries and wapato (AMEC 2010, Kennedy and Bouchard 1976b in Millennia 1997). *Skwxwú7mesh* harvest all five species of salmon as well as steelhead and Dolly Varden char were harvested in freshwater, while eulachon, herring, smelt, lingcod, rockfish, sturgeon, perch and flounder were taken in saltwater. Beach foods harvested include sea urchins, crabs, clams, mussels, cockles and scallops (SN 2001). Sea mammals harvested include harbour porpoises, harbour seals and sea lions (AMEC 2010; SN 2001).

*Skwxwú7mesh* Nation previously report harvesting a total of twenty bird species, a number of which were sought for their feathers. Species harvested for food included red throated loons, geese, grebes, and ducks (surf scooters, mallards, mergansers), grouse (harvested in Horseshoe Bay and *st'k'ii* in West Vancouver), blue grouse and ruffed grouse (Eagle Mountain – WGP 2015b, Kennedy and Bouchard 1976b in Millennia 1997, SN 2001). Gulls, as well as their eggs were harvested for food and “Seagull Island” at the upper end of Howe Sound was identified as a place to harvest gull eggs (Kennedy and Bouchard 1976b in Millennia 1997).

- **Land Resources** - this category includes sites related to traditional *Skwxwú7mesh* use of resources on land where one or more of the following site “activities” is recorded: berry/plant gathering, forestry, hunting, lithics, resource material, trapping or archaeological site.

*Skwxwú7mesh* harvest a wide variety of plant-based resources from the territory, including elderberries, chokecherries, deerberries, huckleberries, salal berries, blueberries, wild crab-apples, salmonberries, trailing blackberries, horsetail, lady fern, fireweed, blackcap, cow-parsnip and arrow-grass. Edible roots harvested included skunk cabbage, blue camas, chocolate lily, bracken fern, licorice fern, wild carrot, arrow-head, wild onion, yew wood, oceanspray wood (ironwood), broad-leafed maple wood, Douglas-fir, western birch and bitter cherry for their technology (spear shafts, canoe poles, dip net handles), along with red and yellow cedar trees for timber and bark (Kennedy and Bouchard 1976b in Millennia 1997). Important land based resources for the *Skwxwú7mesh* in the RSA and LSA include elk, moose and deer which were an important food source (Kennedy and Bouchard 1976b in Millennia 1997, SN 2001). Other resources include black bears, harvested for the meat, fat and hides, as well as for other traditional purposes (e.g., spiritual) and small terrestrial mammals, including hares (Kennedy and Bouchard 1976b in Millennia 1997) and species such as marmots were harvested in montane, parkland environments (AMEC 2010).

- **Travel** – this category includes sites related to traditional *Skwxwú7mesh* travel on land or water. The travel sites in the RSA and LSA were important in traditional times for travel, providing access to harvesting and cultural sites. Most of these routes continue to be of importance to *Skwxwú7mesh* and are used to access fishing grounds, for hunting and resource gathering purposes and to access cultural and spiritual sites. Travel routes are also used for cultural purposes. Many of the travel routes identified connect to a network of main

routes that run from the head of Howe Sound through both land and water, connecting to both sides of Howe Sound, across the sound and extending into Burrard Inlet, up the Sunshine Coast and across the Strait of Georgia.

**Table 11-4: *Skwxwú7mesh* use and occupation in the Proposed Project Area**

Category	Number of Sites in the RSA	Number of Sites in the LSA
Culture History	151	20
Aquatic Resources	146	21
Archaeology	144	7
Settlement Activity	107	6
Land Resources	73	17
Travel	20	6

Source: Traditions 2015b

The activities carried out in the traditional use and occupancy sites in the LSA are diverse, as indicated in Table 11-5.

**Table 11-5: Activities carried out at the traditional use and occupancy sites identified in the LSA**

Site "Activity"	Number of Sites in the LSA
Hunting	20
Named Place	16
Fishing	9
Ceremonial/Sacred Site	7
Seafood Gathering	7
Traditional History	7
Archaeological Site	6
Trading	6
Trails/Travel	6
Dwelling	5
Lithics	5
Preparation	5
Legendary Being	3
Berry/Plant Gathering	2
Manufacture	2
Medical/Therapeutic Site	2
Resource Material	2
Burial	1
Conflict	1
Forestry	1
Pictograph/Rock Art	1
Trapping	1
Water Supply	1

Source: Traditions 2015b



The *Skwxwú7mesh* harvested both marine and terrestrial resources from throughout its territory based on a seasonal round. In the winter, most *Skwxwú7mesh* lived in their winter villages on the Squamish and Cheakamus Rivers, however there are many ancestral villages located in the Howe Sound area, including sites at *Tsitsusm* (Potlach Creek), *K'ik'elxn* (Port Mellon), *Ch'kw'elhp* and *Schenk* (Gibsons), *kw'ech'tenm* (McNab Creek) (Traditions 2015b). The winter season was largely sedentary, devoted to ceremonial activities, though some food harvesting occurred to supplement foods preserved during other seasons.

In the spring *Skwxwú7mesh* began to move to various seasonal resource gathering villages, camps and sites around Howe Sound and Burrard Inlet. In the late spring, some *Skwxwú7mesh* went to the Fraser River for eulachon and salmon fisheries, remaining there until late September (Traditions 2015b).

During the summer, *Skwxwú7mesh* hunters harvested game on the islands, in the valleys and on the mountains in and around Howe Sound. Berries and a multitude of resources were harvested, as were the multiple runs of salmon that began in the summer and continued into the fall. In the later summer *Skwxwú7mesh* started to return to the winter villages to await the arrival of the coho and chum salmon, although various forms of harvesting continued. During the fall the most important activity was harvesting the salmon runs, which continued late into November (Traditions 2015b).

This seasonal round was developed over many generations and continues in modified form today. Resources from the land and sea remain of central importance to *Skwxwú7mesh* culture and economy (Traditions 2015a; Traditions 2015b).

### **11.3.2.2 Cumulative Impacts and Anticipated Future Use**

*Skwxwú7mesh* territory was once abundant in rich foods and resources harvested from the land and the sea, sustaining a vibrant society. From land came deer, bear, elk, duck, swan, small rodents, berries, grasses, roots and various other plants and medicines, amongst other things. From the rivers, lakes and oceans the *Skwxwú7mesh* harvested resources including mussels, sea eggs, cockles, clams, seaweed, herring, trout, urchin, sea lion, seal, all kinds of salmon and eulachon, including their oil. Great cedar canoes transported the *Skwxwú7mesh* between dozens of villages and countless harvesting sites and camps that existed throughout the territory. Every year the salmon, herring and eulachon would return to the territory in great abundance, and with the resources harvested during the spring, summer and fall, the *Skwxwú7mesh* could devote most of the winter to ceremonial activities. *Skwxwú7mesh* had a rich and distinctive culture and their own practices, traditions and customs tied to, and governing the use of, their lands and waters.

*Skwxwú7mesh* use of Howe Sound, including the McNab Creek area, has been severely impacted by land alienation, industrial development and pollution in the past century. This is representative of the impacts of development felt throughout *Skwxwú7mesh* territory. Over time Crown authorized development has greatly diminished the productivity and health of the lands, waters and resources in *Skwxwú7mesh* territory and significantly constrained *Skwxwú7mesh* access to sites for their Aboriginal Rights practices. This has had direct, and severe, impacts on the ability of *Skwxwú7mesh* members to exercise their Aboriginal Rights. Provincial and federal legislation and decision making has made it difficult for the *Skwxwú7mesh* Nation to exercise its traditional laws, including those regarding land and resource management, over the territory.



*Kw'ech'tenm*, the *Skwxwú7mesh* village located at the mouth of McNab Creek, was abandoned due to population decline brought about by epidemics, probably in the late eighteenth century. Land sales, tenures and industrial forestry operations alienated much of the area from *Skwxwú7mesh* use in the twentieth century. However, *Skwxwú7mesh* people continued to use the area for camping, resource harvesting, and cultural training. Although the McNab Creek valley was heavily logged in the past, the vegetation is now coming back, providing good habitat for elk, including an important wintering area. Today there are elk trains and elk 'bed' through this re-growth in the lower valley area. Given the valley is relatively isolated, with boat access only, and contains good ungulate habitat, it is a favoured area for *Skwxwú7mesh* hunters.

The west side of Howe Sound is a major migration route for Squamish River salmon. The eel grass beds along the foreshore along the west side of Howe Sound are important habitat for juvenile salmon leaving the Squamish River and other marine species including herring and crabs. With the environmental clean-up of pulp mills and mines, and the reforestation of the valley, the *Skwxwú7mesh* once again harvest crabs and prawns in the area of *kw'ech'tenm*. Salmon trolling is common along the shoreline.

While western Howe Sound and the McNab Creek valley have seen some revitalization, the productivity and health of this area is not yet what it once was, placing limits on the ability of the *Skwxwú7mesh* Nation to use the area to the extent that their ancestors did. As a result, the Nation's traditional seasonal round operates in a modified form today.

There is concern amongst the *Skwxwú7mesh stelmexw* (Squamish people) that this important resource area, now recovering from previous industrial activities, may once again be impacted by new development. Rather than continuing to recover, the lower McNab Creek valley and foreshore may again be negatively impacted, making harvesting resources in *kw'ech'tenm* difficult again. Mining and material transport activity may disturb and impact travel routes and other harvesting sites. The Project may make it more difficult for the *Skwxwú7mesh* to proactively manage their territory and ensure the continued revitalization of the Howe Sound area and ensure it is protected for the benefit of present and future generations in accordance with *Skwxwú7mesh* land and marine use planning initiatives and *Skwxwú7mesh* traditional laws. There is also concern about the impact of the Proposed Project on hunting, following the McNab Valley's recent revival as good habitat of elk and other ungulates.

The foregoing sets the general context for the current and desired future state of *Skwxwú7mesh* Nation Aboriginal Rights, including current use, and informs the subsequent effects assessment on this VC.

### **11.3.2.3 Skwxwú7mesh Nation Aboriginal Rights**

The *Skwxwú7mesh* Nation has informed the Proponent that it existed and prospered within their traditional territory (described in Section 10.1.1) since time immemorial. *Skwxwú7mesh* is, and always has been, an independent nation, occupying and controlling their own territory with a distinctive culture and their own practices, traditions and customs. They have never ceded or surrendered their lands and waters, but have enjoyed and occupied the land, benefited economically from the lands and waters and proactively used and managed the lands, waters and resources of their territory for centuries. *Skwxwú7mesh* Nation Aboriginal Rights are recognized and affirmed by s. 35 of the *Constitution Act, 1982* and as Canadian law has recently recognized, Aboriginal land rights survived European settlement and remain valid unless extinguished.

In discussions, *Skwxwú7mesh* has informed the Proponent that Canadian law's recognition and affirmation of Aboriginal Rights and Aboriginal Title reinforce the rights *Skwxwú7mesh* has always exercised and claimed over their territory<sup>4</sup>. In 1792, a British Royal Navy expedition under the command of Captain George Vancouver was camped at a small cove at the head of Howe Sound when he was approached by approximately forty natives who wished to trade. From that time forward, there were countless encounters between *Skwxwú7mesh*, their neighbours and the European settlers who came to build present day cities at many of the ancestral village sites of the *Skwxwú7mesh*. The practices, traditions and customs that were integral to *Skwxwú7mesh*'s distinctive pre-contact society continue today, making up *Skwxwú7mesh*'s Aboriginal Rights. *Skwxwú7mesh*'s use and occupation of the territory has continued since sovereignty in 1846, with the nation continuing to exclusively occupy and use their lands and waters.

*Skwxwú7mesh* Nation has exclusively used and occupied the Howe Sound area since before contact with Europeans. There are numerous *Skwxwú7mesh* settlements and resource harvesting sites in the Howe Sound area and the only Indian Reserves set aside by the Crown during the late nineteenth and early twentieth centuries in Howe Sound were for the *Skwxwú7mesh*. *Skwxwú7mesh* use and occupation of the area continues to this day (Traditions 2015b).

### **11.3.3 Potential Project-Related Interactions and Effects on *Skwxwú7mesh* Nation Aboriginal Rights, including Current Use**

This section considers the interactions and potential effects of development and use of the LSA on *Skwxwú7mesh* Nation Aboriginal Rights, including as these relate to current use and intangible cultural heritage, and is based on input from *Skwxwú7mesh* Nation. Although potential effects on tangible or physical cultural heritage, including any structure, site, or thing of historical, archaeological, paleontological, or architectural significance, is discussed in Volume 2, Part B - Section 8.1: Heritage Resources, *Skwxwú7mesh* Nation has provided Project-specific mitigation recommendations regarding tangible heritage related to *Skwxwú7mesh* Nation's Aboriginal Rights, including current use, in Section 11.3.4.

Potential effects associated with identified interactions between the Proposed Project and *Skwxwú7mesh* Nation Aboriginal Rights, including current use, are presented in Table 11-6 through Table 11-10.

Potential effect ratings and a preliminary evaluation of the potential effects on *Skwxwú7mesh* Nation Aboriginal Rights and current use associated with these interactions is also provided, to focus the assessment on those interactions of greatest importance. Those potential effects anticipated to be negligible are described in Section 11.3.3 and are not carried forward in the assessment. All measurable (or greater than negligible) potential adverse effects are also described in Section 11.3.3 and are carried forward to subsequent sections for further assessment.

The scope of the effects assessment does not include shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to BURNCO's existing facilities in Burnaby and Langley (CEA Agency 2013). Therefore, an assessment of potential effects from the Proposed Project on *Skwxwú7mesh* Nation

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<sup>4</sup> *Skwxwú7mesh*'s rights include aboriginal title, which encompasses the rights to enjoy and occupy the lands and waters of their territory, to benefit economically from the lands and waters, and to pro-actively used and managed the lands, waters and resources. From hereon in, reference to *Skwxwú7mesh* "Aboriginal Rights" should be read as including aboriginal title. For the purposes of this assessment *Skwxwú7mesh* rights encompass the Nation's current use and exercise of the same.

Aboriginal Rights, including current use, does not include an assessment of potential effects on *Skwxwú7mesh* Nation Aboriginal Rights or current use in the Strait of Georgia or the Fraser River.

### **11.3.3.1 Identification of Potential Project-VC Interactions**

A preliminary evaluation of identified interactions between the various physical works and activities and the selected VC subcomponents and indicators across all spatial and temporal phases of the Proposed Project is presented in Table 11-6 through Table 11-10. For those Project-VC interactions that may result in potential direct, indirect and induced effects requiring further consideration, the nature of the effects (both adverse and positive) arising from those interactions is described below.

**Table 11-6: Project-VC Interaction Table: Terrestrial Resources**

Project Activities	Description	Terrestrial Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during construction</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project Area provides important habitat for terrestrial species, particularly ungulates (i.e., elk and deer), and either direct habitat loss or sensory disturbance (and consequent habitat alienation) are realistic – and likely unavoidable - conceptual effects pathways.</li> <li>Therefore, potential construction-related effects on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights to, and current use of, terrestrial resources are carried forward.</li> </ul>
<b>Operations</b>			
All Project operation activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during operations</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project Area provides important habitat for these terrestrial species, particularly ungulates (i.e., elk and deer), and either direct habitat loss or sensory disturbance (and consequent habitat alienation) are realistic – and likely unavoidable - conceptual effects pathways.</li> <li>Therefore, potential operations-related effects on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights to, and current use of, terrestrial resources are carried forward.</li> </ul>
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>All marine and land based activities during reclamation and closure</li> </ul>	○	<ul style="list-style-type: none"> <li>Any adverse residual effects on terrestrial resources caused by reclamation and closure are expected to be negligible and are not carried forward.</li> </ul>

**Notes:**

- = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.
- = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

Table 11-7: Project-VC Interaction Table: Aquatic Resources

Project Activities	Description	Aquatic Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during construction</li> </ul>	●	<ul style="list-style-type: none"> <li>Freshwater spawning habitat for anadromous and resident salmon may be lost, but the loss is not likely to be biologically significant. <i>Skwxwú7mesh</i> Nation remains concerned with cumulative effects on salmon habitat in Howe Sound, and may contribute to cumulative effects at the regional level.</li> <li>In the marine environment, the following effects are anticipated:               <ul style="list-style-type: none"> <li>Low-level acoustic disturbances may result in disturbance or direct displacement.</li> <li>Suspension of fine-grained particles from propellers may result in ongoing turbidity in this section of habitat.</li> <li>Small, direct losses of marine habitat due to the marine footprint of the Project.</li> </ul> </li> <li>While marine effects are not anticipated to be biologically significant, <i>Skwxwú7mesh</i> Nation believes that additional monitoring and managing cumulative effects are necessary for effective protection of <i>Skwxwú7mesh</i> Nation's Aboriginal Rights (and achievement of general stewardship obligations).</li> <li>Therefore, potential construction-related effects on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights to, and current use of, freshwater and marine resources are carried forward.</li> </ul>

Project Activities	Description	Aquatic Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Operations</b>			
All Project operation activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during operations</li> </ul>	●	<ul style="list-style-type: none"> <li>Freshwater spawning habitat for anadromous and resident salmon may be lost, but the loss is not likely to be biologically significant. <i>Skwxwú7mesh</i> Nation remains concerned with cumulative effects on salmon habitat in Howe Sound, and may contribute to cumulative effects at the regional level.</li> <li>In the marine environment, the following effects are anticipated:               <ul style="list-style-type: none"> <li>Low-level acoustic disturbances may result in disturbance or direct displacement.</li> <li>Suspension of fine-grained particles from propellers may result in ongoing turbidity in this section of habitat.</li> <li>Small, direct losses of marine habitat due to the marine footprint of the Project.</li> </ul> </li> <li>While marine effects are not anticipated to be biologically significant, <i>Skwxwú7mesh</i> Nation believes that additional monitoring and managing cumulative effects are necessary for effective protection of Squamish Nation's Aboriginal Rights (and achievement of general stewardship obligations).</li> <li>Therefore, potential operations-related effects on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights to, and current use of, freshwater and marine resources are carried forward.</li> </ul>
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>All marine and land based activities during reclamation and closure</li> </ul>	○	<ul style="list-style-type: none"> <li>Potential effects on aquatic resources post-closure are likely minor or negligible, and additional mitigation or effect characterization beyond what is provided in Part B are not pursued in this section and are not carried forward in the assessment.</li> </ul>

**Notes:**

○ = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.

● = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration



**Table 11-8: Project-VC Interaction Table: Governance of *Skwxwú7mesh* Nation Lands**

Project Activities	Description	Governance of <i>Skwxwú7mesh</i> Nation Lands	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during construction</li> </ul>	●	<ul style="list-style-type: none"> <li>The proposed Project would conflict with numerous management objectives stated in <i>Xay Temixw</i>, therefore Governance is carried forward in the effects assessment.</li> </ul>
<b>Operations</b>			
All Project operation activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during operations</li> </ul>	●	<ul style="list-style-type: none"> <li>The proposed Project would conflict with numerous management objectives stated in <i>Xay Temixw</i>, therefore Governance is carried forward in the effects assessment.</li> </ul>
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>All marine and land based activities during reclamation and closure</li> </ul>	●	<ul style="list-style-type: none"> <li>Potential conflicts with <i>Xay Temixw</i> use are not addressed in other sections of the Application, therefore this is carried forward in the assessment.</li> </ul>

*Notes:*

- = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.
- = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

**Table 11-9: Project-VC Interaction Table: Impacts to Use and Occupancy of *Skw̓xwú7mesh* Nation Territory**

Project Activities	Description	Impacts to Use and Occupancy of <i>Skw̓xwú7mesh</i> Nation Territory	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during construction</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project is anticipated to potentially result in:                             <ul style="list-style-type: none"> <li>- Direct loss of use and occupancy of the Project area</li> <li>- Indirect loss of use and occupancy areas due to accessibility constraints; and</li> <li>- Indirect loss of use and occupancy areas due to sensory disturbance</li> </ul> </li> <li>As the above-noted potential construction-related effects are not mitigated elsewhere in the effects assessment, they are carried forward in the assessment.</li> </ul>
<b>operations</b>			
All Project operation activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during operations</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project is anticipated to potentially result in:                             <ul style="list-style-type: none"> <li>- Direct loss of use and occupancy of the Project area</li> <li>- Indirect loss of use and occupancy areas due to accessibility constraints; and</li> <li>- Indirect loss of use and occupancy areas due to sensory disturbance</li> </ul> </li> <li>As the above-noted potential operations-related effects are not mitigated elsewhere in the effects assessment, they are carried forward in the assessment.</li> </ul>
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>All marine and land based activities during reclamation and closure</li> </ul>	●	<ul style="list-style-type: none"> <li>Adverse effects on <i>Skw̓xwú7mesh</i> Nation use and occupancy of the territory caused by decommissioning is not addressed elsewhere in the Application, and is therefore carried forward in the assessment.</li> </ul>

**Notes:**

○ = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.

● = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

**Table 11-10: Project-VC Interaction Table: Transmission of *Skwxwú7mesh* Nation Culture and History**

Project Activities	Description	Transmission of <i>Skwxwú7mesh</i> Nation Culture and History	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during construction</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project is anticipated to have the following potential effects that may contribute to interruptions in the transmission of culture and history:                             <ul style="list-style-type: none"> <li>- Increased access by non-Squamish people</li> <li>- Olfactory and acoustic disturbances</li> <li>- Visual changes</li> </ul> </li> <li>As mitigation identified in other parts of the Application do not address the above noted potential construction-related effects, these are carried forward in the assessment.</li> </ul>
<b>Operations</b>			
All Project operation activities and works	<ul style="list-style-type: none"> <li>All marine and land based activities during operations</li> </ul>	●	<ul style="list-style-type: none"> <li>The Proposed Project is anticipated to have the following potential effects that may contribute to interruptions in the transmission of culture and history:                             <ul style="list-style-type: none"> <li>- Increased access by non-Squamish people</li> <li>- Olfactory and acoustic disturbances</li> <li>- Visual changes</li> </ul> </li> <li>As mitigation identified in other parts of the Application do not address the above noted potential operations-related effects, these are carried forward in the assessment.</li> </ul>
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>All marine and land based activities during reclamation and closure</li> </ul>	●	<ul style="list-style-type: none"> <li>Proposed Project-induced changes to biota and physical attributes of the Proposed Project Area may have long-term effects after reclamation and closure, and are therefore carried forward in the assessment.</li> </ul>

*Notes:*

○ = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.

● = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

### **11.3.3.2 Potential Project-Related Effects on Skwxwú7mesh Nation Aboriginal Rights, including Current Use**

The proposed Project is located in Skwxwú7mesh territory, adjacent to an ancestral village site, kw'ech'tenm, and in the McNab Creek valley which supports a variety of Skwxwú7mesh cultural practices, including the harvesting of traditional resources. Because the Project will, if approved, impact Skwxwú7mesh Nation Aboriginal Rights (including Aboriginal Title) interests, both in the McNab Creek valley and foreshore, but also in the large Howe Sound region, the Crown has a duty to consult Skwxwú7mesh about the potential impacts of the Project on their rights and title interests and take steps to avoid, mitigate, offset or otherwise accommodate those impacts. The effects assessment of Skwxwú7mesh Nation Aboriginal Rights is an important step in that process as it provides all parties involved – the Crown, the Proponent and Skwxwú7mesh – with information about the potential impacts of the Project on those rights and title interests. This information can then be used to inform ongoing consultation about the extent to which the proposed Project is acceptable, if at all, from Skwxwú7mesh's perspective, including its compatibility with Skwxwú7mesh's objectives for the territory and the continued revitalization of the lands, waters and resources which support Skwxwú7mesh culture.

Section 11.3.2 Existing Conditions provided the administrative context for Skwxwú7mesh Nation Aboriginal Rights, and the past, current, and anticipated future use of Skwxwú7mesh Nation territory for the exercise of those rights. This section also address the past and present status (in effect, the “baseline conditions”) for three of the five assessment components chosen to represent Skwxwú7mesh Aboriginal Rights, including current use, for this assessment: Governance over Skwxwú7mesh Nation Territory, Use and Occupancy of the Territory, and Transmission of Culture and History. The other two assessment components for Aboriginal Rights (Terrestrial Resources and Aquatic Resources) are derived from the corresponding assessments for overlapping VCs in Part B of the Application<sup>5</sup>.

The subcomponents of Aboriginal Rights used in the effects assessment on Skwxwú7mesh Nation Aboriginal Rights, including current use linked to the exercise of those rights, were identified through input from Skwxwú7mesh Nation. They represent a very small sub-set of tangible components of Aboriginal Rights, developed for the purposes of assessing potential Project-related effect on those rights, including current use. The potential effects are already understood to be “key effect” pathways. Other effects to Skwxwú7mesh Nation Aboriginal Rights, including current use linked to the exercise of those rights, were scoped out through Skwxwú7mesh Nation's independent assessment of the Project prior to consultation, or through subsequent consultation with the Proponent, and are not discussed further. Some of the excluded effects pathways represent minor or negligible effects that do not warrant detailed assessment. However in some cases, as described in Section 11.3.1, the assessment framework is inadequate to provide even a generalized assessment of effects and thus their absence from this assessment is due to the inability to provide meaningful results. For example, the effects of the Proposed Project on Skwxwú7mesh resulting from decreased access to traditional resources, on the ability of Skwxwú7mesh to economically benefit from their territory and on the Skwxwú7mesh traditional economy as a result of the diminishment of traditional resources, and access to the same, have not been assessed as part of this Application. Notwithstanding these limitations, Skwxwú7mesh Nation has acknowledged that the

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<sup>5</sup> Note, this statement is explicitly limited to this particular Project. Relevant indicators (e.g. particular species or spatial areas) for aquatic and terrestrial resources are often starkly different when considering Skwxwú7mesh Nation values compared to other regulatory approaches. Through initial project review and consultation with the Proponent, Skwxwú7mesh Nation is satisfied that the focal species chosen for Part B of this Application/EIS are appropriate for consideration of Skwxwú7mesh Nation's interests.

assessment of impacts on the five sub-components of Aboriginal Rights below is sufficient for the Proposed Project, including current use linked to the exercise of those rights.

### 11.3.3.2.1 Potential Effects on Terrestrial Resources

The health and abundance of terrestrial resources is a necessary precondition for the practice of *Skwxwú7mesh* Aboriginal Rights, including current use of these resources. The sufficient presence of terrestrial resources for harvest is a cornerstone of hunting, trapping and any other resource gathering for social, medicinal or other cultural purposes. Past interviews and studies with *Skwxwú7mesh* Nation members have identified at least ten species of land mammals, 25 species of birds, and 47 species of plants that have been traditionally used (Traditions 2015b).<sup>6</sup> Furthermore, the interconnected nature of natural ecosystems means that in many cases, species of direct use are themselves reliant on myriad other species for symbiotic processes.

Terrestrial resources were assessed at a technical level in Volume 2, Part B -Section 5.3: Terrestrial Wildlife and Vegetation. The collective list of floral and faunal proxies is sufficient to address *Skwxwú7mesh* Nation's key concerns for stewardship of terrestrial resources, for this particular Project and setting only.

Of particular concern to *Skwxwú7mesh* Nation given the nature of the Project and its location, are impacts to ungulates and their habitat – primarily elk and deer and corresponding impacts to the Nation's Aboriginal Rights and current use that are tied to these animals. The Project lies within one of three areas designated as "Wildlife Focus Area – Elk" in a 2007 Land Use Agreement between the province and *Skwxwú7mesh*. These are areas with a formal management intent to "*expand the provincial elk reintroductions within the Squamish Territory in order to restore naturally occurring populations, and, provided conservation needs have been met, to provide future opportunities for Squamish Nation hunting for social and ceremonial purposes*" (SN and BC 2007). Elk and deer both use the McNab Creek valley, including the alluvial fan on which the pit will occur, extensively. Consequently, *Skwxwú7mesh* members also directly use the Proposed Project Area, and report increasing reliance by ungulates on this habitat. The low elevation, flat-gradient and high foliage density provide good winter habitat and predation cover.

Volume 2, Part B - Section 5.3: Terrestrial Wildlife and Vegetation included the sequential effects assessment process for terrestrial resources and the assessment is not re-presented here. At the time of writing the assessment, *Skwxwú7mesh* Nation and the Proponent had not yet engaged in detailed technical consultation on this assessment section of Volume 2, Part B. It is the Proponent's opinion that the list of effects pathways considered in Volume 2, Part B - Section 5.3 is comprehensive, that the mitigation measures identified are appropriate and sufficient, and that there will be no significant adverse effect on deer, elk, or key habitats for these species. It is *Skwxwú7mesh* Nation's opinion that:

- The Proposed Project Area provides important habitat for these species, and either direct habitat loss or sensory disturbance (and consequent habitat alienation) are realistic – and likely unavoidable - conceptual effects pathways; and,

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<sup>6</sup> These numbers are based on selective interviews and do not represent the full extent of species used by the *Skwxwú7mesh*.

- A “non-significant” determination by the Proponent does not necessarily equate to no significant effect on terrestrial resources through the *Skw̓x̓wú7mesh* Nation lens of Aboriginal Rights.

*Skw̓x̓wú7mesh* Nation acknowledges that many effective mitigation options exist and that if the suite of mitigation proposed in Part B is thorough, it is conceivable that the Project could proceed without significantly and adversely impacting the Nation’s Aboriginal Rights, including current use, due to harm caused to terrestrial resources. However, pending further review and consultation, *Skw̓x̓wú7mesh* Nation adopts the interim view that additional mitigation may be required.

#### **11.3.3.2.2 Potential Effects on Aquatic Resources**

As with terrestrial resources, the health and abundance of aquatic resources is also a necessary precondition for *Skw̓x̓wú7mesh* Nation Aboriginal Rights, including current use of these resources. Past interviews and studies with *Skw̓x̓wú7mesh* Nation members have identified at least 24 species of fish, three species of sea mammals, and 15 species of intertidal foods (Traditions 2015b).<sup>7</sup> Within the Proposed Project Area, freshwater, marine water and groundwater are all tightly interconnected and are jointly relied upon by all species either directly or indirectly. Thus the general protection and stewardship of all marine habitat, freshwater habitat, and aquatic species is necessary for protection of *Skw̓x̓wú7mesh* Aboriginal Rights. The Nation has recently commenced a marine use planning process for all of Howe Sound to advance this stewardship obligation. The process is, however, not yet sufficiently advanced such that specific management objectives or performance benchmarks are available for this assessment.

Aquatic resources were assessed at a technical level in Sections 5.1 Fisheries and Freshwater Habitat and 5.2 Marine Resources of Part B. *Skw̓x̓wú7mesh* Nation and the Proponent have discussed the technical assessment and conclusions on residual effects in some detail. Although the list of focal species does not address all species of use or interest to *Skw̓x̓wú7mesh* Nation, the Nation is satisfied that the list of proxies used is sufficient for a general assessment of necessary environmental stewardship of aquatic resources.

The full list of potential effects pathways on aquatic resources during construction, operations and post-closure are not re-presented here. *Skw̓x̓wú7mesh* Nation has advised the Proponent that they are generally satisfied with the consideration of effects pathways. Notwithstanding the mitigation proposed by the Proponent in Part B, it is *Skw̓x̓wú7mesh* Nation’s opinion that the residual effects of the Proposed Project on aquatic resources may still negatively impact the practice of *Skw̓x̓wú7mesh* Nation Aboriginal Rights. For instance, construction and operations are anticipated to have residual effects including:

- Freshwater spawning habitat for anadromous and resident salmon would be lost, with proposed offsetting focused on rearing habitat. *Skw̓x̓wú7mesh* Nation generally agrees with the Proponent that the lost habitat is, in and of itself, not likely to be biologically significant. However, *Skw̓x̓wú7mesh* Nation is concerned with cumulative effects on salmon habitat in Howe Sound, and does not believe that proponent-driven cumulative effects assessments through the EA framework are an effective means for managing regional effects.

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<sup>7</sup> These numbers are based on selective interviews and do not represent the full extent of aquatic resources used by *Skw̓x̓wú7mesh*.



- Low-level disturbances to marine habitat may occur, arising in part from vessel noise and barge loading – the former of which may affect marine mammals in a 2 km radius all along the shipping route. In addition to acoustic disturbance or direct displacement, water velocity from propellers is sufficient to suspend fine-grained particles. Most of the marine floor in this area is covered in wood chips. The water velocity is likely not high enough to suspend the larger wood chips, but because there are fine-grained materials mixed in with the wood waste, marine barge traffic may cause ongoing turbidity in this section of habitat. There would also be small, direct losses of marine habitat due to the marine footprint of the Project. As with the freshwater impacts, *Skwxwú7mesh* Nation generally agrees with the Proponent that the specific impacts from Proposed Project activities are not biologically significant. However, notwithstanding the cumulative effects assessment compiled by the Proponent in Part B; *Skwxwú7mesh* Nation believes that additional means of monitoring and managing cumulative marine impacts beyond standard EA requirements are necessary for effective protection of *Skwxwú7mesh* Nation's Aboriginal Rights (and achievement of general stewardship obligations).

In addition to the residual effects identified by the Proponent in Part B, it is *Skwxwú7mesh* Nation's opinion that the confidence attributed to the effects on fish and fish habitat in Part B is moderately overstated. This opinion is based in part on the necessary reliance on predictive groundwater models in very heterogeneous materials, and on the reliance for habitat-based assessments of fish use as opposed to more intensive direct sampling. Consequently, additional mitigation, adaptive management commitments, follow up monitoring, or compensation actions are explored in Section 11.3.4 further prior to characterizing the residual effect on *Skwxwú7mesh* Nation's Aboriginal Rights and current use.

Potential effects on aquatic resources post-closure are likely minor or negligible, and additional mitigation or effect characterization beyond what is provided in Part B are not pursued in this section.

### **11.3.3.2.3 Potential Effects on Governance of *Skwxwú7mesh* Nation Lands**

A fundamental sub-component of *Skwxwú7mesh* Nation Aboriginal Rights is the right to proactively use and manage the territory, including through land use decisions. This governance right is directly related to numerous other Aboriginal Rights – from traditional pursuits such as resource gathering and other uses of the land, to economic development activities such as those outlined in Section 11.3.2. The right to governance over the territory was rapidly and brutally impacted during colonialization in the late 1800s and early 1900s (SN 2001; Traditions 2015b; refer to Section 10.1.1). Reconciliation requires that governments continue to work with *Skwxwú7mesh* Nation to ensure that governance rights are respected.

The indicators selected to evaluate potential effects on *Skwxwú7mesh* Nation's right to governance from the proposed Project, as identified in Section 11.3.1.2, are:

1. Consistency with the Nation's Land Use Plan, *Xay Temíxw*. This plan describes part of *Skwxwú7mesh* Nation's vision for the future of the territory. It is predominantly focused on terrestrial as opposed to marine portions of the territory; as previously noted, a *Skwxwú7mesh* Nation-led marine use planning process has been initiated but is not sufficiently advanced to provide specific management guidance. Despite this limitation, the Land Use Plan represents an exercise of the Nation's governance rights, and the objectives therein provide guidance against which proposed uses of the territory may be evaluated.

2. Decision making authority within the territory in general. The extent to which *Skwxwú7mesh* Nation is a decision maker for any proposed use of the territory can be viewed as a continuum. Where the Nation is a de facto or de jure decision maker for a proposed project, the Nation’s governance rights are being fully respected and exercised. When the Nation is relegated to a consulted party in another level of government’s decision making, the governance right is impacted. The severity of this impact is determined by the level of consultation and the amount of influence afforded to the Nation in decision making.

**11.3.3.2.3.1 Consistency with Xay Temíxw**

In 2001, *Skwxwú7mesh* Nation completed an initial draft of the Nation’s own Land Use Plan, Xay Temíxw, “to determine and describe the community’s vision for the future of the forests and wilderness of the traditional territory”. (SN 2001:1). The plan identifies and maps numerous classes of lands in *Skwxwú7mesh* Nation territory for which different land use priorities are asserted. Some of these areas have subsequently been afforded varying levels of protection through the BC *Land Act*<sup>8</sup>. And, while the plan itself has not been formally adopted by any other land use planning process or the Province of BC, it was specifically cited as a supporting reason when the BC Supreme Court found consultation on a proposed ski resort was inadequate (*Squamish Nation et al. v. The Minister of Sustainable Resource Management et al.*, 2004 BCSC 1320).

Xay Temíxw is specifically focused on the forested wilderness of the traditional territory, and does not directly address coastal or marine resources; however, the Nation is undertaking marine use planning. The proposed Project is likely to interact chiefly with coastal and marine habitat, and thus Xay Temíxw presents only a partial frame of reference for *Skwxwú7mesh* Nation governance. However Xay Temíxw does provide numerous stated management objectives that address both upland and coastal portions of the territory. The proposed Project was evaluated against these management objectives, particularly where they pertain to natural resource management and economic development. Objectives pertaining to cultural sites, heritage resources, and traditional use are integrated into Section 11.3.5.4 (effects on traditional use and occupancy), and Section 11.3.5.5 (effects on transmission of culture and history).

It is evident that the proposed Project would conflict with numerous management objectives stated in Xay Temíxw. The summary below includes only the sub-set of management objectives with clearest potential conflict with the Project:

- Xay Temíxw Objective: Ensure that the Nation has secure and exclusive rights to the cultivation and harvesting of non-timber forest products (nutraceutical and botanical) based on *Skwxwú7mesh* Nation traditional knowledge (SN 2001: 21).
  - In the absence of mitigation, the Project would contravene this objective. Although the Proponent is not harvesting plant resources per se, the Project would involve clearing of up to 59 ha of vegetated areas. Typical industrial clearing practices provide no consideration for potential harvest of plants with a usable purpose for *Skwxwú7mesh stelmexw* (Squamish people).

<sup>8</sup> A 2007 Land Use Agreement between *Skwxwú7mesh* Nation and the Province of BC formally recognized, and provided management direction for, numerous areas related to the 2001 land use planning process, including *Kwékwayex Kwelháynewx ta Skwxwú7mesh Temíxw* (Wild Spirit Places), *Síiyamin ta Skwxwú7mesh* (Cultural Sites) *Úxwumixw* (Village Sites), *Skwxwú7mesh-ulh Snewayelh* (Cultural Training Areas), and Wildlife Focus Areas. However, not all sites proposed by *Skwxwú7mesh* Nation were included.

- Xay Temíxw Objective: Maintain the abundance and diversity of all native species of wildlife throughout the traditional territory; restore viable populations of all species at risk within the traditional territory and ensure adequate protection of habitat. (SN 2001:24).
  - Of particular interest in Xay Temíxw are species at risk, deer winter range, moose winter range, mountain goat winter range, grizzly bear and wolf habitat. The plan, however, pre-dates the successful re-introduction of elk into the territory and this species is also implicitly a management priority within Xay Temíxw. Mitigation for wildlife and their habitat, and predicted residual effects, are communicated in Volume 2, Part B - Section 5.3 Terrestrial Wildlife and Vegetation, in Part B of this Application. It is the Proponent's opinion that the mitigation identified in Part B is sufficient to achieve consistency with this management objective. Skwxwú7mesh Nation has not yet reviewed the wildlife effects assessment in detail, but will do so during the formal review through the BC *Environmental Assessment Act* process. It is Skwxwú7mesh Nation's opinion that additional mitigation may be required, particularly to ensure that "adequate protection of habitat" is achieved to the Nation's standards. However Skwxwú7mesh Nation's opinion on the need for, and specific details of, any such mitigation will be deferred to the final review of the proposed Project once this Application is accepted for review by BC EAO.
- Xay Temíxw Objective: Maintain, rebuild or enhance salmon stocks to historic levels (SN 2001:31).
  - While the Project is unlikely to create a measurable decline in salmon stocks that rely on the McNab Creek watershed, it remains uncertain whether it can achieve a net-zero (or potentially positive) result on the productive capacity of salmon. Skwxwú7mesh Nation reviewed multiple iterations of conceptual offsetting strategies for fish habitat with the Proponent prior to this Application being submitted. While Skwxwú7mesh Nation was generally amenable to the freshwater habitat concept, the Nation also noted that the Proponent was unable at that time to effectively demonstrate hydraulic effectiveness of the proposed plan. Skwxwú7mesh Nation confirmed similar concerns with Fisheries and Oceans Canada (DFO) staff during this pre-review stage. Thus, accounting for the fish and fish habitat mitigation in Volume 2, Part B – Section 5.1, the proposed Project still has a low to medium likelihood to conflict with this management objective and further consideration of mitigation or offsetting is relevant. For similar reasons, the Project may conflict in whole or in part with the following management objectives:
    - Xay Temíxw Objective: Restore extirpated stocks where possible (SN 2001:31). The Project is likely to conflict with this strategy since it relies heavily on the pre-existing impacts from past industrial use – which is the opposite of restoration.
    - Xay Temíxw Objective: Maintain or increase the natural production of spawning streams through habitat protection measures (SN 2001:31). The Project is in conflict with this strategy since it would lead to a small net-loss of spawning habitat.
    - Xay Temíxw Objective: Protect the integrity of environmentally sensitive areas and critical fish habitats (SN 2001:31). Given the cultural and environmental context of Howe Sound and salmon-producing streams within it, it is Skwxwú7mesh Nation's opinion that the entirety of the Sound and of McNab Creek is an environmentally sensitive area.

As the Project is likely to conflict with one or more management objectives in *X̱ay Temíxw* (pertaining specifically to natural resource management), additional mitigation or offsetting options are required (Section 11.3.4) prior to characterizing the residual effect (Section 11.3.5).

#### **11.3.3.2.3.2 Decision Making Authority for *S̱kw̱x̱w̱ú7mesh* Nation**

As outlined in the preamble for this section, the legal structure of a project assessment under the BC *Environmental Assessment Act* or the *Canadian Environmental Assessment Act, 2012* is a direct impact on *S̱kw̱x̱w̱ú7mesh* Nation's right to self-govern the territory. The assessment framework(s) relegate the Nation to a consulted party in some other level of government's decision making on land uses in *S̱kw̱x̱w̱ú7mesh* territory. *S̱kw̱x̱w̱ú7mesh* "assert(s) their aboriginal title to those lands and waters that constitute the Nation's traditional territory, their rights to the resources of the traditional lands and waters, and their inherent right to self-determination"; further, "the Squamish have never ceded or surrendered title to their lands, rights to their resources, or the power to make decisions within their territory" (SN 2001).

Although both federal and provincial levels of government are legally obligated to consult with *S̱kw̱x̱w̱ú7mesh* Nation prior to making decisions on land and resource uses, it has been *S̱kw̱x̱w̱ú7mesh* Nation's experience that Crown consultation has failed to achieve equal government-to-government decision making. Potential mitigation through agreements between the Proponent and *S̱kw̱x̱w̱ú7mesh* Nation are therefore considered ((Section 11.3.4) prior to providing a residual effects characterization (Section 11.3.5).

#### **11.3.3.2.4 Potential Effects on Use and Occupancy of *S̱kw̱x̱w̱ú7mesh* Nation Territory**

Potential effects on factors identified under CEAA 2012 5(1)(c)(iii) and associated aspects of (ii) and (iv) relating to cultural heritage are specifically addressed in the following assessment of potential Project-related effects on *S̱kw̱x̱w̱ú7mesh* Nation Aboriginal Rights.

*S̱kw̱x̱w̱ú7mesh stelmexw* (Squamish people) have used, occupied, and relied upon the entirety of their territory since time immemorial. The connection of people to the territory and vice versa is the essence of *S̱kw̱x̱w̱ú7mesh* culture, and the Aboriginal Rights practiced by *S̱kw̱x̱w̱ú7mesh stelmexw* are an outcome of this connection.

The OUS affirmed this past and current reliance on the Proposed Project Area (Traditions 2015b). As summarized in Section 11.3.2, the OUS documented the expected result that the Proposed Project Area continues to be used directly by *S̱kw̱x̱w̱ú7mesh stelmexw* to exercise a multitude of Aboriginal Rights, and was, is and will be used as an access route to practice rights elsewhere within the territory. Accordingly, the following three indicators, as presented in Section 11.3.1.2, were adopted to convey the potential effects the proposed Project may have on the Nation's use and occupancy of the Nation's territory:

1. Alienation of territory through direct exclusion ("Direct Loss of Use and Occupancy Areas (Footprint)"). The Project would be situated on terrestrial and marine areas that are presently accessible and used by *S̱kw̱x̱w̱ú7mesh*. Although the terrestrial footprint of the site would occur within privately owned land, it is not currently fenced and is still used and accessed by *S̱kw̱x̱w̱ú7mesh*.
2. Indirect alienation of land ("Indirect Loss of Use and Occupancy Areas (Accessibility)"). Where land-based activity or marine shipping lanes obstruct past, current, or future movement patterns, this has the potential

effect of preventing access to areas of use and/or occupancy, thereby impacting the practice of Aboriginal Rights, including title.

3. Sensory disturbances to surrounding back country lands (“Indirect Loss of Use and Occupancy Areas (Sensory Disturbance)”). Aboriginal Rights are composed of more than the physical act of harvesting a resource or occupying a space on the landscape. The exercise of rights includes spiritual components related to the interconnectedness of *Skwxwú7mesh* to the territory. All forms of sensory disturbance are therefore relevant considerations for effects on this sub-component of Aboriginal Rights.

#### **11.3.3.2.4.1 Direct Loss of Use and Occupancy Areas (Footprint)**

The total terrestrial (e.g., including freshwater but excluding marine) footprint of the Proposed Project by the end of mine life would be 59 ha. Some infrastructure may be removed during decommissioning, however the pit lake would persist and thus the terrestrial extent of territory permanently altered will be 28 ha. The marine footprint, including the conveyor and barge loading area (e.g., omitting the dynamic exclusion zones of the barges) is 295 m<sup>2</sup>, which would persist to the end of operations. The fact that the terrestrial footprint exists within privately owned lands and that the marine footprint exists within a water lot lease may be viewed as ameliorating factors for the potential effect on use and occupancy of this area. However, the private ownership does not reflect the unceded nature of the entirety of *Skwxwú7mesh* territory. Further, given *Skwxwú7mesh*'s documented past, current and desired future use of the Proposed Project Area, there is a direct effect pathway that requires additional mitigation (Section 11.3.4) prior to characterizing the residual effect (Section 11.3.5).

#### **11.3.3.2.4.2 Indirect Loss of Use and Occupancy Areas (Accessibility)**

Through construction and operations, the Proposed Project footprint would physically occupy 59 ha of combined marine and terrestrial territory relied upon by *Skwxwú7mesh*. In addition, indirect alienation of use and occupancy areas can occur either in whole or in part. Complete indirect alienation exists if restrictive access controls (e.g., fencing) are in place that prevent movement to an area of desired use that is not directly occupied by the Proposed Project. Partial alienation exists when the Proposed Project does not specifically preclude access to and use of a particular area, but makes such access either more difficult, or a less preferred option. While partial alienation may allow some alternative movement corridors to the same ultimate end point, the potential spatial scale of the effect can also be vastly greater than direct impacts from Proposed Project footprint or access controls.

*Skwxwú7mesh* has long used the low-elevation McNab Creek valley as an access corridor for practice of numerous Aboriginal Rights, and direct use and reliance remains documented in current times. This includes fishing in McNab Creek upstream of the Proposed Project Area; hunting elk, deer and blue grouse in lower elevation areas; and hunting mountain goats in higher elevation areas (Traditions 2015b). Furthermore, *Skwxwú7mesh*'s traditional village, *kw'ech'tenm* remains a stopover place for cultural practices – such as the annual youth canoe journeys. Additional practice of Aboriginal Rights documented in proximity to *kw'ech'tenm* include but are not limited to marine resource harvest, ceremonial activities, trading, legendary being records, burial sites, raw resource materials, healing sites, water supply areas and pictographs. In total, at least 47 traditional use and occupancy sites are located in or overlap with the LSA applied in the OUS, and at least



367 sites in the broader RSA (Traditions 2015b) – for some of which, access routes may be related to the areas affected by Proposed Project activities.<sup>9</sup>

Access management and control provisions are not yet fully developed for the proposed Project. However, as an industrial construction and operations area, it is inevitable that some minimum, mandatory access control provisions would be necessary for site security and for safety at least through construction and operations. *Skwxwú7mesh* Nation has identified past, current, and ongoing future use of the surrounding territory that rely on freedom of movement within the Proposed Project Area, and there is therefore likely to be some potential residual effect in the absence of mitigation, compensation or avoidance measures.

#### **11.3.3.2.4.3 Indirect Loss of Use and Occupancy Areas (Sensory Disturbance)**

Spiritual intangibles are a necessary component of exercising Aboriginal Rights in a way that sustains the *Skwxwú7mesh* culture and community. These intangibles are often broadly referred to as “sense of place” or other flexible terms that convey the multi-sensory connection to the territory that is associated with cultural practices. An interview quoted in *Xay Temíxw* states,

*“I want a place to go where there won’t be people around, where I can harvest cedar and other plants without people snooping around. It’s hard to get away from the crowds... I can’t even harvest in many areas. The other year I was way up the mountains harvesting cedar. Way up there where I didn’t think that there would be people. All of a sudden forty hikers came out of the blue. One of the women came up to me and asked if I had permission to be stripping and processing cedar. I told her that I asked permission but it wasn’t from the forestry people. It was from the Creator and the tree.”* (Tracy Williams; excerpted from *Skwxwú7mesh* Nation 2001).

Similar sentiments by *Skwxwú7mesh stelmexw* appear consistently in the long history of cultural studies and in consultation discussions between the Proponent and Squamish for the Proposed Project. Sites which require solitude (such as ritual bathing and healing sites) are increasingly difficult to find, and it is generally held by *Skwxwú7mesh stelmexw* that non-members fail to understand this holistic perspective of Aboriginal Rights.

It is difficult to define and measure a “sense of place” as it relates to sensory disturbance since it varies by individual, but relevant aspects as they relate to Project activities include:

- Encountering more people than permissible to achieve the desired level of solitude
- Olfactory disturbances such as dust emissions, hydrocarbon emissions, or other airborne pollutants
- Acoustic disturbance, particularly industrial noises that are starkly different from natural sound sources
- Visual changes, such as reductions in the proportion of forested cover in the viewscape, and/or the presence of heavy machinery or industrial buildings.

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<sup>9</sup> These numbers are based on selective interviews and do not represent the full extent of *Skwxwú7mesh* ‘ use and occupancy of these areas.



Sensory disturbances that affect an individual's connection to the land would, at best, diminish the spiritual enjoyment and fulfilment associated with the activity. At worst, they would present an intolerable deterioration resulting in the unwillingness or inability to exercise Aboriginal Rights, which are associated with cultural heritage components contemplated in CEAA 2012 5(1)(c)(ii) and (iv). Mitigation, avoidance, offsetting, compensation or accommodation measures should therefore be applied where possible to reduce the severity or duration of effects through this pathway.

#### **11.3.3.2.5 Potential Effects on Transmission of *Skw̓xwú7mesh* Nation Culture and History**

The transmission of *Skw̓xwú7mesh* culture and history from one generation to the next is a high-priority objective of the Nation. The assessment of potential effects on transmission of *Skw̓xwú7mesh* culture and history is also contemplated under CEAA 2012 5(1)(c)(ii) and (iv). Defined broadly, this transmission of cultural and history represents a practical outcome of ongoing exercise of Aboriginal Rights; however for the purposes of this effects assessment this sub-component focuses on the biophysical and geophysical attributes of *kw'ech'tenm*.

Oral history, as documented in several studies, cites *kw'ech'tenm* as an ancestral village; and presently it remains a teaching place and stopover area during *Skw̓xwú7mesh* Nation's youth canoe program each summer (Traditions 2015b). By virtue of *kw'ech'tenm* being a named place of habitual use by *Skw̓xwú7mesh stelmexw*, *Xay Temíxw* outlines the importance of retaining the existence and knowledge of this place. Substantial changes to the biota and physical attributes of the Proposed Project Area may therefore impact the ability for this objective to be realized.

Administrative and technical boundaries on this assessment make it difficult to articulate the potential effect pathway for *kw'ech'tenm*, other than to say that the place would change during operations but also long-term after decommissioning. While the characteristics of this effect (particularly magnitude) are difficult to assess, precautionary offsetting measures that help to improve retention of cultural history should be applied.

More generally, given the immense duration and intensity of use, the area around *kw'ech'tenm* may yield additional sites of historic, heritage, or cultural importance to *Skw̓xwú7mesh* Nation. *Skw̓xwú7mesh* Nation is satisfied that the Proponent has undertaken their legal due diligence for this current phase of the Proposed Project through the archaeological impact assessment (AIA) (see Volume 2, Part B - Section 8.1: Heritage Resources of this Application). However, the strict requirements of the *Heritage Conservation Act* (HCA) do not provide fail-safe protection of *Skw̓xwú7mesh* Culture and History. Section 7 of *Xay Temíxw* outlines an amended policy and regulation for the HCA within *Skw̓xwú7mesh* Nation territory, as enabled by Section 4 of that Act ("Agreements with First Nations"). However, to date no such agreements have been reached under the HCA and the *Skw̓xwú7mesh* Nation reports that the Province has been criticized for not making Section 4 of the Act a bigger priority. Notwithstanding the purported intent of the HCA, it is considered by many First Nations as insufficient to adequately address indigenous peoples' governance over heritage areas (Wilson-Raybould, 2014). Additional mitigation actions should be explored to ensure that *Skw̓xwú7mesh* Nation's interests are integrated into future assessments, monitoring and response protocols.

**11.3.4 Recommended Mitigation**

*Skwxwú7mesh* and the Proponent jointly reviewed some portions of a late-draft stage of the Application. In providing opinion and informing the content for this section of Part C, *Skwxwú7mesh* Nation’s views of the potential impacts on the Nation’s Aboriginal Rights, including current use, were based on the residual environmental and socioeconomic effects that would exist after the mitigation that had already been proposed by the Proponent elsewhere in that draft version of the Application. The potential effects, or at least effects pathways, described above therefore already account for most of the detailed mitigation and avoidance measured documented elsewhere in this Application (Part B). Although potential effects on tangible or physical cultural heritage, including any structure, site, or thing of historical, archaeological, paleontological, or architectural significance, is discussed in Volume 2, Part B - Section 8.1: Heritage Resources, *Skwxwú7mesh* Nation has provided Project-specific mitigation recommendations regarding tangible heritage related to *Skwxwú7mesh* Nation’s Aboriginal Rights in this section of Part C.

It is *Skwxwú7mesh* Nation’s view that, despite environmental mitigation and avoidance measures proposed in Part B of the Application, the Proposed Project would likely still have residual effects on *Skwxwú7mesh* Nation Aboriginal Rights, including current use. In some cases these residual effects can be mitigated or avoided. This section therefore highlights additional measures on which the Proponent and *Skwxwú7mesh* Nation have come to agreement on *Skwxwú7mesh* conditions (Table 11-11). The measures constitute the *Skwxwú7mesh* Nation conditions of Project approval. Residual effects are subsequently characterized on the presumption that the conditions are implemented.

**Table 11-11: Identified Mitigation Measures: *Skwxwú7mesh* Nation Aboriginal Rights, including Current Use**

Potential Effect	Mitigation
Loss of terrestrial resources and their habitat	<ul style="list-style-type: none"> <li>▪ Implementation of measures identified in Volume 2, Part B - Section 5.3 Terrestrial Wildlife and Vegetation.</li> <li>▪ Proponent to engage in deep consultation with <i>Skwxwú7mesh</i> Nation during ongoing regulatory review of the Application. Where feasible and practical, the Proponent will adopt additional <i>Skwxwú7mesh</i> Nation recommendations for protection of terrestrial resources.</li> <li>▪ <i>Skwxwú7mesh</i> Nation involvement and approval role, for development and implementation of mitigation (including offsetting), and management and monitoring plans related to deer and elk. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> </ul>
Loss of freshwater or marine aquatic resources	<ul style="list-style-type: none"> <li>▪ Implementation of measures identified in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat and Section 5.2: Marine Resources.</li> <li>▪ Addition of a marine component to the Fish Habitat Offset Plan (Volume 4, Part G – Section 22.0: Appendix 5.1-B).</li> <li>▪ Proponent to demonstrate, to the satisfaction of <i>Skwxwú7mesh</i> Nation, hydraulic feasibility of the proposed Habitat Offset Plan (provided in Volume 4, Part G – Section 22.0: Appendix 5.1-B).</li> <li>▪ <i>Skwxwú7mesh</i> Nation involvement and decision making role, for development and implementation of management and monitoring plans. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> <li>▪ Proponent to provide financial contribution to <i>Skwxwú7mesh</i> Nation’s Marine Use Planning process. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> <li>▪ Proponent will place McNab Creek ecological function as the highest management priority. Should follow-up monitoring reveal Proposed</li> </ul>

Potential Effect	Mitigation
	Project-related effects on habitat quantity or quality in McNab Creek, adaptive management actions will be taken as necessary – including but not limited to voluntary stoppage of operations until solutions are in place.
Infringement or loss of <i>Skwxwú7mesh</i> Nation's right to governance	<ul style="list-style-type: none"> <li>▪ <i>Skwxwú7mesh</i> Nation involvement and decision making role, for development of management and monitoring plans.</li> <li>▪ Proponent to consult with <i>Skwxwú7mesh</i> Nation on actions that can achieve greater consistency with <i>Xay Temíxw</i>. This will be achieved through a negotiated decision making role for <i>Skwxwú7mesh</i> Nation in the management and monitoring plans as noted above.</li> <li>▪ Subject to agreement through ongoing discussion, the Proponent to formally acknowledge the Proposed Project's impacts on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights.</li> </ul>
Direct and indirect impacts on use and occupancy of <i>Skwxwú7mesh</i> Nation territory	<ul style="list-style-type: none"> <li>▪ Co-development between the Proponent and <i>Skwxwú7mesh</i> Nation of an Access and Communication Protocol that seeks to minimize access, disruption and inconvenience to <i>Skwxwú7mesh</i> for activities undertaken in and around the Proposed Project Area.</li> <li>▪ Explore ways to return direct stewardship and use of the Proponent property<sup>10</sup> back to <i>Skwxwú7mesh</i> after decommissioning. Details of agreement will be negotiated through ongoing discussion.</li> <li>▪ The Proponent to compensate residual net losses incurred by the Nation.</li> </ul>
Effect on retention and transmission of <i>Skwxwú7mesh</i> Nation culture	<ul style="list-style-type: none"> <li>▪ Proponent to fund <i>Skwxwú7mesh</i> Nation in honouring <i>kw'ech'tenm</i>; including but not limited to a plaque or other signage. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> <li>▪ <i>Skwxwú7mesh</i> Nation decision making role in development and implementation of chance-find protocols for heritage sites and any other AIA-related mitigation measures.</li> </ul>

### 11.3.5 Residual Effects Assessment

Input provided by *Skwxwú7mesh* Nation to the Proponent for the residual effects assessment on *Skwxwú7mesh* Nation Aboriginal Rights, including current use, has been included under the appropriate headings in the following sections and are summarized in Table 11-12.

#### 11.3.5.1 Terrestrial Resources

The residual effects on terrestrial resources are described below. This characterization differs from that provided in Volume 2, Part B - Section 5.3: Terrestrial Wildlife and Vegetation, as the effects here are interpreted through the lens of *Skwxwú7mesh* Nation Aboriginal Rights and associated current use.

##### 11.3.5.1.1 Construction and Operations

Notwithstanding full implementation of the mitigation identified in Volume 2, Part B - Section 5.3: Terrestrial Wildlife and Vegetation, and any additional mitigation as outlined in Table 11-11, the construction and operation period(s)

<sup>10</sup> This refers to the lands owned by 0819042 BC Ltd and BURNCO Rock Products Ltd., including DL 677 LD 37 New Westminster Group 1; DL 677A LD 37 New Westminster Group 1; DL 677B LD 37 New Westminster Group 1; PCL 1 DL 677B LD 37 New Westminster Group 1; and Foreshore Tenure #240515.

would have residual effects on terrestrial resources relied upon by *Skwxwú7mesh*. The likelihood of this effect is certain.

- **Context:** Industrial development of forested areas in *Skwxwú7mesh* Nation territory has been a defining characteristic of post-contact times. Forestry, mining, hydroelectric generation, urbanization and back-country tourism have removed enormous amounts of terrestrial resources. Development pressure in the territory has been most intense in areas immediately surrounding Howe Sound. For decades now, and likely decades to come, *Skwxwú7mesh stelmexw* have been forced to travel farther and farther to access resources, particularly those associated with old growth forests. The elk population was extirpated from the territory shortly after industrial development commenced. Although reintroduction of this species c. 2007 has been successful to date, abundance remains far from historic or desired levels to sustain *Skwxwú7mesh* Nation culture and sustenance. Consequently, remaining harvestable resources on the west side of Howe Sound, including both the LSA and the RSA, and including ungulates but also all other terrestrial resources, are extremely important. The context of this residual effect is therefore high: even small losses in plant or animal abundance, or habitats upon which they rely, will have a disproportionately high effect on *Skwxwú7mesh* Nation's Aboriginal Rights, including current use.
- **Magnitude:** The Project exists within a relatively small area and in which past forestry practices have diminished the biodiversity (and thereby the number of harvestable resources that would be directly affected). Early seral forest provides key habitat for ungulates. The low elevation nature of the McNab Creek valley is comparatively rare and displacement of ungulates from preferred habitat may have undetectable – but biologically relevant - consequences on animals' winter energy budgets. The magnitude of the overall effect on terrestrial resources, with particular focus on ungulates, is therefore considered moderate.
- **Geographic Extent:** Although the terrestrial footprint of the Project is relatively small, habitat would be lost directly (footprint) or indirectly (sensory disturbance) for species such as ungulates that have wide home ranges. Any effect on these species potentially exists within their entire home range, where habitat use changes. The geographic extent is therefore considered to be sub-regional (e.g., beyond the LSA, but less than the entire RSA).
- **Frequency:** Once construction commences, site clearing and sensory disturbance would be frequent or continuous for the remainder of operations. Although some aspects of the effect would occur only rarely or infrequently, there would be some extent of continuous effect throughout operations.
- **Reversibility:** There would be a permanent loss to the harvestable land base, as the pit closure lake would be a permanent alteration to the landscape. At least a portion of this generalized effect is therefore irreversible.
- **Duration:** As the effect is considered irreversible, the duration is indefinite.

#### **11.3.5.1.2 Decommissioning**

Any adverse residual effects on terrestrial resources caused by decommissioning are expected to be negligible. Note, the creation of the pit lake is considered to be an operations-related effect and is included in the preceding discussion.

### 11.3.5.2 Aquatic Resources

The residual effect on aquatic resources is described below. As for the terrestrial resources, this characterization differs from that provided in Part B, Section 5.1 Fisheries and Freshwater Habitat and Section 5.2 Marine Resources, as the effects here are interpreted through the lens of *Skwxwú7mesh* Nation Aboriginal Rights and associated current use.

#### 11.3.5.2.1 Construction and Operations

Notwithstanding full implementation of the mitigation identified in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat and Section 5.2 Marine Resources, and any additional mitigation as outlined in Table 11-11, the construction and operation period(s) would have residual effects on aquatic resources relied upon by *Skwxwú7mesh*. The likelihood of there being a residual effect is certain.

- **Context:** *Skwxwú7mesh* has continued to rely directly on marine and freshwater aquatic resources since time immemorial; however the ability for resources to provide the necessary cultural and physical sustenance has been diminished significantly—and in some cases lost outright – during post-contact times.
  - Regionally, Howe Sound is highly sensitive to industrial impacts. Starting in the late 1800s and extending to the early 2000s, Howe Sound was subject to very intensive industrialization. Forestry, mining, fishing, and chemical manufacturing had particularly devastating impacts on the marine life in Howe Sound. Howe Sound saw a huge decline in almost every key marine species. The past 10 years has seen a revitalization in marine life in Howe Sound. A commercial pink salmon fishery opened in the Sound in 2013, the first time in a generation. Herring abundance has returned, after nearly vanishing from the Sound for decades. Large predators have followed, and sightings of whales and dolphins continue to increase. Furthermore, the health of the water and animals is improving. Industrial pollution is down, and natural resources are increasingly becoming safe again for human consumption. This recent revitalization must be considered in the context of the impacts in the 20<sup>th</sup> century, demonstrating both the high sensitivity but also strong resilience of the Howe Sound ecosystem. The abundance and health of marine resources has also led to a recent revitalization of harvest by *Skwxwú7mesh stelmexw* (Traditions 2015b).
  - Locally, McNab Creek and its estuarine area are a micro-example of Howe Sound as a whole. The ecosystem has been heavily impacted dating to the early 1900s (Traditions 2015b), but has recently shown signs of healing. With regards to the interconnection between freshwater and marine habitat, a provincial assessment in 1979 concluded, “*The true fisheries capability of this area lies behind the collective production of each seemingly minor stream. Poorly planned developments that result in a loss of productivity in even a few of these streams could result in a large net loss to the overall productivity of the area*” (Peatt 1979). This quote is representative of the interconnectedness of territory that defines *Skwxwú7mesh* culture and the embedded stewardship obligations. McNab Creek and the smaller watercourses nearby have endured significant impacts to their biological productivity. The main creek is very flow-stressed in late summer, and struggles to support the anadromous and resident fish that rely upon it. The late summer low flows can be attributed in part to upland forestry activities that have diminished the ability for slopes to retain and attenuate base flows. The comparative rareness of low-gradient fluvial fans with abundant gravel in Howe Sound

renders McNab Creek as key spawning habitat for anadromous species, with high sensitivity and low resilience to overcome further impacts.

- For the reasons summarized above, the context of this residual effect is high: even small losses in fresh water quality or quantity, or marine impacts to any habitat relied upon now or in the future by fish or shellfish, would have a disproportionately high effect on *Skwxwú7mesh* Nation's Aboriginal Rights, including current use.
- **Magnitude:** One of the key predictions from the effects assessment in Volume 2, Part B is that there is unlikely to be any measurable decrease in water quantity or quality in McNab Creek. It is assumed that this prediction is ultimately borne out through detailed monitoring, and that the commitment is upheld to keep McNab Creek ecological function as the highest management priority. It is also assumed that the degraded nature of marine habitat due to past impacts from the log sort would continue for the duration of Project operations (e.g., a full scale marine habitat restoration within the LSA is unlikely within the 20 year lifespan of the Proposed Project). Should any of these assumptions not be met, it is *Skwxwú7mesh* Nation's view that effects on aquatic resources would have a high magnitude. However, if the assumptions are borne out, the magnitude of this effect is expected to be low.
- **Geographic Extent:** The Proposed Project would include site-specific effects (footprint and small-scale sensory disturbance). However it would also include acoustic disturbances to fish and marine mammals that may extend up to 2 km from moving barges. The geographic extent is therefore considered to be sub-regional (i.e., beyond the LSA but not throughout the entire RSA).
- **Frequency:** Pile driving, riparian clearing, spawning channel excavation, water quality effects and barge loading and movement would, collectively, be frequent or continuous for the remainder of operations.
- **Reversibility:** Most impacts to aquatic resources are likely to be reversible after operations cease. However, the loss of spawning habitat is anticipated to persist for seven generations or more, and thus it is *Skwxwú7mesh* Nation's opinion that irreversible residual effects would exist.
- **Duration:** As the effect is considered irreversible, the duration is indefinite.

#### **11.3.5.2.2 Decommissioning**

Any adverse residual effects on aquatic resources caused by decommissioning are expected to be negligible; or, in the event that the pit lake can be used as productive rearing habitat, net-positive.

#### **11.3.5.3 Governance of *Skwxwú7mesh* Nation Lands**

As outlined in Section 11.3.3.2.3 the decision framework for whether or not the Proposed Project proceeds, and any conditional approvals that may arise, directly impacts *Skwxwú7mesh* Nation's right to govern within its unceded territory. Such impacts are generally categorized as neither "construction & operations" impacts, nor "Decommissioning", as they occur primarily during the pre-construction approvals. However, included amongst the mitigation outlined in Table 11-11 is an ongoing decision-making role for *Skwxwú7mesh* Nation so that, if the Proposed Project does proceed, there are some assurances that *Skwxwú7mesh* Nation's governance objectives



and standards can be incorporated into long-term decision making. A related key mitigation for this effect pathway is the development of appropriate agreement terms between the Nation and the Proponent, to offset the overall effects the Proposed Project may have on the Nation's rights. The effectiveness of this mitigation would depend on ongoing negotiations. *Skwxwú7mesh* Nation therefore adopts the precautionary position that there may be some residual adverse effect on the Nation's right to governance within the territory.

- **Context:** *Skwxwú7mesh* Nation's right to governance was outright ignored and implicitly undermined for multiple generations. Increasing recognition of this component of Aboriginal Rights in recent years has allowed some influence in local and regional decision making, but it is *Skwxwú7mesh* Nation's opinion that this right remains significantly impacted throughout the territory. Further inability to exercise this right has a cascading adverse effect on the practice of broader Aboriginal Rights. *Skwxwú7mesh* Nation has been particularly hesitant about engaging in the provincial or federal EA process in part because of the high likelihood of such effects. The context of this effect is therefore high.
- **Magnitude:** The magnitude of the effect is unknown as it depends on future negotiations between the Proponent and *Skwxwú7mesh* Nation.
- **Geographic Extent:** The geographic extent of the effect is beyond regional, as *Skwxwú7mesh* Nation retains the right to govern throughout the entirety of the Nation's territory.
- **Frequency:** The frequency of the effect is considered rare, as it is anticipated that conflicts between either the Proponent or other levels of government and *Skwxwú7mesh* Nation regarding a decision making role would be necessary on only a few occasions through the life of the Proposed Project.
- **Reversibility:** Regardless of outcome, it is anticipated that *Skwxwú7mesh* Nation would eventually achieve full recognition of the right to govern throughout the area in which Aboriginal Title has been claimed.
- **Duration:** The duration of the effect is unknown since it depends on future negotiations between the Proponent and *Skwxwú7mesh* Nation.

#### **11.3.5.4 Use and Occupancy of *Skwxwú7mesh* Nation Territory**

As outlined in Section 11.3.3.2.4, the Proposed Project Area overlaps with, and intersects travel corridors to and from, areas of past, current and future use by *Skwxwú7mesh*. Mitigation measures have been proposed that would reduce the seriousness of this effect. However, because the effect is dependent on individual behaviours and beliefs it is impossible within the scope of this assessment to characterize the residual effect beyond a very general level.

- **Context:** *Xay Temíxw* (SN 2001) highlights the effects that all forms of land development have had, and would continue to have, on the use and occupancy of *Skwxwú7mesh stelmexw* within their territory. Similar conclusions were provided in the OUS (Traditions 2015b), and in the multitudes of similar studies the Nation has conducted in recent decades. Land alienation through direct occupation by non-members, indirect alienation through fragmentation of the land base, and diminished "sense of place" in wild places have collectively led to use and occupancy of the territory that is well below target levels in both frequency and diversity of use. Consequently, this sub-component of Aboriginal Rights, including current use and associated

intangible cultural heritage (e.g., sense of place), is highly sensitive to further impacts and may show low resiliency for revitalization. Context is high.

- **Magnitude:** The magnitude of this effect is unknown as it depends on individual behaviours. Comprehensive interview-based methodology may provide greater insight. Inference may also be drawn from historical records and interviews for other projects; however such inferences would be confounded by other social, political, and economic variables. These sources of information were unavailable for this assessment, and consequently this aspect of the assessment is limited by administrative and technical boundaries.
- **Geographic Extent:** The geographic extent of the effect is likely to be sub-regional, since the Project is likely to affect accessibility and/or sense of place in areas extending beyond the LSA, but not across the entire RSA.
- **Frequency:** The frequency of effect would be continuous since access controls, footprint of the Proposed Project, and operations would occur either continuously or near-continuously until decommissioning is complete.
- **Reversibility:** The reversibility of the effect is unknown. Should a meaningful long-term loss of use and occupancy occur, it is possible that an inter-generational transfer of knowledge is lost and the effect would thus be permanent.
- **Duration:** The duration of the effect is likely to be multiple years, equal to or greater than the operational life of the Proposed Project.

#### **11.3.5.4.1 Decommissioning**

Any adverse residual effects on use and occupancy of the territory caused by decommissioning are expected to be negligible. This conclusion assumes long term use and stewardship of the private property<sup>11</sup> reverts to *Skwxwú7mesh* Nation either in isolation or in partnership with the Proponent.

#### **11.3.5.5 Transmission of *Skwxwú7mesh* Nation Culture and History**

Out of necessity given the effects assessment framework for the Proposed Project, a very narrow view was adopted for transmission of *Skwxwú7mesh* Nation culture and history. Focusing solely on the retention of *kw'ech'tenm* as an ancestral village, and any as-yet unknown cultural or heritage sites, there is generally a low likelihood for outright loss of culture and history. Mitigation for *Skwxwú7mesh* Nation concerns focused on increasing awareness of *kw'ech'tenm* as an ancestral village site, and honouring it. However, the flat valley bottom and alluvial fan adjacent to McNab Creek would be forever changed by the Proposed Project. The significance this may have to *Skwxwú7mesh* Nation culture and history is constrained by technical and administrative boundaries for this assessment.

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<sup>11</sup> The private property refers to the lands owned by 0819042 BC Ltd and BURNCO Rock Products Ltd, including DL 677 LD 37 New Westminster Group 1; DL 677A LD 37 New Westminster Group 1; DL 6778 LD 37 New Westminster Group 1; PCL 1 DL 677B LD 37 New Westminster Group1; and Foreshore Tenure #240515.

- **Context:** “Cultural and heritage sites are very important to the *Skwxwú7mesh* Nation. But the significance of the land extends beyond the archaeological sites where physical evidence of past use and occupation can be found. The whole traditional territory holds a legacy of language, tradition, legend, spirituality and use that closely links the people to their territory” (SN 2001:13). *Xay Temíxw* identifies the importance of retaining existence and knowledge of heritage sites. It, along with the multitude of cultural studies in past decades, also demonstrates the concern over loss of language, and inter-generational transfer of knowledge (Traditions 2015a, Traditions 2015b). The context is high, in that any further loss of culture and history for *Skwxwú7mesh* Nation may have a disproportionate cascading adverse effect on other Aboriginal Rights.
- **Magnitude:** The magnitude of the effect is unknown. As it is informed largely by individual beliefs and behaviours, it is constrained by technical and administrative boundaries.
- **Geographic Extent:** The geographic extent of any effect would be local since the Proposed Project is very unlikely to affect any spatial features beyond the defined LSA.
- **Frequency:** The frequency of the effect would be rare, as there are likely to be only a small number of discrete activities that directly change sites of heritage value.
- **Reversibility:** To some extent there would be some permanent change to the biological and physical attributes of the area since the Proposed Project proposes to leave a pit lake where presently there is forested land. The effect, at least in part, would remain irreversible.
- **Duration:** Because at least some portion of the effect is irreversible, the duration of the effect is indefinite.

### 11.3.5.5.1 Summary of Expected Residual Effects on Skwxwú7mesh Nation Aboriginal Rights, including Current Use

Table 11-12: Characterization of Expected Residual Effects\* on *Skwxwú7mesh* Nation Aboriginal Rights, including Current Use

Project-Related Effect	Residual Effect Assessment Criteria					
	Context	Magnitude	Geographic Extent	Duration	Reversibility	Frequency
Effects on Terrestrial Resources Relied Upon By <i>Skwxwú7mesh</i>	High	Moderate	Sub-regional	Indefinite	Irreversible	Continuous
Effects on Aquatic Resources Relied Upon by <i>Skwxwú7mesh</i>	High	Low	Sub-regional	Indefinite	Irreversible	Continuous
Effects on Squamish Nation Governance over the Territory	High	Unknown	Beyond regional	Unknown	Reversible	Rare
Effects on Use and Occupancy of the Territory	High	Unknown	Sub-regional	Unknown	Unknown	Continuous
Effects on Retention and Transmission of Culture and History	High	Unknown	Local	Indefinite	Irreversible	Rare

\*Effects are an amalgamated summary of effects on separate indicators and across all phases of the Project.

### **11.3.6 Significance of Residual Effects and Level of Confidence**

*Skwxwú7mesh* Nation and its members have exercised Aboriginal Rights within the Proposed Project Area and throughout the Nation's territory since time immemorial. The breadth and complexity of Aboriginal Rights are immense. It is *Skwxwú7mesh* Nation's view that the assessment requirements for the Proposed Project outlined in the AIR/EIS Guidelines are unable to provide component-specific significance determinations for *Skwxwú7mesh* Nation Aboriginal Rights, including current use. There are no transparent, measurable thresholds that can allow avoidance of a significant effect, or similarly avoid unacceptably diminishing recovery potential where subcomponents of Aboriginal Rights, including current use, are already well beyond a significance threshold. However, *Skwxwú7mesh* Nation does accept that the Project is not likely to have significant adverse effects on Aboriginal Rights, including current use and, for clarity, associated intangible cultural heritage.

This significance determination and level of confidence on that determination are qualitative, not quantitative, and apply to *Skwxwú7mesh* Nation Aboriginal Rights, including current use, in general. Importantly, it is also dependent on implementation of mitigation recommendations presented in this Application and further discussions between the Proponent and *Skwxwú7mesh* Nation. Consequently, the conclusion of non-significant residual effects is presented with moderate confidence.

### **11.3.7 Cumulative Effects**

Both the Proponent and *Skwxwú7mesh* concur that an itemized cumulative effects assessment on impacts to *Skwxwú7mesh* Nation's Aboriginal Rights, including current use, includes legal and cultural considerations that are beyond the assessment capacity for a project of this size and cannot be properly assessed in the Crown's EA process. However, historical cumulative effects on *Skwxwú7mesh* Nation's Aboriginal Rights and use – such as land alienation and health of natural resources – are integrated into the “context” discussion for individual effects discussed in Section 11.3.5. Unquestionably, all sub-components of Aboriginal Rights, including those related to current use and associated cultural heritage, have been negatively impacted since pre-contact times, with these impacts well beyond any reasonable definition of “significance.” In this sense, the combination of these past effects with Project residual effects identified in Section 11.3.5 could be significant, if they were to further change the already significantly affected condition of Aboriginal Rights, including current use or to impede the opportunity to restore affected Aboriginal Rights. Given the administrative and technical uncertainty associated with the residual effects characterization provided in Section 11.3.5, a detailed future cumulative effects analysis has not been undertaken, pending further negotiations between the Proponent and the *Skwxwú7mesh* Nation.

### **11.3.8 Summary of Effects on *Skwxwú7mesh* Nation's Aboriginal Rights, including Current Use**

The conclusion of “acceptable impacts” is contingent on the mitigation documented in this Application, most of which requires further implementation and/or deep consultation with *Skwxwú7mesh* Nation. It is also limited to the Proposed Project as defined: the size of operations and relatively short lifespan of the Proposed Project are very important considerations. Consequently, the conclusion of non-significant residual effects is presented with moderate confidence. Due to this uncertainty, *Skwxwú7mesh* Nation has reserved the right to revise this conclusion should new and important information be revealed, or should the Proposed Project details change.

In summary, *Skwxwú7mesh* Nation has strongly emphasized that the indicators and methods applied to this assessment are not to be used as a broad precedent for acceptable third-party assessment of impacts on the Nation in future developments. Such decisions must be negotiated on a case-by-case basis unless otherwise indicated by the Nation.

## **11.4 Assessment of Potential Effects on Tsleil-Waututh Nation and other Aboriginal Groups**

### **11.4.1 Methodology**

This section provides a description of the assessment methodology used to prepare Part C of the Application related to potential effects of the Proposed Project on Aboriginal Rights, including the current use of lands and resources for traditional purposes and associated intangible cultural heritage (herein referred to in Section 11.4 as “current use” for brevity) of Tsleil-Waututh Nation and the other Aboriginal Groups identified in the Section 11 Order and described in Section 10.0 Background Information, as follows: Musqueam Indian Band, Stz’uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe, and Métis Nation British Columbia (“other Aboriginal Groups” for brevity). The assessment methodology follows typical EA practice for assessment of VCs, as detailed in Volume 2, Part B - Section 4.0: Assessment Methods of this Application.

As part of the preparation of this section of the Application, the Proponent provided a draft to Tsleil-Waututh Nation and other Aboriginal Groups for review and comment prior to submission of the Application. Comments were received from Tsleil-Waututh Nation and Cowichan Tribes and integrated into this section of the Application. Penelakut Tribe provided procedural comments, which have also been addressed in this section of the Application. Among the comments received from Tsleil-Waututh Nation was a request to state that Part C and the Application as a whole does not, in any way, abrogate or derogate from any Aboriginal, treaty, title, or other rights or freedoms that pertain to Aboriginal peoples.

#### **11.4.1.1 Valued Component (VC) Selection and Rationale**

The AIR/EIS Guidelines requires an assessment of potential effects from the Proposed Project on asserted Aboriginal Rights, including current use, of Tsleil-Waututh Nation and the other Aboriginal Groups.

#### **11.4.1.2 Measurable Indicators**

The subcomponents and indicator(s) chosen for the assessment of potential effects of the Proposed Project on the VC (Aboriginal Rights, including current use) and the rationale for their selection are presented in Table 11-13.

**Table 11-13: Assessment Subcomponents and Measurable Indicators for Aboriginal Rights, including Current Use**

Assessment Subcomponent	Rationale for Selection	Measurable Indicator(s)
<b>Fishing and Harvesting Freshwater and Marine Resources</b>	The Proposed Project may affect opportunities for fishing or harvesting freshwater and marine resources for traditional purposes.	<ul style="list-style-type: none"> <li>▪ Changes in access to freshwater and marine resources;</li> <li>▪ Changes in availability or quality of freshwater and marine resources (including freshwater and marine habitat quality and quantity); and</li> <li>▪ Changes in quality of experience during fishing or harvesting freshwater or marine resources current use experience.</li> </ul>
<b>Harvesting Terrestrial Resources</b>	The Proposed Project may affect opportunities for harvesting terrestrial resources for traditional purposes.	<ul style="list-style-type: none"> <li>▪ Changes in access to terrestrial resources;</li> <li>▪ Changes in availability or quality of terrestrial resources (with a focus on ungulate quality and quantity); and</li> <li>▪ Changes in quality of experience during harvesting of terrestrial resources.</li> </ul>
<b>Aboriginal Title</b>	The Proposed Project may affect claims of Aboriginal Title to specific locations in the Local Study Area.	<ul style="list-style-type: none"> <li>▪ Changes in access to specific locations where Aboriginal Title has been asserted.</li> </ul>
<b>Intangible Cultural Heritage</b>	The Proposed Project may directly affect the ability to transmit intangible cultural heritage (culture and history) due to changes in access to locations associated with heritage or in the sensory environment / environmental setting (e.g., noise, air, visual quality) at these locations that may influence how the locations themselves or the landscape of which they are a part are experienced	<ul style="list-style-type: none"> <li>▪ Changes in access to locations associated with transmission of culture and history; and</li> <li>▪ Changes in quality of experience associated with the sensory environment / environmental setting at locations associated with the transmission of culture and history.</li> </ul>

**11.4.1.3 Assessment Boundaries**

The following section describes the spatial and temporal boundaries of the assessment of Aboriginal Rights, including current use, as well as any administrative or technical boundaries that may apply.

**11.4.1.3.1 Spatial Boundaries**

The Local Study Area (LSA) and Regional Study Area (RSA) for the effects assessment on Tsleil-Waututh Nation and other Aboriginal Groups' Aboriginal Rights, including current use, are defined in Table 11-14.



**Table 11-14: Spatial Boundaries – Aboriginal Rights, including Current Use**

Spatial Boundary	Description of Assessment Area
<b>Local Study Area (LSA)</b>	The LSA for this assessment is the BURNCO development property plus a 3 km buffer, and the proposed barging route with a 3 km buffer (Figure 10-9).
<b>Regional Study Area (RSA)</b>	The RSA for this assessment is the Howe Sound region (Figure 10-9).

### 11.4.1.3.2 Temporal Boundaries

The effects assessment for Aboriginal Rights, including current use, is based on the following temporal boundaries:

- Project construction – up to 2 years;
- Project operations – 16 years; and
- Project reclamation and closure – ongoing and one year beyond operations.

Past information to support the description of “existing conditions” of use by Tsleil-Waututh Nation and the other Aboriginal Groups has been included in Section 11.4.2 below. This information serves as the past temporal boundary for consideration of potential Project effects on Aboriginal Rights, including current use, in combination with other projects and activities that have already been carried out.

### 11.4.1.3.3 Administrative Boundaries

Aboriginal use of lands and resources is constrained by laws, government regulations, policies and procedures, and agreements between governments and specific Aboriginal Groups. For example, Tsleil-Waututh Nation, Musqueam Indian Band and Lake Cowichan First Nation have Comprehensive Fisheries Agreements with DFO, which define salmon allocations. Communal licences issued by DFO to First Nations also define to which Pacific Fisheries Management Areas licences apply.

### 11.4.1.3.4 Technical Boundaries

The assessment of potential effects of the Proposed Project on Aboriginal Rights, including current use, is constrained by the technical limitations identified for the VC assessments linked to this assessment, as well as the data collection and reporting methodologies employed in existing information sources used to support this assessment.

## 11.4.1.4 Assessment Methods

### 11.4.1.4.1 Describing Existing Conditions

A non-confidential summary of past, current, and anticipated future uses of lands and resources in the Study Area (i.e., LSA and RSA) by Tsleil-Waututh Nation and other Aboriginal Groups and potentially associated Aboriginal

Rights, including Aboriginal Title, is presented in Section 11.4.2, and forms the existing or 'baseline' conditions for the assessment of potential Project effects on Tsleil-Waututh Nation and other Aboriginal Groups' Aboriginal Rights, including current use, beginning in Section 11.4.3.

#### **11.4.1.4.2 Identifying Project Interactions, Effects, and Mitigation**

A preliminary evaluation of identified interactions between the various physical works and activities and selected subcomponents and indicators across all spatial and temporal phases of the Proposed Project was undertaken to characterize interactions as:

- a) Positive, none or negligible adverse effects expected –no further consideration warranted; or
- b) Potential adverse effects expected - further consideration and possibly additional mitigation warranted.

This evaluation on Aboriginal Rights, including current use, is presented in Section 11.4.4.2. Rationale is provided for all determinations of no or negligible interaction where no further consideration is required. For those Project-VC interactions that may result in potential effects requiring further consideration, the nature of the effects arising from those interactions is described. Potential effects include direct, indirect and induced effects.

Identification of Proposed Project interactions is based on the experience of technical specialists supported by existing information and information provided to the Proponent by Aboriginal Groups during consultation. The assessment of potential effects from the Proposed Project on Tsleil-Waututh Nation and other Aboriginal Groups' Aboriginal Rights, including current use, considered:

- a) The rationale for inclusion of the sub-component and indicators chosen (as identified in Table 11-13).
- b) The interaction pathways between Proposed Project components and the subcomponents identified for this effects assessment. The pathways considered the various phases of the Project (construction, operations, post-closure).
- c) The overall seriousness of the potential effects that may manifest through the pathways, taking into account the environmental mitigation measures that have already been identified in Part B of the Application.

Mitigation measures proposed for VCs assessed in Part B are evaluated in Section 11.4.5 for effectiveness at also addressing potential Project-related effects on Aboriginal Rights and associated current use. Where the measures identified in Part B are considered insufficient to address these potential effects, or no applicable measures could be identified in Part B, additional mitigation measures to specifically address potential Project-related effects on Aboriginal Rights, including current use, are also proposed.

#### **11.4.1.4.3 Evaluating Residual Effects**

Following an evaluation of the effectiveness of proposed mitigation measures to avoid, reduce, or otherwise manage potential Project effects on Aboriginal Rights, including current use, in Section 11.4.5, any expected

residual effects were categorized as either less than measurable (i.e., negligible) or as measurable. Negligible residual effects were not considered further in the assessment. As no measurable residual effects are identified below in Section 11.4.6, residual effects criteria specific to this assessment have not been defined.

## **11.4.2 Existing Conditions**

### **11.4.2.1 Tsleil-Waututh Nation and Other Aboriginal Groups' Use in the Study Areas**

This section provides a summary of past, current, and anticipated future uses of lands and resources for traditional purposes in the LSA and RSA by Aboriginal Groups listed in Section 11.4.1, based on existing information. Information on land and resource use of these Aboriginal Groups beyond these boundaries has been included to provide further context for the assessment of potential effects on their Aboriginal Rights, including current use, given that for some of these groups, their traditional territories do not overlap the LSA or RSA to any great extent.

Information used to prepare this section was obtained from Aboriginal Groups through consultations on the Proposed Project or from the following publicly available sources, as follows:

- Aboriginal Group websites or publications;
- British Columbia Treaty Commission;
- Aboriginal Affairs and Northern Development Canada (AANDC); and
- Applications and associated submissions for other projects posted on the BC EAO and the CEA Agency websites.

Existing conditions related to freshwater, marine and terrestrial resources are found in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat, 5.2 Marine Resources, and 5.3 Terrestrial Wildlife and Vegetation. Existing conditions related to heritage resources are found in Volume 2, Part B - Section 8.1: Heritage Resources. Aspects of the existing conditions for each of the above-noted VCs that are relevant to Aboriginal use are integrated into the following sections.

### **11.4.2.2 Tsleil-Waututh Nation Use**

Key sources relied upon for this summary include regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., Eagle Mountain – WGP, 2015 a, b; PMV 2015; WLNG 2015), an expert report, titled *Tsleil-Waututh Nation's History, Culture and Aboriginal Interest in Eastern Burrard Inlet* (Redacted) and produced on behalf of Tsleil-Waututh Nation (Morin 2015), and ongoing consultation between the Proponent and Tsleil-Waututh Nation.

Tsleil-Waututh Nation has previously reported that Howe Sound holds substantial meaning and significance to them. They describe multiple settlement and overnight campsites along the shores of Howe Sound, used for harvesting. Culturally significant landscapes and the features associated with them include, but are not limited to, named places, village sites, transformer sites, rock art locations, wild spirit places, and travel routes (WLNG 2015).

Tsleil-Waututh Nation has stated in correspondence to the BC EAO and the Proponent related to the Proposed Project that a key goal is to expand their role in planning and development processes within the consultation area (Figure 10-5) to fulfill their role as stewards of the lands and resources in that area, and to protect Tsleil-Waututh Aboriginal rights, title and interests.

#### **11.4.2.2.1 Fishing and Harvesting Freshwater and Marine Resources**

Tsleil-Waututh Nation was traditionally dependent on the foreshore and marine waters of their asserted territory, heavily relying on marine and intertidal resources, particularly salmon, a food staple, small fish (e.g., herring, eulachon, smelt), shellfish (e.g. clams, mussels, crabs), and a variety of groundfish (e.g., cod, flounder, halibut, lingcod, rockfish, sole, among others; Morin 2015; TWN 2015a; VAFFC 2011). Tsleil-Waututh Nation reports that traditional harvesting in Howe Sound includes shellfish harvesting (crabs, prawns, and oysters) and fishing (e.g., salmon, smelt, cod, and flounder). Marine resources were and remain vital to Tsleil-Waututh for subsistence and cultural life (WLNG 2015).

In mid-July or early August, Tsleil-Waututh members would travel to the Fraser River, which they accessed through kinship ties, to harvest and dry sockeye, their most favoured type of salmon. In autumn, Tsleil-Waututh travelled to their fishing camps/villages Indian, Capilano, Seymour, and other rivers to fish for pink and chum salmon. Smoked chum was a winter staple (Morin 2015; TWN 2015a; VAFFC 2011).

Tsleil-Waututh also harvested seals, porpoises, and sea lions, along with aquatic plants, such as seaweeds. Resources were used immediately, or processed and stored for use in the winter while Tsleil-Waututh was residing in large village in and around Burrard Inlet. Marine mammals harvested were highly-valued, the oil from the animals used for dipping other food items such as dried berries and roe. Resources from the waters in their consultation area were, and remain, central to Tsleil-Waututh Nation's day-to-day subsistence and are central to their culture (Morin 2015; PMV 2015; TWN 2015a, b; WLNG 2015).

Sturgeon (*Skwo:wech*) and eulachon were also harvested while Tsleil-Waututh members were resident on the Fraser River, a waterway they also used as a travel corridor (LFFA 2013; Morin 2015). Eulachon, along with herring, were the first species available in large quantities in spring and Tsleil-Waututh harvested them in large quantities and dried for future use. Eulachon served as staples in Tsleil-Waututh diet. Currently, they occasionally receive Fraser River eulachon through relatives and cultural protocols (Morin 2015). Sturgeon, due to its decline, is no longer a component of their diet and cultural practices. Tsleil-Waututh is participating in the recovery of these species and their habitats for future generations (LFFA 2013; Morin 2015).

Tsleil-Waututh maintains its reliance on salmon, and to a much lesser extent small fish (e.g., eulachon, herring), reporting salmon are central to their cultural, social, and ceremonial practices. They currently hold a fishing allocation for Fraser River sockeye, chinook, and chum, and an Indian River allocation of pink and chum (Morin 2015). Depending on season run sizes and conservation measures, Tsleil-Waututh Nation carries out annual salmon, as well as crab, food, social and ceremonial (FSC) fisheries for their members. Fish is distributed fresh in season, as well, as canned, smoked, or frozen in winter. The volume of sockeye, for example, portioned to each member, is dependent on Tsleil-Waututh's overall DFO proportional allocation, which, in turn, depends upon the annual sockeye run. A key objective of the Tsleil-Waututh's FSC program is to increase their members' access to all seafood species traditionally harvested in Tsleil-Waututh territory, an aspiration pursued in parallel with what the Tsleil-

Waututh understand as an obligation to restore the lands and waters of the nation’s territory to its “former state,” for the benefit of future Tsleil-Waututh generations (Morin 2015; TWN 2015b). Tsleil-Waututh Nation has previously stated that the marine resources in Howe Sound remain important for current and future generations of Tsleil-Waututh Nation’s members. In addition, salmon and other fisheries remain an important source of income for several of Tsleil-Waututh families (WLNG 2015).

Tsleil-Waututh fish for FSC purposes under communal licences issued by the DFO. Pacific Fisheries Management Area (PFMA) subareas to which these licences apply include 28-11, 28-12, 28-13, 28-14, 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17. Subareas within PFMA 28 apply to eastern Burrard Inlet and Indian Arm; the other subareas within PFMA 29 cover the Fraser River downstream of the Port Mann Bridge and into the Strait of Georgia (PMV 2015).

In 2009, DFO issued Tsleil-Waututh two communal licences for Chinook, on August 25 to 26 (12 hours) and August 26 to 27 (24 hours). There was one Chinook opening in late July 2010; the balance of openings in 2010 and 2011 (16 in total) were solely for sockeye, and largely limited to the month of August in both years. In 2012, sockeye was also the targeted species, when five communal licences and two limited participation (i.e., ceremonial) openings were granted. There was also one opening for Chinook (PMV 2015). DFO records indicate that Tsleil-Waututh had access to two FSC sockeye openings in 2013 (48 hours, August 5 to 7; 8 hours, August 7), and one limited participation (i.e., ceremonial) fishery (30 hours, July 30 to 31) (PMV 2015).

Salmon allocations provided under the Tsleil-Waututh’s 2014 Comprehensive Fisheries Agreement (CFA) with DFO include 7,000 pieces of Fraser River sockeye, 100 pieces of Fraser River chinook, an “incidental” amount of Fraser River coho, and to-be-negotiated amounts of Fraser River pink and chum (DFO and TWN 2014).

Prior to 2005, Tsleil-Waututh access to the Fraser River was provided upstream of the Port Mann Bridge to Mission. Currently, Tsleil-Waututh, Qayqayt First Nation (New Westminster Indian Band) and Kwikwetlem First Nation are the only other First Nations besides Tsawwassen and Musqueam with access to in-river salmon fisheries below the Port Mann Bridge; with Qayqayt’s access downstream of Douglas Island to the Alex Fraser Bridge, while Kwikwetlem’s access is downstream of Douglas Island to Pattulo Bridge. Data previously collected for salmon harvested below the Port Mann Bridge between 2009 and 2013, by Aboriginal Groups other than Musqueam and Tsawwassen, including Tsleil-Waututh, are presented in Table 11-15.

**Table 11-15: Below Port Mann Bridge Salmon Catch (kept) for Aboriginal Groups Other Than Tsawwassen and Musqueam, 2009 to 2013**

Species	2009	2010	2011	2012	2013
Chinook	430	91	126	165	30
Sockeye	86	12,247	9,390	6,010	3,817
Pink	2	0	730	0	0
Coho	0	4	5	2	7
Chum	110	60	89	63	62

Source: PMV 2015

Tsleil-Waututh report that over the last four decades, their consumption of shellfish has dramatically decreased; shellfish harvesting in Burrard Inlet has been closed for the last forty years; members report historical pollution and sedimentation on the beaches of IR3 and Maplewoods mud flat (Morin 2015). One 48-hour crab opening occurred on June 13 through 14; this same opening was provided on June 13 and 14, 2014, in which Dungeness, graceful, and red rock species were targeted (PMV 2015).

Tsleil-Waututh Nation reports that it maintains confidential records of traditional activities within their territory that relate to cultural heritage, as well as the seasonality and procurement of culturally important marine species. These records indicate several areas of fishing activity and numerous shellfish harvesting locations at multiple areas in Howe Sound. They identify a large part of Howe Sound to be a priority prawn harvesting area (WLNG 2015).

Tsleil-Waututh participates in commercial fisheries through Salish Seas Limited Partnership, a business owned jointly with the Musqueam Indian Band and Sliammon First Nation. Species harvested commercially through this enterprise include crab (in Crab Management Area I), prawn, halibut, and herring (Morin 2015; PMV 2015).

#### **11.4.2.2.2 Harvesting Terrestrial Resources**

Tsleil-Waututh's annual round also included dispersal and land-based harvesting and hunting over wide areas (Morin 2015; TWN 2015a; WLNG 2015). Species hunted historically and continuously by Tsleil-Waututh include ungulates, such as deer and elk, bear, ducks, and other waterfowl, with deer being the most commonly harvested land mammal. The Tsleil-Waututh Nation has previously reported that waterfowl were hunted while resident on the South Arm of the Fraser River in July and August (Morin 2015; PMV 2015; VAFFC 2011). Tsleil-Waututh people also hunt in distant areas, within asserted territories held by relatives (Morin 2015).

Tsleil-Waututh Nation has previously indicated that Howe Sound is an important part of their territory and that traditional harvesting in Howe Sound encompasses fishing and hunting. Howe Sound provides them with a limited opportunity to hunt waterfowl, determined by the scarcity of locations where waterfowl harvesting can occur in their asserted territory. Tsleil-Waututh report low-intensity waterfowl harvesting around a large part of Howe Sound, at locations where larger flocks gather (Eagle Mountain – WGP 2015b; WLNG 2015). They also report harvesting grouse (Eagle Mountain – WGP 2015b).

Tsleil-Waututh Nation has recently (i.e., 2014) expressed concern regarding potential adverse effects from projects on the following species: mountain goat, Roosevelt elk, marbled murrelet, northern goshawk, northern spotted owl, and coastal tail frog (Eagle Mountain – WGP 2015a, b).

Tsleil-Waututh report ancestral elk hunting at False Creek (Vancouver, BC) and Burnaby Mountain (Morin 2015). In 2006, 18 Roosevelt elk cows and two bulls from the Sunshine Coast were barged up Indian Arm and released into the watershed in part of an effort to reintroduce a population. In 2012, the herd was healthy enough for Tsleil-Waututh to hunt them in their asserted territory for the first time in more than a century. To ensure the continued health of the herd, only a few elk can be hunted annually. Tsleil-Waututh conducts a lottery to determine which members will be the designated harvesters. The elk are designated as "community elk" ensuring that some are harvested for community gatherings and for Elders (Tennant and Hinchey 2014).

Plants were gathered for food, medicine and technological purposes, with plant harvesting occurring from shoreline to mountain valleys, contingent upon the season and species. Plant harvesting continues and includes the



gathering of berries such as salmonberry and “dokka/dockle berry”/salal, for food, and plants such as cascara, licorice root, and devil’s club, for medicinal purposes. Trees continue to be harvested or are obtained through trade and are used to carve canoes and poles (Morin 2015). While resident on the Fraser River, they harvested berries, specifically cranberries, on southern Lulu Island, around No. 5 Road (PMV 2015; VAFFC 2011).

Tsleil-Waututh Nation reports a general decrease in plant use, in part, due to the changes that have occurred at Maplewoods Mud Flats, an area immediately southwest of IR3. They explain that in the past the intertidal area at this location was much greener with a variety of reeds and intertidal grasses, including edible species. They suggest the loss of inter-tidal plant ecology impairs cultural transmission of skills and knowledge regarding the use of these plants (Morin 2015).

#### **11.4.2.2.3 Aboriginal Title**

There is no publicly-available information that refers to specific locations in the LSA where Tsleil-Waututh Nation asserts Aboriginal Title.

#### **11.4.2.2.4 Intangible Cultural Heritage**

Tsleil-Waututh members explain that all areas used for traditional purposes, such as fishing, hunting, and gathering, are considered sacred. They report that the landscape utilized for these purposes was shaped, in the very distant past, by the Transformers—or *Xáls*, *Xexá:ls*, or *Khaals*—who commenced their journey at the Fraser River delta travelling upstream and creating the world (PMV 2015). Tsleil-Waututh Nation explains that several landforms in Howe Sound are linked with powerful spirit beings, and many landscapes feature are used in traditional ceremonial practices (WLNG 2015).

Tsleil-Waututh explain that waterways within their asserted territory were the principal means of travel between sites, summer camps, and hunting, fishing, and gathering locations. Their Traditional Land Use (TLU) Studies record several canoe routes from Burrard Inlet to Squamish, where members travelled to the Squamish estuary. Tsleil-Waututh report that waterways remain important travel corridors for their members for harvesting marine resources; their members seasonally travelling up Howe Sound to access the Squamish Valley (WLNG 2015).

Canoe routes were also used to access places such as *ł’əqtinəs* (on the north shore of the Fraser River opposite Deas Island); *kwy-yowka* (on the south shore of Lulu Island), and *ʔəléqsən* (on the northern end of Westham Island) within the seasonal round of land and resource use. Tsleil-Waututh report two historic canoe routes connecting Roberts Bank to Boundary Bay, Canoe Passage, the South Arm of the Fraser River, and Sturgeon Bank, and two fishing villages, one opposite Deas Island in the Fraser River (associated with *ł’əqtinəs*) and the other at Cannery Point, on the southeastern corner of Point Roberts peninsula (PMV 2015). In addition to travel along waterways by canoe, Tsleil-Waututh also travelled along a series of trails that ran between various village/camp sites, as well as between village/camp sites and inland resources and spiritual/ceremonial locations (Morin 2015).

Tsleil-Waututh Nation has previously noted that two features of early development (i.e., Britannia Beach Mine and Woodfibre Pulp and Paper Mill) in Howe Sound have had a significant adverse effect on their resource use in the area. They report that industrial developments contributed to adverse effects to marine ecosystems in Howe

Sound and as a result resource areas around these two facilities have been considered unappealing for harvesting for the majority of the 20<sup>th</sup> century (WLNG 2015).

Tsleil-Waututh Nation previously reported that one of their key goals “is to expand its participation in all planning and development processes that take place on their traditional territory” so that the once-abundant resources can be restored, protected and utilized on a sustainable basis and so our culture can continue to thrive” (TWN 2010).

### **11.4.2.3 Musqueam Indian Band Use**

Key sources relied upon for this summary are Musqueam Indian Band’s own *Musqueam Comprehensive Land Claim: Preliminary Report on Musqueam Land Use and Occupancy* (1984) and *We Are of One Heart and One Mind: A Comprehensive Sustainable Community Development Plan* (2011), regulatory documents for other projects in proximity to the Proposed Project Area (e.g., PMV 2015; WLNG 2015), and ongoing consultation between the Proponent and Musqueam Indian Band.

Musqueam asserts that their:

...traditional territory is 144,888 hectares (358,026 acres) and includes all of present day Vancouver, extending northwest up Howe Sound and east up the Fraser Valley. Historically, we travelled far and wide and traded and inter-married with Nations up and down the coast of present day B.C., Vancouver Island and in Washington State (MFN 2011).

The Musqueam Indian Band has described areas within its traditional territory over which extended families exercised exclusive use and occupation (MBC 1984):

Certain resource sites of a restricted or concentrated nature, such as waterfowl and deer netting stations, fish trap locations, certain berry patches, or fields of edible roots were ‘corporately’ owned by extended families. These were used to the exclusion of other families, although their use might be shared with permission. Unlike things considered private property [e.g., moveable goods, such as tools, fishing equipment, canoes, house-boards, matting, utensils, and foods], these places and resource sites could not be alienated from the extended family group. ... [These areas] were recognized as ‘property’ over which Musqueam exercised exclusive rights.

Musqueam report that “today” Musqueam people continue to use the resources found within the land and waters of their traditional territory (MIB 2011).

### **11.4.2.3.1 Fishing and Harvesting Freshwater and Marine Resources**

The Musqueam Indian Band have an established right to fish for food, social, and ceremonial (FSC) purposes in the area of Canoe Pass on the South Arm of the Fraser River (*R. v. Sparrow* [1990] 1 S.C.R. 1075); also described therein as “the waters of Ladner Reach and Canoe Passage”). The Musqueam also assert an Aboriginal right to fish for FSC purposes in a broader area that includes but is not limited to all waters of the Fraser River – including its North Arm, Middle Arm, and South Arm – downstream of the Port Mann Bridge to the Strait of Georgia (BC and PMV 2012, PMV 2015).

Musqueam explain, “[t]hen as now, we are a fishing people whose rhythms, stories and culture are closely aligned with the Fraser River along whose banks we still live today” (MFN 2011). All five species of Pacific salmon (chinook, sockeye, pinks, coho, and chum), steelhead trout, rockfish (rock cod, red snapper), herring and herring spawn, smelt, halibut, eulachon, trout, and sturgeon were fished historically by the Musqueam in their asserted traditional territory (see previous section), and all were important economically. The most commonly harvested marine mammals included harbour seal, sea lion, and porpoise; harvesting areas included the Fraser River estuary. At productive beaches within Musqueam traditional territory, abalone, barnacles, clams, chitons, cockles, mussels, crabs, crayfish, octopus, oysters, prawn, scallops, sea urchins, sea cucumber, shrimp, and seaweed were harvested and set aside for winter supplies; however, clams were the most abundant and heavily harvested within their traditional territory (MBC 1984; MIB 2007; PMV 2015; WLNG 2015).

Fishing remains essential to the Musqueam, with salmon identified as a key species, vital for Food Social and Ceremonial (FSC) and economic purposes, forming a basis for trade with other First Nations (MFN 2014, 2015; PMV 2012, 2015). While Musqueam once harvested salmon throughout the year, DFO records illustrate that in 2013 Musqueam were provided opportunities to harvest salmon under communal licence, as follows (PMV 2015):

- Chinook Salmon over fourteen openings, between 8 and 18 hours each, May 18 through September 1;
- Pink Salmon over four openings in September, between 19 and 24 hours;
- Chum Salmon over three openings in October, lasting between 36 and 48 hours each; and
- Sockeye Salmon during two openings, one each in July and August, for 24 and 36 hours respectively.

There were 15 additional, limited participation fisheries (i.e., ceremonial purposes) in 2013 (DFO 2013, 2014; PMV 2015):

- Eight for Chinook Salmon over May, July, August and September (6 to 12 hours each);
- Two for Pink Salmon in September (12 hours each);
- Three for Chum Salmon in October (between 6 and 12 hours); and
- Two for Sockeye Salmon, one each in July and August (24 and 32 hours, respectfully).

In late September and late October 2013, Musqueam also participated in economic opportunity fisheries, which draw from the annual FSC allocation, and allow for the sale of pink and chum salmon harvested during specific opening times. Retained catch for the period 2009 to 2013, including limited participation and economic fisheries, is presented in Table 11-16. Musqueam report that they are not able to catch enough salmon to meet their communal needs (PMV 2015).

**Table 11-16: Musqueam Salmon Catch (Kept), 2009 to 2013**

Species	2009	2010	2011	2012	2013
Chinook	5,889	2,988	3,643	2,546	1,500
Pink	39,102	0	105,012	0	65,278
Coho	198	87	690	261	713
Chum	13,082	8,158	15,315	14,849	24,145
Sockeye	3,673	231,847	84,097	41,403	20,528

Source: PMV 2015

Areas in which Musqueam harvest salmon for FSC purposes (and sale of those salmon in years where returning numbers allow) is permitted in Pacific Fishery Management Areas (PFMA) subareas 29-3, 29-4, 29-6, 29-7, 29-9, 29-10, 29-11, 29-12, 29-13, 29-14, and 29-17 (PMV 2015), described collectively as follows:

Those waters of the Fraser River westerly of the power lines immediately downstream of the Port Mann Bridge and the waters of the Strait of Georgia bounded by a line commencing at Point Grey thence northerly to the light on Point Atkinson, thence westerly to the light on Point Cowan on Bowen Island, thence following the southerly shoreline of Bowen Island to the light on Cape Roger Curtis, thence in a direct line southeasterly to the Roberts Bank LL# 309 (known as the Hooter Buoy) thence due west to the 40 metre contour line as shown on C.I.I.S. 3463, thence follow the 40 metre contour line to the International border. (DFO and MIB 2013a).

There are PFMA sub-areas beyond those identified above over which Musqueam's asserted traditional territory also extends (e.g., Indian Arm and Burrard Inlet), but within which Musqueam salmon harvesting for FSC purposes is not permitted. Musqueam previously identified Burrard Inlet as a traditional fishing area for chum and coho (PMV 2015).

In 2013 salmon allocations for FSC purposes, pursuant to agreement between DFO and Musqueam (2013), were 1,200 pieces of Chinook, 75,000 pieces of sockeye, 17, 325 pieces of pink, 16,500 pieces of chum (reduced to 10,900), and incidental harvest of hatchery-marked coho. Conservation concerns, also shared by Musqueam, have resulted in restrictions on the targeted fishing of coho, access to Chinook, and retention of steelhead (DFO and MIB 2013a, b).

Musqueam report that certain species, such as sturgeon, once harvested in Burrard Inlet and in all the riverine and estuarine waters of the Fraser River, including at Sturgeon Bank (a high-use area), Roberts Bank, and in sloughs, are no longer harvested in Musqueam traditional territory because of conservation concerns. Musqueam report observing an increasing number of sturgeon as by-catch, potentially indicating a recovery of the species and the potential for Musqueam to resume sturgeon harvesting for FSC purposes, within conservation limits (PMV 2015).

Small fish (e.g., eulachon, herring) were, and continue to be, important to the Musqueam and they report travelling up the Fraser River as far as New Westminster and Mission to harvest eulachon and a decade ago, harvesting eulachon was pursued under open licences. Currently in the lower Fraser River, eulachon can be fished by drift net in limited amounts for ceremonial purposes, but only on a case-by-case basis. In 2013, Musqueam was allowed only three (April (13, 16, 17) 5 to 6 hour openings to harvest. Eulachon harvesting occurs in Canoe Passage, Ladner Reach, and waters around Duck, Rose, Kirkland, Gunn, and Barber Islands (PMV 2015).

Herring was harvested throughout the Fraser estuary, as well as Howe Sound, Burrard Inlet, and False Creek. Musqueam continue to harvest herring in Canoe Passage and on the north shore of the South Arm of the Fraser River. Herring roe, once gathered within Musqueam asserted territory, is now traded for because of conservation and contamination concerns. They wish to return to harvesting roe once contamination and conservation concerns are addressed. Musqueam harvesters continue to pursue rockfish (there are no DFO restrictions in place) and Musqueam has expressed a desire to resume harvesting ratfish (used medicinally) and dogfish (skin was traditionally used as sandpaper) (PMV 2015).

In 2013 and 2014, Musqueam were licenced to harvest crab (targeting Dungeness, graceful and red rock) within the Musqueam Crab Area and prawn in PFMA sub-areas 29-2, 29-3, and 29-4. They wish to secure DFO licences, allowing them to utilize FSC allocations of crab, as well as other species, for economic or commercial purposes, as they would have undertaken traditionally (DFO 2014; PMV 2015). Musqueam has previously expressed concern regarding the decreasing access to crab harvesting areas in their asserted territory as well as the compromised quality of crab in areas that remain accessible (PMV 2015).

Octopus is a traditional food source and Musqueam is seeking to obtain a licence to address the ongoing community need and demand for the resource. Concerns regarding contamination prevent Musqueam from harvesting sea urchin (food, medicine) sea cucumber (food, medicine) clams (food), and cockles (food). Musqueam must now trade for these resources with their relatives from other Aboriginal Groups, or buy the seafood from stores for their Elders. They want harvest these resources again and observe that forced changes in diet, for example as a result of food avoidance, may be a contributing factor to the overall health of community members (PMV 2015).

The most commonly harvested marine mammals were the harbor seal, sea lion, and porpoise, with seal harvested throughout the Fraser River Estuary, including all areas of the South Arm of the Fraser River and offshore of Steveston, Westham Island, and Brunswick Point. Musqueam report also harvesting seal outside of Steveston (PMV 2015). Seal and sea lion meat was valued as a food source, and the whiskers have essential ceremonial functions. Seal skins have been used in drum-making (as compared to deer skin) and seal fat was once rendered for oil. Musqueam is able to harvest seals and sea lions under a special DFO licence, however prefer not to due to concern regarding pollutants. They desire to resume harvesting seals and sea lions upon the resolution of contamination and conservation concerns (PMV 2015).

The Musqueam Indian Band is involved in commercial fisheries through Salish Seas Limited Partnership, a business owned jointly with the Tsleil-Waututh Nation and Sliammon First Nation. Species harvested commercially through this enterprise include crab, prawn, halibut, and herring. Individual Musqueam members also hold commercial licences. Commercial crab harvesting primarily occurs in Bowen Island waters, Burrard Inlet, and near the Roberts Bank terminals (PMV 2015).

#### **11.4.2.3.2 Harvesting Terrestrial Resources**

In the 1980s, approximately ninety Musqueam members actively hunted, focussing primarily on wildfowl, including mallard, teal, widgeon, pintail, geese, brandt, blackduck, grouse, and pheasant. They harvested these birds on river banks, marshes, meadows throughout the Fraser delta; on the foreshore areas within and adjacent to their IRs (i.e., 2, 3, and 4); on Bowen and Passage Islands; and, others sites within their asserted territory (MBC 1984).

Musqueam report harvesting birds into the lower reaches of the Fraser River, with intensive areas identified next to the southwestern portion of Westham Island, in and around Tsawwassen First Nation lands, Sturgeon Bank and Musqueam IR4. They explain that while these areas were also hunted historically, displacement from other harvesting locations has been reported due to development and hunting restrictions, including prohibitions against discharge of firearms (PMV 2015).

Deer were harvested on Bowen Island and in the mountains in the northern portion of their asserted territory in the 1980s. Prior to the 1980s, mountain goats were also hunted in their asserted territory. Musqueam harvesters relied on their custom and kinship ties for permission to harvest deer, wapiti (elk), moose, and caribou in areas outside of their asserted territory (MBC 1984). Musqueam report harvesting deer and bear at Burns Bog within living memory; deer have also been harvested at areas along the South Arm of the Fraser River. Harvesting of game (e.g., deer, mountain goat) continues in the more northerly portions of their asserted territory (PMV 2015).

Small land mammals were abundant within Musqueam asserted territory; mink, muskrat, and otter were harvested primarily for their fur. Beaver and rabbit were harvested for both fur and food (MBC 1984).

Musqueam report that cranes, herons, raptors (e.g., eagles, osprey), and swans were once harvested for food and ceremonial use, but current conservation concerns preclude such practices. However, these birds remain important to Musqueam members, and their parts, which are now derived from birds collected by conservation officers, continue to be used for ceremonial purposes (PMV 2015).

Plant foods and resources were, and continue to be, important to Musqueam (MBC 1984; PMV 2015). Musqueam report that cedar, like salmon, has historical, cultural and spiritual significance to their people. The wood was used to build houses, canoes, and ceremonial boxes; while cedar bark was gathered and used clothing, rope, baskets, and mats (MIB 2006).

Common plant foods gathered included wapato, camas lily, and Pacific crabapple. Berries gathered by Musqueam included blackberries, salmonberries, thimbleberries, blackcaps, red and blue huckleberries, salal berries, Oregon grape, blueberries and “saskies” (new shoots of berry plants). Musqueam traded berries found in their asserted territory with other Aboriginal Groups for “soapberries”. Dried berries were an important part of Musqueam’s winter diet, served with an oil condiment produced from fish or seal, they provided an important source of variety and nutrition. Bog cranberry and wapato served as article of exchange with other Aboriginal Groups. Specific extended families owned important berry grounds. Bog cranberries were harvested on Lulu Island, Sea Island, the bogs south of the South Arm of the Fraser River, and University of British Columbia Endowment Lands. Other berries were gathered in the meadows of Grouse Mountain, while bush berries were harvested along creeks and streams within Musqueam’s asserted territory (MBC 1984).

Plants were also harvested for medicinal use, including alder, balsam, blackberry leaves, burdock, camomile, cascara bark, cherry bark, chokecherry, clover, devil’s club, dandelion, elderberry root, ferns (a variety of roots), foxglove, hemlock, horsetail, juniper, Labrador tea, nettle, mountain ash, Oregon grape, regular maple, rosehip, skunk cabbage, silverweed, vine maple, wild crabapple, and blueberry, cranberry, and strawberry plants (MBC 1984). Plants continue to be used as ingredients and materials for dyes, basketry, cordage, and manufacturing (PMV 2015). Musqueam women once used the Coast Mountains within their asserted territory to gather the shed wool of mountain goats (clinging to trees and bushes) for weaving (MBC 1984).



Kelp continues to be an important food and medicinal plant. Musqueam report they must now trade for it, either because it cannot be found or is avoided due to contamination concerns. Musqueam identify similar issues for seaweeds generally. They attribute loss of healthy kelp and eelgrass, which also serve as an important habitat for crab and other marine life, to the effects of industrial activity and habitat alteration within their asserted territory (PMV 2015).

Intertidal species harvested at Brunswick Point include cattail, tule (hard-stemmed bulrush), and grasses (conceivably canary grass, used for weavings, basketry, and tumplines). Other key harvesting areas for these plants include Westham Island, Canoe Passage, Musqueam IR 4 (about 0.5 km south of the middle reach of Canoe Passage and 2 km east of Brunswick Point), and, Ladner. Musqueam continue to harvest many of these resources, but report some are no longer accessible in former locations due in part to changing intertidal landscapes and barriers associated with commercial and industrial development (PMV 2015).

Cattail and tule are used ceremonially, for weavings and mats; the bulbs and roots of cattail are edible. Musqueam explain cattails are also indicators of environmental health (i.e., if the plant is aromatic when first cut the environment is healthy and foul-smelling when the environment is compromised). These plants also serve as wind indicators when hunting. The practice of cutting cattails to let salmon through is the basis for the place-name *šx<sup>w</sup>lic'əm*, on the south shore of Canoe Passage, near Brunswick Point (PMV 2015).

#### **11.4.2.3.3 Aboriginal Title**

It is known that the Musqueam Indian Band asserts title to its traditional territory generally (MIB 1976), and has recently asserted title to *Tuq̓tinus* or *λ'əq̓tines*, which is located along the south arm of the Fraser River (BC and PMV 2012; MIB 2011; VAFFC 2011). Rozen (1985) reports that this location was likely a summer camp of the Musqueam originally, used later by other groups with the permission of the Musqueam and “other Mainland Halkomelem.”

#### **11.4.2.3.4 Intangible Cultural Heritage**

Musqueam members continue to consider themselves to be “stewards of the lands, waters and living creatures within and around the Fraser River” (MIB 2006). As is the case with other Coast Salish peoples, all areas used for traditional purposes, such as fishing, hunting, or gathering, are regarded as sacred and that features associated with culturally important landscapes include named places, former village sites, and travel routes (WLNG 2015).

Musqueam report, that the Fraser River and its surrounding waters is their “highway” (MIB 2006) and these waterways still serve as important travel corridors for harvesting marine resources (WLNG 2015). Musqueam explain, historically they could navigate from the North Arm of the Fraser River through Lulu Island (Richmond) and Delta, using slough channels as an alternate to ocean travel. These sloughs, which also once supported fishing locations, no longer survive. Musqueam maintains that the remaining waterways have become reportedly congested with log booms and increasing vessel traffic, resulting in more vessel interactions, loss of fishing gear, and safety concerns (PMV 2015).

Beside canoes, Musqueam also travelled along a series of trails. They identify several trails within the Fraser River estuary, including trails associated with the following place names: *λ'eq̓tines* (Lulu Island, across from Deas Island

also known as *Tl'ektines*, *Tl'uq̓tinus*); *sc'ələx<sup>w</sup>qən'* (Ladner); and, *spəlxən* (two trails on the eastern margins of Crescent Slough, at the western aspect of Burns Bog). They also reference a trail running north-south along the western shore of Lulu Island, to and from the Steveston area (*q<sup>w</sup>eya?x<sup>w</sup>*, *q<sup>w</sup>leyəm*) (PMV 2015).

#### **11.4.2.4 Stz'uminus First Nation Use**

Key sources relied upon for this summary include, *Written Evidence of the Stz'uminus First Nation, May 27, 2015*, regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., PMV 2015; TMPL 2014; WLNG 2015), and ongoing consultation between the Ministry and Stz'uminus First Nation.

Stz'uminus First Nation is a member of the Hul'qumi'num Treaty Group, asserting traditional use over the area identified in Figure 10-7. The Marine Traditional Territory for Stz'uminus as part of the Hul'qumi'num Treaty Group includes areas at the mouth of Howe Sound and around Bowen and Keats island (WLNG 2015), and the Fraser River, from Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009). The other Coast Salish First Nation comprising the Hul'qumi'num Treaty Group include (HTG 2005a, b):

- Cowichan Tribes;
- Lake Cowichan First Nation;
- Halalt First Nation;
- Lyackson First Nation; and
- Penelakut Tribe.

The Stz'uminus First Nation maintains that they continue to visit the Fraser River and its Delta, and fish there. They reference an ancient village (*Tl'uq̓tinus*), located on the south arm of the Fraser River, near what is now Lulu Island and assert *Tl'uq̓tinus* and its surrounding land and water were used for fishing, plant cultivation and harvesting, waterfront activities, and as a base for trading. They report continued use of *Tl'uq̓tinus* lands to fish and hold ceremonial burnings honouring Stz'uminus ancestors who lived along the Fraser River's edge (HTG 2005a, b; SFN 2014, 2015).

Stz'uminus is also a member of the Cowichan Nation Alliance along with Cowichan Tribes, Halalt First Nation, and Penelakut Tribe (BC and PMV 2012).

##### **11.4.2.4.1 Fishing and Harvesting Freshwater and Marine Resources**

Stz'uminus First Nation reports continued use and reliance on the ocean and its marine resources to sustain its members and culture. The Cowichan, Chemainus, and Fraser Rivers, in their asserted territory, also continue to have a vital role Stz'uminus' way of life, where they harvest trout (brown, rainbow and cut throat), steelhead, and salmon (chum, coho, chinook, sockeye, and pink (SFN 2015). They report a number of fishing sites, including, Strait of Georgia (sockeye, halibut, Pacific cod and lingcod), Strait of Georgia, east of Galiano Island (sockeye), Strait of Georgia, southeast off Robert's Bank (spring, pink, and sockeye), Sydney to Steveston Cannery, to

Campbell River (clams), Roberts and Sturgeon Bank (salmon), and Strait of Georgia, south fork of Fraser River onto Roberts Bank (sockeye and sturgeon) (TMPL 2014).

Stz'uminus maintains they used *Tl'uq̓tinus*, on the south arm of the Fraser River as a base for resource harvesting (see previous section) (SFN 2014, 2015). Species harvested historically on the South Arm of the Fraser River included sockeye and pink salmon, sturgeon, shellfish, and marine mammals; dried clams and other foodstuffs (e.g., camas) were also traded to other First Nations resident in and around the area. The Stz'uminus also used other habitation sites in the area, including ones at Steveston (BC and PMV 2012; SFN 2014, 2015; TMPL 2014).

Stz'uminus First Nation, as a member of the Cowichan Nation Alliance (CNA), is jointly working to establish a land base along the Fraser River and to re-establish fishing rights (SFN 2014). The CNA has been working to restore former fisheries within the Fraser River through the DFO, mostly recently seeking, along with *Skw̓wú7mesh* Nation, allocation increases on the Lower Fraser River and a change in the harvesting area (DFO 2015).

Stz'uminus First Nation reports that they have Aboriginal communal fishing licences for a variety of species, including salmon (sockeye, coho, pink, chum, and chinook), as well as for herring spawn on kelp or boughs, pacific herring, groundfish, crab (dungeness and red rock) prawn, clams (manila native littleneck, butter), and pacific oyster (SFN 2015).

The Stz'uminus First Nation's Fisheries Agreement with DFO includes the marine waters surrounding Saltspring, Prevost, Valdes, Thetis, Penelakut and Galiano Islands, and extends into the Strait of Georgia towards Roberts Point and Lulu Island. The Agreement does not appear to extend northwards to Howe Sound (WLNG 2015). Current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by Cowichan Nation Alliance member bands has been described as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV 2015).

Stz'uminus as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP) engages in a commercial fishing business in which some of the Cowichan Nation Alliance member groups (Halalt, Penelakut) participate, along with Lake Cowichan and Lyackson First Nations. Species harvested through this enterprise are crab (one Area H licence), prawn (two local / coast wide licences), halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP 2014). Commercial licences for halibut, sablefish, and rockfish under these licences are generally undertaken off the west coast of Vancouver Island (HFLP 2014, PMV 2015).

#### **11.4.2.4.2 Harvesting Terrestrial Resources**

Cowichan Nation Alliance, of which Stz'uminus is a member, previously reported that along the Fraser River, including Canoe Pass, as well as elsewhere in their collective territory, brant goose, canvasback duck, common merganser, and mallard were hunted in the fall (CNA 2011, SFN 2015). They have stated a desire to resume the harvest of traditional resources in that area (CNA 2011).

The Cowichan Nation Alliance has also reported that its members revere bald eagles, which were not hunted. Their Elders have indicated that eagle numbers in the Richmond area have been dwindling each year (CNA 2011).

Stz'uminus First Nation gathered a wide variety of plant species for food, as well as ceremonial, medicinal, and technological purposes throughout their asserted territory (TMPL 2014). They have previously identified seaweed gathering sites on the "mainland" (Richmond/Vancouver, BC), Steveston, BC, and the Fraser River (TMPL 2014). Stz'uminus, as part of the Cowichan Nation Alliance, report that in the marshy areas south of Canoe Passage or Brunswick Point – in the area of Xwulits'um, or place for cutting (cattails) – several varieties of cattails and rushes (stth'equn) were once harvested (PMV 2015). Berries and other plants were gathered and cultivated by the ancestors of the Cowichan Nation Alliance member bands at Tl'uqtinus, including cranberries, blueberries, blackberries, wapato, bulrushes/reeds (stth'equn), as well as seaweed (BC and PMV 2012, HTG 2005 a, b, PMV 2015, TMPL 2014, Woodward and Company 2011). They also identify gathering sites at Annacis Island and Steveston (TMPL 2014).

#### **11.4.2.4.3 Aboriginal Title**

Stz'uminus First Nation, as represented by the Hul'qumi'num Treaty Group, asserts that *Tl'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Cowichan Nation, the descendants of which are present-day Cowichan Tribes, Chemainus (Stz'uminus), Halalt, Hwlitsum, Lyackson, and Penelakut members (BC and PMV 2012, HTG 2005a, b, PMV 2015, Woodward and Company 2011).

#### **11.4.2.4.4 Intangible Cultural Heritage**

As is the case with other Coast Salish groups, areas used for traditional purposes, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG 2015).

Waterways have been and remain important travel corridors for Stz'uminus First Nation when harvesting marine resources (WLNG 2015), and accessing gathering sites on the "Mainland" (Richmond/Vancouver) (TMPL 2014). The Strait of Georgia (TMPL 2014), and the Fraser River has been identified by the *Hul'qumi'num Mustimuhw*, (which includes Stz'uminus) as the main transportation corridor the bridged the Island Hul'qumi'num communities to their relatives on the Mainland (HTG 2005b).

Stz'uminus, as part of the CNA, have reported that for the last generation they have been striving to rejuvenate their access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes (PMV 2015). They have also expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV 2015).

#### **11.4.2.4.5 Cowichan Tribes Use**

Key sources relied upon include *Hearing Order OH-001-2014*, *Written Evidence*, *Cowichan Tribe*, regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., PMV 2015, TMPL 2014, WLNG 2015), and ongoing consultation between the Ministry and Cowichan Tribes Nation.

Cowichan Tribes, as part of the Hul'qumi'num Treaty Group, asserts traditional use over the area identified in Figure 10-7. Marine Traditional Territory for Cowichan Tribes as part of the Hul'qumi'num Treaty Group, includes areas at the mouth of Howe Sound and around Bowen and Keats islands (WLNG 2015), and the Fraser River, from Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009).

Cowichan Tribes members are in possession of and residents of IRs located in Cowichan Band and Cowichan River of southeast Vancouver Island. They maintain they are descendants of the historic Cowichan people holding Aboriginal title to land and Aboriginal rights (e.g., to fish) on the south arm of the Fraser River. Cowichan Tribes report that on the south arm of the Fraser River and its mouth was the location of *Ti'uqtinus*, a multi-seasonal residence (at least spring, summer, and autumn), fishing grounds (for salmon, sturgeon, and eulachon), related water activities, and plant gathering (for blueberries, cranberries, bulrushes). They report this site was also a Cowichan base for trading (clams, camas) and hunting/trapping waterfowl along the south arm of the Fraser River and its mouth (CT 2014; HTG 2005a, b). In correspondence sent to the Proponent in January 2016, Cowichan Tribes noted that the Cowichan Nation Alliance intends to re-establish permanent residences as well as economic ventures and employment opportunities at the *Ti'uqtinus* site.

Cowichan Tribes is also a member of the Cowichan Nation Alliance along with Chemainus (Stz'uminus First Nation), Halalt First Nation, and Penelakut Tribe (BC and PMV 2012).

#### **11.4.2.4.6 Fishing and Harvesting Freshwater and Marine Resources**

Cowichan Tribes members report harvesting a variety of seafood including salmon (e.g., chinook, coho, chum, pink, and sockeye) eulachon, cod, rockfish, halibut, sole, flounder, sturgeon, herring (and roe), red snapper, lingcod (and roe), skate, clams (e.g., butter, horse, Japanese, and littleneck), cockles, dungeness crab, oysters, scallops, urchins, chitons, octopus, sea cucumber, mussels (e.g., blue, small) and abalone (CT 2014; TMPL 2014). Cowichan used Lulu (see previous section) Island to fish for salmon and sturgeon and to trade dried clams (BC and PMV 2012). Other marine resources harvested, at confidential locations, include, harbour porpoises, humpback whales, sea lions, harbour seals, and sea otters (TMPL 2014).

Salmon has previously been identified by Cowichan Tribe members as a vital food, both historically and currently. Cowichan Tribes identify numerous fishing sites, including the Fraser River and Salish Sea as sites for the harvesting of salmon (e.g., coho, chum, jack spring (small male Chinook), Chinook, and sockeye). They also report harvesting sturgeon on Fraser River, Lulu Island and Point Roberts (TMLP 2014).

Cowichan Tribes designate herring as a traditional food source, once harvested year round. Declining herring stocks mean harvesting only occurs from September to October, making it more difficult to meet community needs (TMPL 2014).

Cowichan Tribes, as part of the Hul'qumi'num Treaty Group maintains that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced in the same era also had the effect of restricting their access to fishing in the area. Despite these changes, *Hul'qumi'num Mustimuhw* continued to use the Fraser River for fishing, including commercially, into the early twentieth century (HTG 2005a; TMPL 2014). They are working to establish a land base along the Fraser River and to re-establish fishing rights (SFN 2014).

Cowichan Tribes Fisheries Agreement with DFO encompasses Cowichan Lake watershed and the marine waters surrounding Saltspring, North Pender, Saturna, Mayne and Galiano Islands, and extending into the Strait of Georgia towards Roberts Point and Lulu Island (WLNG 2015). Cowichan Tribes, as part of the Cowichan Nation Alliance, has been working to restore former fisheries within the Fraser River through the DFO, mostly recently seeking, along with *Skwxwú7mesh* Nation, allocation increases on the Lower Fraser River. Also sought are area change requests (DFO 2015). Food, social and ceremonial (FSC) harvesting of all five species of salmon, herring and herring spawn, and groundfish by Cowichan Nation Alliance member bands has been described as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18 (PMV 2015).

#### **11.4.2.4.7 Harvesting Terrestrial Resources**

Cowichan Tribes members report hunting or trapping waterfowl, including brandt, canvasback, common merganser, and mallard in their asserted territory (CT 2014; WLNG 2015). They report accessing hunting sites at Canoe Pass and Fraser River for brant or brent goose, common merganser, canvasback duck, and mallard. Ducks are a preferred food during ceremonial events, their feathers used for ceremonial purposes. Deer are harvested for food and their hooves and hides are also used for ceremonial purposes (TMPL 2014). Cowichan peoples also historically trapped and hunted beaver and sea otter (George 2016).

Cowichan Tribes members report harvesting aquatic plants, including bull rush and reeds, and shoreline plants, including blueberries, cranberries, and camas within their asserted territory (CT 2014). Cowichan Tribes, as part of the Cowichan Nation Alliance, report that in the marshy areas south of Canoe Passage or Brunswick Point – in the area of *Xwulits'um*, or place for cutting (cattails) – several varieties of cattails and rushes (*stth'equn*) were once harvested (PMV 2015). Their ancestors gathered and cultivated plants at *Tl'uqtinus*, including cranberries, blueberries, blackberries, wapato, bulrushes/reeds (*stth'equn*), as well as seaweed (BC and PMV 2012; HTG 2005a, b; TMPL 2014; PMV 2015; Woodward and Company 2011).

#### **11.4.2.4.8 Aboriginal Title**

Cowichan Tribes, as represented by the Hul'qumi'num Treaty Group, asserts that *Tl'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Cowichan Nation, the descendants of which are present-day Cowichan Tribes, Chemainus (Stz'uminus), Halalt, Hwlitsum, Lyackson, and Penelakut members (BC and PMV 2012; HTG 2005a, b; PMV 2015; Woodward and Company 2011). Cowichan Tribes previously reported they would have occupied this site in July, while they fished for sockeye and pink salmon from Canoe Passage to as far up as hope along with other Cowichan Nation Alliance members (TMPL 2014).

#### **11.4.2.4.9 Intangible Cultural Heritage**

Travel between sites, between summer camps, and hunting, fishing, and gathering locations along waterways served as important travel corridors for Cowichan Tribes (TMPL 2014; WLNG 2015), and the Fraser River has been identified by the *Hul'qumi'num Mustimuhw*, (which includes Cowichan Tribes) as the main transportation



corridor that bridged the Island Hul'qumi'num communities to their relatives on the Mainland (HTG 2005b). These waterways remain important travel corridors for harvesting marine resources and accessing sites for ceremonial purposes (TMPL 2014; WLNG 2015). Cowichan Tribes, as part of the Cowichan Nation Alliance, have reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. They have expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV 2015).

As is the case with other Coast Salish groups, areas used for traditional purposes by Cowichan Tribes members, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG 2015).

#### **11.4.2.5 Halalt First Nation Use**

Key sources relied upon include regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., PMV 2015; TMPL 2014; WLNG 2015) and ongoing consultation between the Ministry and Cowichan Tribes Nation.

Halalt First Nation is a member of the Hul'qumi'num Treaty Group, asserting traditional use over the area identified in Figure 10-7. Marine Traditional Territory for Halalt as part of the Hul'qumi'num Treaty Group includes areas at the mouth of Howe Sound and around Bowen and Keats island (WLNG 2015), and the Fraser River, from the Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009).

Halalt First Nation is also a member of the Cowichan Nation Alliance along with Chemainus (Stz'uminus First Nation), Cowichan Tribes, and Penelakut Tribe (BC and PMV 2012).

##### **11.4.2.5.1 Fishing and Harvesting Freshwater and Marine Resources**

Halalt First Nation report that they followed a season round of resource use and regional settlement, which took them from their winter residence on Vancouver Island and Willy Island across the Strait of Georgia to the Fraser River estuary, where they resided for all or part of the annual salmon runs (April, and June through to October), or in some instances year-round (PMV 2015). Halalt First Nation previously reported that historically shellfish (e.g., crabs and mollusks) and fish were their main staples. Steelhead trout was also fished in the Chemainus River in winter. They fished and gathered shellfish along watercourses and waterbodies in the Strait of Georgia and off the Gulf Islands. Halalt harvested ground fish, including herring, sea bass, lingcod, rock cod, greenling cod, red snapper, halibut, flounder, and octopus. They report fishing throughout the year on the Chemainus River for coho, pink, chum, Chinook, and sockeye salmon, which were the primary fish staples consumed (TMPL 2014).

Halalt First Nation explains that sockeye was harvested from their fishing sites in and around the mouth of the South Arm of the Fraser River, along with pink salmon, sturgeon, shellfish, and marine mammals. Dried clams and camas were traded while they were resident in and around this area (BC and PMV 2012; PMV 2015; TMPL 2014). Herring, cutthroat trout, and groundfish, including flounder, sole, and rockfish would have been available to them in the vicinity of Roberts Bank (PMV 2015).

Halalt First Nation explains that seasonal fishing villages were built along watercourses in the region and from here they would fish for salmon during their runs and collect mollusks and other shellfish (TMPL 2014). Shellfish and intertidal harvesting included gathering clams (butter, littleneck, razor, and horse), cockles, chitons, oysters mussels, Dungeness crab (served at feasts), and sea urchin (TMPL 2014).

Historically, Halalt First Nation members harvested sea mammals, including seals, porpoises, and sea lion, with sea lion used for their meat, oil, and hides. In addition, the intestines of sea lions were used to make bowstrings and in trade (TMPL 2014). Halalt First Nation utilized Active Pass on their way to the Fraser to hunt marine mammals (BC and PMV 2012).

Halalt First Nation as a member of both the Cowichan Nation Alliance (CNA) and Hul'qumi'num Treaty Group, has previously reported that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced in the same era also had the effect of restricting their access to fishing in the area. However, *Hul'qumi'num Mustimuhw* continued to use the Fraser River for fishing, including commercially, into the early twentieth century (BC and PMV 2012; HTG 2005a, b; PMV 2015; TMPL 2014).

The Halalt First Nation Fisheries Agreement with DFO encompasses Cowichan Lake water shed and the marine waters surrounding Saltspring, North Pender, Saturna, Mayne and Galiano Islands, and extending into the Strait of Georgia towards Roberts Point and Lulu Island (WLNG 2015). Halalt First Nation as a member of the CNA has been working to restore former fisheries within the Fraser River through the DFO, mostly recently seeking, along with *Skwxwú7mesh* Nation, allocation increases on the Lower Fraser River. Also sought are area change requests (DFO 2015). Food, social and ceremonial (FSC) harvesting of all five species of salmon, herring and herring spawn, and groundfish by CNA member bands has been described as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18 (PMV 2015).

Halalt First Nation as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP) engages in a commercial fishing business in which some of the Cowichan Nation Alliance member groups (Penelakut, Stz'uminus) participate, along with Lake Cowichan and Lyackson First Nations. Species harvested through this enterprise are crab (one Area H licence), prawn (two local / coast wide licences), halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP 2014). Commercial licences for halibut, sablefish, and rockfish under these licences are generally undertaken off the west coast of Vancouver Island (HFLP 2014; PMV 2015).

#### **11.4.2.5.2 Harvesting Terrestrial Resources**

Halalt First Nation members reported harvesting waterfowl, such as ducks and geese. Among the hunting sites identified by the First Nations were, in part, Chemainus River and Estuary, as well as Porlier Pass/Cowichan Gap, Galiano Island, Tent Island, and Shoal Islands, including Wiley Island. In the recent past, ducks were harvested in November and December for longhouse ceremonies (TMPL 2014).

Halalt First Nation reports that harvesting plants remains an important component of life for members. Historically, they gathered aquatic plants for food, medicines, and multi-purpose materials for a number of uses (e.g., rounds ruses were used to make mats edges with grasses from the Fraser River Valley). Among the plants gathered,

were indigenous onions, chocolate lily or rice root, tiger lily, carrots, bracken fern, sea asparagus, *wapato*, bog blueberry and cranberry. *Wapato* or *skous*, bog blueberry and cranberry were found in abundance in the Lower Fraser River. These were gathered when Halalt members inhabited the river banks. Cedar bark, salmon berries and black caps (black cap berries) were also harvested along the river banks. *Wapato* and Indian hemp were trade items (TMPL 2014). Halalt First Nation members have previously identified a number of plant harvesting sites, including sites at the confluence of Pitt and Fraser Rivers and Canoe Pass (TMPL 2014).

Halalt First Nation along with member bands of the Cowichan Nation Alliance, report that in the marshy areas south of Canoe Passage or Brunswick Point – in the area of *Xwulits'um*, or place for cutting (cattails) – several varieties of cattails and rushes (*stth'equn*) were once harvested (PMV 2015). They report harvesting berries (cranberries, blueberries, blackberries), *wapato*, bulrushes/reeds (*stth'equn*), as well as seaweed at *Tl'uqtinus* (BC and PMV 2012; HTG 2005a, b; PMV 2015; TMPL 2014; Woodward and Company 2011).

#### **11.4.2.5.3 Aboriginal Title**

Halalt First Nation, as represented by the Hul'qumi'num Treaty Group, asserts that *Tl'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Cowichan Nation, the descendants of which are present-day Cowichan Tribes, Chemainus (Stz'uminus), Halalt, Hwlitsum, Lyackson, and Penelakut members (BC and PMV 2012; HTG 2005a, b; PMV 2015; Woodward and Company 2011). Halalt First Nation previously reported they would have occupied this site in July, while they fished for sockeye and pink salmon from Canoe Passage to as far up as hope along with other Cowichan Nation Alliance members (TMPL 2014).

#### **11.4.2.5.4 Intangible Cultural Heritage**

Halalt First Nation members used waterways to travel between sites, between summer camps, and hunting, fishing, and gathering locations along waterways. These waterways remain important travel corridors for harvesting marine resources and accessing sites for ceremonial purposes (TMPL 2014; WLNG 2015), and the Fraser River has been identified by the *Hul'qumi'num Mustimuhw*, (which includes Halalt) as the main transportation corridor the bridged the Island Hul'qumi'num communities to their relatives on the Mainland (HTG 2005b). Halalt First Nation, as part of the CNA, previously reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. They have expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV 2015).

As is the case with other Coast Salish groups, areas used for traditional purposes by Halalt First Nation members, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG 2015).

### **11.4.2.6 Lake Cowichan First Nation Use**

Key sources relied upon include regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., BC and PMV 2012; PMV 2015; WLNG 2015) and ongoing consultation between the Ministry and Lake Cowichan First Nation.

Lake Cowichan First Nation is one of six First Nation comprising the Hul'qumi'num Treaty Group, and as part of the Hul'qumi'num Treaty Group asserts traditional use over the area identified in Figure 10-7. Marine Traditional Territory for Lake Cowichan as part of the Hul'qumi'num Treaty Group, includes areas at the mouth of Howe Sound and around Bowen and Keats island (WLNG 2015), and the Fraser River, from Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009).

#### **11.4.2.6.1 Fishing and Harvesting Freshwater and Marine Resources**

Fishing activities of the Lake Cowichan First Nation have been primarily inferred from descriptions pertaining to the Hul'qumi'num Treaty Group as a whole. *Hul'qumi'num Mustimuhw*, which includes the Lake Cowichan, followed a seasonal round of resource use and regional settlement that took them from their winter residences on Vancouver Island and the Gulf Islands across the Strait of Georgia to the Fraser River estuary, where they resided for all or part of the annual salmon runs (April to through October), or, in some instances, year-round (BC and PMV 2012; Fediuk and Thom 2003; HTG 2005; Thom and Fediuk 2008; PMV 2015). Historically, the Lower Fraser represented the most important location within their regional settlement system (HTG 2005). Species harvested historically on the South Arm of the Fraser River included salmon, sturgeon, eulachon, shellfish, and marine mammals (particularly seals); dried clams and other foodstuffs (e.g., camas) were also traded to other First Nations while *Hul'qumi'num*-speaking groups were resident in and around the area (BC and PMV 2012). Areas within the wider Fraser River estuary were also utilized by *Hul'qumi'num*-speaking peoples for fishing salmon, sturgeon, groundfish, and other marine resources on the foreshore (e.g., Tsawwassen, Point Roberts, Boundary Bay) (HTG 2005b). Certain species (e.g., sockeye and pink salmon, sturgeon, eulachon, trout, flounder) could only be obtained in, or were preferred to be taken at, Fraser River-based locations within their trans-Strait of Georgia settlement round.

Lake Cowichan along with other *Hul'qumi'num Mustimuhw*, relied heavily on salmon (chum, spring, coho and sockeye) from the Fraser River year round, herring and herring roe (in March), cod (e.g., lingcod, red snapper, rockfish), steelhead (in winter) (Thom and Fediuk 2009). Halibut, seals, sea lions, and beach foods were harvested from February through the summer months. Salmon, basket cockles, and clams (e.g., horse and butter) were staples in their diet, preserved in large quantities for future consumption, ceremonial, social, and trade purposes. Many of the other marine resources were immediately consumed (Thom and Fediuk 2008).

*Hul'qumi'num Mustimuhw*, including Lake Cowichan previously identified their most desired fish species are, salmon (e.g., spring, sockeye, chum, coho, pink), halibut, herring, ling cod, cod, red snapper, and cod, rock. Their most desired seafood species include, clams (e.g., butter clam, littleneck, manila), Dungeness crab, Pacific oyster, prawns, basket cockle, red sea urchin, octopus, and ghost shrimp or common shrimp (Thom and Fediuk 2008).

Lake Cowichan First Nation as a member of the Hul'qumi'num Treaty Group maintains that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them. Government regulations introduced

in the same era also had the effect of restricting their access to fishing in the area. Despite these changes, *Hul'qumi'num Mustimuhw* continued to use the Fraser River for fishing into the early twentieth century (BC and PMV 2012; HTG 2005a, b). Lake Cowichan reports that two types of salmon (sockeye and Chinook (spring)) are targeted at Roberts Bank; crabs are among a handful of species solely sources at, or that they prefer to harvest at this location (HTG 2005a, b; PMV 2015).

DFO management areas to which Lake Cowichan FSC licences apply are not specified in their latest available fisheries agreement with DFO; however, Lake Cowichan's agreement mentions sockeye, which does not occur in the Cowichan River system (DFO and LCFN 2013). DFO records for communal FSC licences in the Fraser River downstream of the Port Mann Bridge do not indicate that Lake Cowichan has had recent access to fisheries in this area. Lake Cowichan previously reported, however, that one of their FSC fishers harvested fish at the mouth of the Fraser and Roberts Bank in two of the last three years. Two species of salmon have been targeted at Roberts Bank, sockeye and spring (Chinook), with approximately 20 to 50 of each species harvested annually (spring through fall) (PMV 2015).

Lake Cowichan as a member of the Hul'qumi'num Fisheries Limited Partnership (HFLP) engages in a commercial fishing business in which some of the Cowichan Nation Alliance member groups (Penelakut, Stz'uminus) participate, along with Lake Cowichan and Lyackson First Nations. Species harvested through this enterprise are crab (one Area H licence), prawn (two local / coast wide licences), halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP 2014). Commercial licences for halibut, sablefish, and rockfish under these licences are generally undertaken off the west coast of Vancouver Island (HFLP 2014; PMV 2015).

#### **11.4.2.6.2 Harvesting Terrestrial Resources**

Hunting/trapping activities of the Lake Cowichan First Nation have been largely inferred from descriptions pertaining to the Hul'qumi'num Treaty Group as a whole. Large game harvested likely included deer and black bear; small game, fur-bearing mammals, and waterfowl from aquatic settings along sloughs and wetlands, such as beaver, muskrat, otters, mink, ducks, geese, and swans, would also have been targeted (VAFFC 2011). Deer, a staple in their diet, was preserved in large quantities for future food, ceremonial, social and trade purposes (Thom and Fediuk 2008). *Hul'qumi'num Mustimuhw*, including Lake Cowichan previously identified their most desired land mammal species including, white tail deer, elk, black bear, moose, and mountain goat (Thom and Fediuk 2008). Lake Cowichan report they are harvesting ducks, specifically mallards and coots (mud hens), at Roberts Bank. They have previously expressed concern regarding the diminishing numbers of these and other marine birds (PMV 2015).

Gathering activities of the Lake Cowichan First Nation have also been primarily inferred from descriptions pertaining to the Hul'qumi'num Treaty Group as a whole. Other member bands of the Hul'qumi'num Treaty Group have reported that berries (e.g., cranberries, blueberries, blackberries), wapato, and bulrushes/reeds (*stth'equn*) were gathered and cultivated by *Hul'qumi'num' Mustimuhw* ancestors at *t'ektines* (HTG 2005b; Woodward and Company 2011) Lake Cowichan report harvesting eelgrass at Roberts Bank in the intertidal zone (PMV 2015). *Hul'qumi'num Mustimuhw*, including Lake Cowichan previously identified their most desired species of berries

including, blackberries, red huckleberries, oval leaved blueberries, salmonberries, soapberries, black caps or black raspberries, and bog berries (Thom and Fediuk 2008).

#### **11.4.2.6.3 Aboriginal Title**

Lake Cowichan, as represented by the Hul'qumi'num Treaty Group, asserts that *Tl'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Hul'qumi'num speaking First Nations (VAFFC 2011).

#### **11.4.2.6.4 Intangible Cultural Heritage**

Lake Cowichan First Nation members used waterways to travel between sites, between summer camps, and hunting, fishing, and gathering locations along waterways. These waterways remain important travel corridors for harvesting marine resources and accessing sites for ceremonial purposes (WLNG 2015). As is the case with other Coast Salish groups, sites used for traditional purposes by Lake Cowichan First Nation members, such as fishing, hunting, or gathering sites, are regarded as sacred, features associated with culturally important landscapes include named places, village sites, and travel routes (WLNG 2015).

#### **11.4.2.7 Lyackson First Nation Use**

Key sources relied upon the *Lyackson Migration Project: Preliminary Report, Hearing Order OH-001-2014, Written Evidence, Lyackson First Nation* (May 27, 2015), regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., BC and PMV 2012; PMV 2015; WLNG 2015), and ongoing consultation between the Ministry and Lyackson First Nation.

Lyackson First Nation is a member of the Hul'qumi'num Treaty Group, asserting traditional use over the area identified in Figure 10-7. Marine Traditional Territory for Lyackson as part of the Hul'qumi'num Treaty Group includes areas at the mouth of Howe Sound and around Bowen and Keats island (WLNG 2015), and the Fraser River, from Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009).

Lyackson First Nation maintains that it has Aboriginal title and rights interests in the southern Gulf Islands, specifically Le'eyqsun (Valdes) Island; the south-east coast of Vancouver Island in and around the Cowichan Valley; along the south arm of the Fraser River; and, throughout the Salish Seas (Strait of Georgia) (LFN 2015). Lyackson First Nation maintains that the south arm of the Fraser River is the location of an important village site – *Tl'uqtinus*. They state that this village was central to them for trade, inter-community relations, inter-governmental relations, fishing, and berry harvesting (HTG 2005a, b; LFN 2015).

#### **11.4.2.7.1 Fishing and Harvesting Freshwater and Marine Resources**

Lyackson First Nation previously reported fishing was a vital aspect of their cultural and economy. Historically, apart from salmon, halibut, herring, lingcod, dogfish, flounder, smelts, perch, sculpin, skate, and ratfish were traditionally harvested in and around Le'eyqsun (Valdes) Island. They harvested pacific herring from the Gulf



Islands and sockeye salmon from the Fraser River in the summer months (University of Victoria 2014, WLNG 2015).

Lyackson First Nation reports fishing for salmon in Salish Seas (Strait of Georgia), relying heavily on its salmon fisheries for its traditions, health, and personal economic reasons (i.e., salmon forms a critical component of their food supply) (LFN 2015). They maintain that fishing is a contemporary practice, continued from their traditional Aboriginal right practices (LFN 2015).

Lyackson First Nation observes that the Salish Seas wash upstream of the Fraser River as far as Douglas Island, as revealed by the saltwater marshes on Lulu and other Islands. Lyackson First Nation has previously expressed concern about the ecosystems, species, and locations on these islands (e.g., Lulu, Westham) (LFN 2015). They report that the Fraser River itself is very important for Lyackson's salmon food fish, as they follow the fish to the Fraser (LFN 2015).

Lyackson previously reported that, in addition, to salmon, they harvested sturgeon and eulachon in the Fraser River while they were at *Tl'uq̓tinus*. Both sides of the Point Roberts Peninsula were also used for fishing sturgeon, salmon (sockeye and pink) halibut and other groundfish (PMV 2015). Lyackson First Nation states that although white sturgeon is a protected species, it continues to be an important traditional resource for their members and found in their cultural imperatives list as food, medicine, and a spiritual and trade species (LFN 2015).

Other seafood harvested by Lyackson First Nation includes cockles, mussels, oysters, clams, chitons, purple snails, sea cucumbers, barnacles, crabs, and sea urchins (University of Victoria 2014; WLNG 2015). The shellfish were often harvested and consumed at the end of the winter when preserved foods from the summer were becoming scarce (University of Victoria 2014).

Traditional seal, whale, and sea lion hunts occur in the Salish Seas, with Lyackson, along with Penelakut, enjoying the exclusive Aboriginal right to harvest seals and sea lions from Porlier Pass. This is a practice Lyackson First Nation is striving to revitalize, as Elders have requested seal meat and regard it as a medicine (LFN 2015).

The Marine Traditional Territory for Lyackson First Nation, as part of the Hul'qumi'num Treaty Group, includes areas at the mouth of Howe Sound and around Bowen and Keats Islands. Access to sockeye for members of the Hul'qumi'num Treaty Group is provided by DFO annually in Johnston Strait and off the mouth of the Fraser River (WLNG 2015).

Lyackson First Nation as a member of the Hul'qumi'num Treaty Group, has previously reported that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them (HTG 2005a, b). Lyackson First Nation reports that they have advised Canada that they intend to reclaim their food fisheries in the Fraser River as needed and as they have undertaken traditionally (LFN 2015).

Lyackson reports that under the Pacific Integrated Commercial Fisheries Initiative, they have established the Hul'qumi'num Fisheries Limited Partnership (HFLP). Through this Partnership Lyackson owns a 1/5<sup>th</sup> share of the revenues generated from crab (one Area H licence), prawn (two local / coast wide licences), halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP

2014). Commercial licences for halibut, sablefish, and rockfish under these licences are generally undertaken off the west coast of Vancouver Island (HFLP 2014; LFN 2015; PMV 2015).

#### **11.4.2.7.2 Harvesting Terrestrial Resources**

Coastal birds, including black duck, cormorant, and Common merganser were reported by Lyackson to be present in the Roberts Bank area and important to them for food and ceremonial purposes. Lyackson identified deer and grouse as available to them at Porlier Pass (PMV 2015). They also hunted deer, bear, and geese, as well as gathered the eggs of ducks and seagulls on or near Le'eyqsun (Valdes) Island and within their asserted territory (WLNG 2015).

Historically, respective household on Le'eyqsun (Valdes) Island controlled camas fields, fern root beds, and hyacinth roots (University of Victoria 2014). Lyackson First Nation reports harvesting flora for food and medicinal purposes, including lavender, lichen, Oregon grape, rattlesnake plantain, yellow daisy, mullein, and vine mint. They also collected the inner bark of maple, alder, and hemlock trees, as well as the roots of ferns. The bark from the trees was shredded and along with goat wool, down, animal skin and cattails was used to make clothing, mats, and baskets (University of Victoria 2014; WLNG 2015).

#### **11.4.2.7.3 Aboriginal Title**

Lyackson First Nation, as represented by the Hul'qumi'num Treaty Group, asserts that *Ti'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Cowichan Nation, the descendants of which are present-day Cowichan Tribes, Chemainus (Stz'uminus), Halalt, Hwlitsum, Lyackson, and Penelakut members (BC and PMV 2012; HTG 2005a, b; PMV 2015; Woodward and Company 2011). Lyackson First Nation previously reported they would have occupied this site in July, while they fished for sockeye and pink salmon from Canoe Passage to as far up as hope along with other Cowichan Nation Alliance members (TMPL 2014).

#### **11.4.2.7.4 Intangible Cultural Heritage**

Lyackson First Nation previously report that the waters were their highways, and they, along with other Coast Salish Nations, all share a title interest in these waters and continue to use them in a variety of ways, including but not limited to transportation between Vancouver Island and the lower mainland (LFN 2015).

#### **11.4.2.8 Penelakut Tribe Use**

Penelakut Tribe has advised the Proponent that they have not reviewed this Part C Aboriginal Information Requirements of the EAC Application/EIS. Further, Penelakut Tribe requested that the Proponent advise that Penelakut Tribe has not provided information to the Proponent to include in the EAC Application/EIS and does not support the use of publicly available information to support the assessment.

Key sources relied upon include regulatory documents for other projects in close proximity to the Proposed Project Area (e.g., PMV 2015; TMPL 2014; WLNG 2015) and ongoing consultation between the Ministry Penelakut Tribe.

Penelakut Tribe is a member of the Hul'qumi'num Treaty Group, asserting traditional use over the area identified in Figure 10-7. Marine Traditional Territory for Penelakut as part of the Hul'qumi'num Treaty Group includes areas at the mouth of Howe Sound and around Bowen and Keats island (WLNG 2015), and the Fraser River, from Strait of Georgia up to Sawmill Creek, north of Yale (BCTC 2009).

Penelakut Tribe maintains their ancestors seasonally occupied the village of *Tl'uq̓tinus*, on the south shore of Lulu Island, in and around the area opposite Tilbury Island. They assert Aboriginal title, along with other Hul'qumi'num Treaty Group member bands, to part of *Tl'uq̓tinus* and surrounding lands (BC and PMV 2012; HTG 2005a, b; VAFFC 2011; Woodward and Company 2011).

Penelakut Tribe is also a member of the Cowichan Nation Alliance along with Cowichan Tribes, Chemainus (Stz'uminus First Nation), and Halalt First Nation (BC and PMV 2012).

#### **11.4.2.8.1 Fishing and Harvesting Freshwater and Marine Resources**

Penelakut Tribe harvested beach food on Valdes Island, hunted marine mammals in the areas around the Gulf Islands, and Thetis Island was used for both hunting and collecting beach foods. At Telegraph Harbour they raked herring, collected herring spawn, fished for skate, and harvested beach foods (BC and PMV 2012). The marine resource harvested in the Strait of Georgia by Penelakut Tribe included, clams (e.g., littleneck, butter, horse, geoduck, manila), basket cockles, oysters, scallops, mussels, chitons, crabs, sea cucumber, octopus, red and green sea urchins, barnacles, Dungeness crab, giant red chiton, northern abalone, prawn, and red rock crab (TMPL 2013).

Also harvested in the Strait of Georgia by the Penelakut Tribe, were seals, sea lions, porpoises, whales, dolphins (TMPL 2013).

Historical documents suggest Penelakut Tribe once had a fishing camp on a slough at the bridge on No. 4 road east of the Steveston Highway, a second fishing camp, on a little bay, said to be located on the south shore of Canoe Pass, just below Brunswick Point. As indicated in the preceding passage, Penelakut Tribe report using Tk'ektines/ *Tl'uq̓tinus* seasonally (BC and PMV 2012; HTG 2005a, b; PMV 2015).

The Marine Traditional Territory for Penelakut Tribe, as part of the Hul'qumi'num Treaty Group, includes areas at the mouth of Howe Sound and around Bowen and Keats Islands. Access to sockeye for members of the Hul'qumi'num Treaty Group is provided by DFO annually in Johnston Strait and off the mouth of the Fraser River (WLNG 2015). Current FSC harvesting of all five species of salmon, herring and herring spawn, and groundfish by Cowichan Nation Alliance member bands has been described as occurring within the PFMA 29, covering the Fraser River and estuary or within the adjacent management areas (i.e., PFMA 17 and 18) (PMV 2015).

Penelakut Tribe as a member of the Hul'qumi'num Treaty Group, has previously reported that during the reserve creation era in the late nineteenth century, government officials were aware of *Hul'qumi'num Mustimuhw* fishing interests at the Fraser River; however, no reserves were set aside for them (HTG 2005a, b). They, along with other members of the Cowichan Nation Alliance (CNA) has been working to restore former fisheries within the Fraser

River through the DFO, mostly recently seeking, along with *Skwxwú7mesh* Nation, allocation increases on the Lower Fraser River and change harvesting areas (DFO 2015).

Penelakut engages in a commercial fishing business as part of the Hul'qumi'num Fisheries Limited Partnership (HFLP). Species harvested through this enterprise are crab (one Area H licence), prawn (two local / coast wide licences), halibut (one licence and annual TAC quota), herring (11 gillnet and 1 seine), rockfish (one Area Inside licence, targeting yelloweye, quillback, copper, china, and tiger), sablefish (annual TAC quota), and salmon (five Area E gillnet licences) (HFLP 2014).

#### **11.4.2.8.2 Harvesting Terrestrial Resources**

Penelakut Tribe harvested ducks and geese in the Strait of Georgia (TMPL 2013).

Penelakut Tribe previously reported that in the marshy areas south of Canoe Passage or Brunswick Point – in the area of *Xwulits'um*, or place for cutting (cattails) – several varieties of cattails and rushes (*stth'equn*) were once harvested (PMV 2015). Their ancestors harvested berries (e.g., cranberries, blueberries, blackberries), wapato, bulrushes/reeds (*stth'equn*), as well as seaweed at *Tl'uqtinus* (BC and PMV 2012; HTG 2005a, b; PMV 2015; Woodward and Company 2011). Penelakut Tribe harvested sea cucumber, kelp, rockweed, and sea lettuce in the Strait of Georgia (TMPL 2013).

#### **11.4.2.8.3 Aboriginal Title**

Penelakut Tribe, as represented by the Hul'qumi'num Treaty Group, asserts that *Tl'uqtinus*, on the south shore of Lulu Island (in and around the area opposite Tilbury Island), was a home base occupied and used exclusively by the Cowichan Nation, the descendants of which are present-day Cowichan Tribes, Chemainus (Stz'uminus), Halalt, Hwlitsum, Lyackson, and Penelakut members (BC and PMV 2012; HTG 2005a, b; PMV 2015; Woodward and Company 2011).

#### **11.4.2.8.4 Intangible Cultural Heritage**

Waterways have been and remain important travel corridors for Penelakut Tribe when harvesting marine resources (WLNG 2015). Penelakut Tribe, as a member of the Cowichan Nation Alliance, have reported that for the last generation they have been revitalizing access to the waterways that once served as the highways for their ancestors, working with the currents and tides to travel for FSC purposes. They have expressed concern regarding the contaminants and the sustainability of vital habitats that are necessary to support their members (PMV 2015).

#### **11.4.2.9 Métis Nation British Columbia Use**

Key sources relied upon for this summary are the regulatory documents for other projects in proximity to the Proposed Project Area (e.g., PMV 2015; WLNG 2015), and ongoing consultation between the Ministry and the Métis Nation of British Columbia.

Métis Nation British Columbia previously reported that established communities of Métis have existed along the British Columbia coast for over 200 years and that they continue to access the land, waters, and resources for traditional purposes (WLNG 2015). They have also reported travelling great distances to harvest or engage in other cultural activities, and that their use of lands, waters, and resources are not generally confined to specific geographical areas, such as asserted traditional territory, or to areas in which Métis harvesters immediately reside (PMV 2015).

#### **11.4.2.9.1 Fishing and Harvesting Freshwater and Marine Resources**

Métis Nation British Columbia previously reported harvesting salmon, ling cod, eulachon, sturgeon, Dolly Varden, and halibut, with salmon being the primary species harvested. Intensive salmon harvesting sites were identified on the Fraser River, as well as Ladysmith Harbour, Samsun Narrows, and along the southwestern portion of Pender Island. Ling cod harvesting sites were noted on the western side of the Strait of Georgia as well as south of Steveston Jetty; eulachon, sturgeon and Dolly Varden harvesting sites were noted in Canoe Passage and the lower Fraser River (PMV 2015).

Métis Nation of British Columbia previously report harvesting Dungeness crab, tanner crab, kelp crab, squat lobster and shrimp, with crabs harvested west of the Westshore Terminals, Sturgeon Bank, Boundary Bay and at various locations throughout the Gulf Islands. Other marine invertebrates harvested include prawns, clams, oysters, sea cucumber, and sea urchin (PMV 2015).

Métis Nation of British Columbia previously report harvesting marine mammals, primarily seals. These species were not consumed (PMV 2015).

#### **11.4.2.9.2 Harvesting of Terrestrial Resources**

Métis Nation of British Columbia previously report harvesting deer, muskrat, beaver, bear, and otter. Deer, which were the primary species harvested, were principally taken on Galiano Island. Otter were harvested near the mouth of the Fraser River (PMV 2015). Coastal birds, primarily ducks, followed by geese, Pacific Black Brant and swan were also harvested, as were grouse and pheasant (PMV 2015). Harvesting areas for Pacific Black Brant include Boundary Bay, the eastern shore of Galiano Island, south of the BC Ferries Terminal, the inter-causeway area, and south of Brunswick Point. Galiano Island also served as a harvesting site for ducks and grouse (PMV 2015).

Métis Nation British Columbia previously report gathering a range of plants, including firewood (PMV 2015).

#### **11.4.2.9.3 Aboriginal Title**

There is no publicly available information that refers to Métis Nation British Columbia asserting Aboriginal Title.

#### **11.4.2.9.4 Intangible Cultural Heritage**

The Métis Nation British Columbia reports that their concept of health and wellness is derived from the Cree *miyopimatisiwin*, meaning leading an exemplary life, and is informed by a worldview that understands traditional foods as key to maintaining health and wellness. Traditional foods, particularly meats, are preferred to store-bought. Harvesting on the land and water provides an opportunity to bond with family and pleasure and satisfaction from seeking (i.e., scouting, searching, tracking) targeted species (PMV 2015).

#### **11.4.3 Tsleil-Waututh Nation and Other Aboriginal Groups' Aboriginal Rights, including Current Use**

This section considers the interactions and potential effects of the Proposed Project on Aboriginal Rights, including as these relate to current use and intangible cultural heritage. This section is based on the information provided in Section 11.4.2 Existing Conditions. The categories of Aboriginal Rights considered in this Application are:

- Fishing and Harvesting Freshwater and Marine Resources;
- Harvesting Terrestrial Resources;
- Aboriginal Title; and
- Intangible Cultural Heritage.

The information presented in Section 11.4.2 regarding past, current, and anticipated future use of the LSA and RSA by Tsleil-Waututh Nation and the other Aboriginal Groups was drawn from existing sources of information. The Proponent sought new information from Aboriginal Groups regarding their perspectives on potential Project-related effects on Aboriginal Rights, including current use, or on other Aboriginal interests. Only Tsleil-Waututh Nation responded to requests from BC EAO and the Proponent for information about Aboriginal Rights, including current use, and other interests in the LSA and RSA.

The following subsections summarize Aboriginal use identified across the four subcomponents in Section 11.4.2 for each Aboriginal Group. However, the only group to which the rest of the effects assessment applies is Tsleil-Waututh Nation, given that the summaries below demonstrate that Tsleil-Waututh is the only Aboriginal Group with any identified use, based on sources reviewed.

##### **11.4.3.1.1 Fishing and Harvesting Freshwater and Marine Resources**

Tsleil-Waututh Nation asserts that members harvested fish, shellfish and marine mammals in Howe Sound. Tsleil-Waututh Nation also states that southern Howe Sound is a priority harvest area for prawns, and that they used multiple locations along the shores of Howe Sound to camp while harvesting (WLNG 2015). Tsleil-Waututh Nation has noted that early development in Howe Sound has adversely affected their use of resources in the area (WLNG 2015).



While Howe Sound is included in Musqueam Indian Band's asserted traditional territory, there is little publicly available information on harvesting of freshwater and marine resources in Howe Sound (MFN 2011). Herring was identified by Musqueam Indian Band as a resource obtained from Howe Sound (PMV 2015).

The Hul'qumi'num Treaty Group Marine Traditional Territory, which is shared by Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation and Penelakut Tribe, includes areas at the mouth of Howe Sound and around Bowen and Keats Islands, the Strait of Georgia and the Fraser River (WLNG 2015).

According to publicly available information, the Fraser River figures prominently in fishing and harvesting of freshwater and marine resources for the Aboriginal Groups considered in Section 11.4.1. Musqueam Indian Band and Tsleil-Waututh Nation are involved in a commercial fishing venture (Salish Seas Limited Partnership) (PMV 2015). Musqueam Indian Band have an established right to fish for FSC purposes in the South Arm of the Fraser River (*R v. Sparrow* [1990] 1 S.C.R. 1075), and assert a right to fish in all waters of the Fraser River from the Port Mann Bridge to the Strait of Georgia. Hul'qumi'num Treaty Group has previously reported that during the reserve creation era in the late nineteenth century, government officials were aware of their fishing interests at the Fraser River; however, no reserves were set aside for them (BC and PMV 2012; Fediuk and Thom 2003; HTG 2005). Members of the Cowichan Nation Alliance (Cowichan Tribes, Halalt First Nation, Penelakut Tribe and Stz'uminus First Nation) are jointly working to re-establish fishing rights in the Fraser River (HTG 2005a, b).

Publicly available information on Métis Nation British Columbia contains no information on fishing or harvesting freshwater and marine resources in the Proposed Project Area.

#### **11.4.3.1.2 Harvesting Terrestrial Resources**

Tsleil-Waututh Nation reports harvesting terrestrial resources in Howe Sound, particularly waterfowl (WLNG 2015). While Tsleil-Waututh Nation reports that Roosevelt elk are important, publicly-available information indicates that members harvest elk in Indian Arm (Eagle Mountain – WGP 2015b). Tsleil-Waututh Nation noted that early development in Howe Sound has adversely affected their use of resources in the area.

Musqueam Indian Band's asserted traditional territory includes Proposed Project Area, but there is little publicly-available information related to harvesting of terrestrial resources in Howe Sound. Musqueam Indian Band reports that terrestrial harvesting activities occurred to the north as far as Grouse Mountain for plant resources, Bowen Island for waterfowl and deer, and throughout the Coast Mountains for mountain goats (MBC 1984).

According to publicly-available information, harvesting of terrestrial resources for the Aboriginal groups considered in Section 11.4 occurs in the Fraser River, the land and islands in the Strait of Georgia and on Vancouver Island. Musqueam Indian Band harvests on lands along the Fraser River (MIB 2006; MBC 1984; PMV 2015). The Cowichan Nation Alliance reports that its member First Nations also harvested waterfowl along the Fraser River (CNA 2011; SFN 2015) and plants at locations around Vancouver and Richmond, including the area around *Tl'uq̓tinus* (BC and PMV 2012; HTG 2005a and b; PMV 2015). Lake Cowichan First Nation and Lyackson First Nation report harvesting birds for food, social and ceremonial purposes at Roberts Bank (PMV 2015). Penelakut Tribe report harvesting ducks and geese in the Strait of Georgia and cattails and other plants along the Fraser River (TMPL 2013).

Métis Nation British Columbia report harvesting otters near the mouth of the Fraser River and birds along Boundary Bay (PMV 2015).

#### **11.4.3.1.3 Aboriginal Title**

As none of the Aboriginal Groups listed in Section 11.4.1 have asserted Aboriginal Title to specific locations within the Proposed Project Area, Aboriginal Title is not carried forward as a subcomponent in the effects assessment.

#### **11.4.3.1.4 Intangible Cultural Heritage**

Tsleil-Waututh Nation reports that Howe Sound is culturally important. They note that several landforms in Howe Sound are linked to spirit beings and that landscape features are relevant to traditional ceremonial practices (WLNG 2015). Tsleil-Waututh also view that waterways as key means of travel between sites, summer camps, and hunting, fishing, and gathering locations and TLU studies recorded canoe routes from Burrard Inlet to the Squamish estuary. Tsleil-Waututh report that members travel seasonally up Howe Sound to access the Squamish Valley (WLNG 2015).

Musqueam Indian Band views all areas used for traditional purposes as sacred, and that features associated with culturally important landscapes include named places, former village sites, and travel routes (WLNG 2015). No publicly-available information on named places, former village sites, and travel routes in Howe Sound was located in preparation of this Application.

While the Aboriginal Groups represented by Hul'qumi'num Treaty Group and the Cowichan Nation Alliance also state that waterways have been and remain important travel corridors for travel and harvest, there are no references to such activities occurring in the Proposed Project Area.

The Métis Nation British Columbia reports that their concept of health and wellness is derived from the Cree *miyopimatisiwin*, meaning leading an exemplary life, and is informed by a worldview that understands traditional foods as key to maintaining health and wellness (PMV 2015). However, publicly available information for Métis Nation British Columbia does not make reference to use of the Proposed Project Area.

### **11.4.4 Potential Project-Related Interactions and Effects on Aboriginal Rights, including Current Use**

This section considers the interactions and potential effects of development and use of the Potential Project Area LSA on Aboriginal Rights, including those related to current use and those related to intangible cultural heritage. Potential effects on tangible or physical cultural heritage, including any structure, site, or thing of historical, archaeological, paleontological, or architectural significance, is discussed in Volume 2, Part B - Section 8.1: Heritage Resources.

Potential effects associated with identified interactions between the Proposed Project and Aboriginal Rights, including current use, are presented in Table 11-17 through Table 11-20. Potential effect ratings and a preliminary evaluation of the potential effects on Aboriginal Rights and current use associated with these interactions is also provided, to focus the assessment on those interactions of greatest importance. Those potential effects anticipated

to be negligible are described in Section 11.4.3 and are not carried forward in the assessment. All non-negligible measurable (or greater than negligible) potential adverse effects are also described in Section 11.4.3 and are carried forward to subsequent sections for further assessment.

#### **11.4.4.1 Identification of Potential Project-VC Interactions**

Since shipping from where the barges meet the existing shipping lanes in the Strait of Georgia and in the Fraser River to the Proponent's existing facilities in Burnaby and Langley were excluded from the scope of the assessment (CEA Agency 2013), potential interactions between and effects on Aboriginal Rights, including current use, in the Strait of Georgia or the Fraser River were not evaluated in this EAC Application/EIS. For Aboriginal Groups other than Tsleil-Waututh Nation, this exclusion meant their respective traditional territories only marginally overlapped Project components or activities under assessment. For a review of concerns raised by Aboriginal Groups in consultation with the Proponent related to marine shipping associated with the Project, see Sections 12.0 Other Aboriginal Interests and 13.0 Aboriginal Consultation.

A preliminary evaluation of identified interactions between the various physical works and activities and Aboriginal Rights, including current use, were therefore limited to the LSA and RSA. As summarized above from Section 11.4.2, only Tsleil-Waututh Nation has identified use in the LSA and RSA based on sources reviewed in the context of and consultation on the Proposed Project, and are therefore the only Aboriginal Group considered further in the assessment.

Potential effects associated with identified interactions between the Project and Tsleil-Waututh Nation Aboriginal Rights, including current use, are presented in Table 11-17 through Table 11-20.

Potential effect ratings and a preliminary evaluation of the potential effects on Aboriginal Rights, including current use, associated with these interactions are also provided to focus the assessment on those interactions of greatest importance. Potential Project-VC interactions are characterized as:

- a) No or negligible adverse effects expected - no further consideration warranted; or
- b) Potential adverse effects expected - further consideration and possibly additional mitigation warranted.

Potential effects anticipated to be negligible on Tsleil-Waututh Nation Aboriginal Rights, including current use, are described in this section and are not carried forward in the assessment. All measurable (or greater than negligible) potential adverse effects (whether direct, indirect or induced) on Tsleil-Waututh Nation Aboriginal Rights, including current use, are also described in this section and are carried forward to Section 11.4.5.

**Table 11-17: Project-VC Interaction Table: Fishing and Harvesting Freshwater and Marine Resources**

Project Activities	Description	Fishing and Harvesting Freshwater and Marine Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	All marine and land-based activities during construction	○	<p>Changes in access to freshwater and marine resources:</p> <ul style="list-style-type: none"> <li>▪ Construction may prevent access to fishing and harvesting of freshwater and marine resources around the jetty and on land within areas under construction. As the jetty is located within an existing log boom tenure and fishing and harvesting by Tsleil-Waututh Nation would generally occur at the mouth of McNab Creek, the effect is considered negligible and not carried forward.</li> <li>▪ Access limitations may be expected due to Proposed Project-related vessel traffic. By including Tsleil-Waututh Nation in the mitigation measures described in Volume 2, Part B - Section 7.2: Marine Transport and Volume 3, Part E - Section 16.0: Marine Transport Management Plan, anticipated effects on access are considered negligible and not carried forward.</li> </ul>
		○	<p>Changes in availability or quality of salmonids/freshwater fish resources:</p> <ul style="list-style-type: none"> <li>▪ Construction activities have the potential to affect habitat quality; however, residual effects on salmon in freshwater are anticipated to be positive (see Volume 2, Part B - Section 5.1) and this effect is not carried forward.</li> </ul> <p>Changes in availability or quality of marine fish resources:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Direct loss of subtidal fish habitat.</li> <li>- Changes in habitat quality.</li> <li>- Noise effects (injury and disturbance).</li> </ul> </li> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.2).</li> </ul> <p>Changes in availability or quality of benthic resources:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Loss of habitat and shading effects.</li> <li>- Habitat quality due to construction activities and propeller scour.</li> </ul> </li> </ul>

Project Activities	Description	Fishing and Harvesting Freshwater and Marine Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
			<ul style="list-style-type: none"> <li>- Direct mortality due to construction activities and propeller scour.</li> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.2).</li> </ul> <p>Changes in availability or quality of marine mammal resources:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Noise effects on behaviour.</li> <li>- Vessel strikes (injury and mortality).</li> </ul> </li> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.2).</li> </ul> <p>Changes in availability or quality of marine bird resources:</p> <ul style="list-style-type: none"> <li>▪ In-air noise from construction may affect behaviour.</li> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.2).</li> </ul>
		●	<p>Changes in quality of use experience during fishing or harvesting freshwater or marine resources</p> <ul style="list-style-type: none"> <li>▪ Increased vessel traffic due to construction of the Proposed Project may also affect quality of current use experience due to concerns of safety. This effect is carried forward.</li> <li>▪ Proposed Project activities may would affect quality of current use experience through noise, air, and visual changes that affect the quality of the environmental setting. This effect is carried forward.</li> </ul>

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## Volume 3

Project Activities	Description	Fishing and Harvesting Freshwater and Marine Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Operations</b>			
All Project operation activities and works	All marine and land based activities during operations	○	Changes in access to freshwater and marine resources are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.
		○	<p>Changes in availability or quality of salmonids and freshwater fish resources:</p> <ul style="list-style-type: none"> <li>▪ Operations activities have the following potential effects:               <ul style="list-style-type: none"> <li>- Direct loss of freshwater and riparian habitat.</li> <li>- Groundwater conditions in McNab Creek may be affected by excavation of mine pit and creation of a pit lake.</li> </ul> </li> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.1).</li> </ul> <p>Changes in availability or quality of marine fish, benthic resources, marine mammals and marine birds are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.</p>
		●	Changes in quality of use experience during fishing or harvesting freshwater or marine resources are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.



## AGGREGATE PROJECT

## Volume 3

Project Activities	Description	Fishing and Harvesting Freshwater and Marine Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	All marine and land based activities during reclamation and closure	○	Changes in access to all freshwater and marine resources: <ul style="list-style-type: none"> <li>▪ No ongoing effects from the Proposed Project are anticipated post-closure.</li> </ul>
		○	Changes in availability and quality of freshwater and marine resources: <ul style="list-style-type: none"> <li>▪ Flooded pit would remain and continue to affect surface flows; however, it is anticipated to result in positive effects on freshwater salmon habitat (see Volume 2, Part B - Section 5.1). As such, this is not considered further.</li> <li>▪ No ongoing effects from the Proposed Project are anticipated for other freshwater and marine resources (see Volume 2, Part B - Sections 5.1 and 5.2).</li> </ul>
		○	Changes in quality of use experience during fishing or harvesting freshwater or marine resources: <ul style="list-style-type: none"> <li>▪ No ongoing effects from the Proposed Project are anticipated post-closure.</li> </ul>

*Notes:*

○ = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.

● = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

Table 11-18: Project-VC Interaction Table: Harvesting of Terrestrial Resources

Project Activities	Description	Harvesting Terrestrial Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	All marine and land based activities during construction	o	<p>Changes in access to terrestrial resources:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Improvements to wharf and access roads may improve access over land to Tseil-Waututh Nation, which is a potentially positive effect.</li> <li>- Access limitations may be expected due to Proposed Project-related vessel traffic.</li> </ul> </li> <li>▪ Mitigation measures outlined in Sections 5.3, 7.3 and 16.2.2.11 are anticipated to render effects on access as negligible and are not carried forward.</li> </ul>
		o	<p>Changes in availability or quality of ungulates (Roosevelt elk):</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Direct habitat loss.</li> <li>- Sensory disturbance.</li> <li>- Habitat fragmentation.</li> <li>- Barriers to movement.</li> <li>- Direct and indirect mortality.</li> </ul> </li> <li>▪ New roads may provide access to the public into Roosevelt elk habitat, which may result in increased mortality. However, public access to the McNab Valley via the Proposed Project Area may be controlled or limited, thereby reducing access to Roosevelt elk habitat by hunters and poachers (Volume 2, Part B - Section 5.3).</li> <li>▪ Effects of the Proposed Project are not expected to exceed ecological thresholds and compromise the resilience of the regional population of Roosevelt elk (see Volume 2, Part B - Section 5.3). Therefore, availability and quality of ungulates is not carried forward.</li> </ul> <p>Changes in availability or quality of birds:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Direct and indirect habitat loss.</li> <li>- Direct and indirect mortality.</li> </ul> </li> </ul>

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Project Activities	Description	Harvesting Terrestrial Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
			<ul style="list-style-type: none"> <li>▪ Residual effects were rated negligible and not carried forward (see Volume 2, Part B - Section 5.3).</li> </ul> <p>Changes in availability or quality of terrestrial plants:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Potential introduction of invasive species.</li> <li>- Potential introduction of dust and sediments.</li> <li>- Potential loss of extent of species that were not detected during the rare plant surveys.</li> </ul> </li> <li>▪ Residual effects were rated negligible and not carried forward.</li> </ul>
		•	<p>Changes in quality of use experience during harvesting of terrestrial resources:</p> <ul style="list-style-type: none"> <li>▪ Increased vessel traffic due to construction of the Proposed Project may affect quality of current use experience due to concerns of safety. This effect is carried forward.</li> <li>▪ Improvements to wharf and access roads may result in higher numbers of non-Aboriginal hunters, potentially affecting quality of current use experience. Although public access via the Proposed Project Area may be controlled or limited to reduce access to Roosevelt elk habitat (Volume 2, Part B - Section 5.3), there still may be an increase in hunters and poachers in the area. Therefore, this effect is carried forward.</li> <li>▪ Proposed Project may affect quality of current use experience through noise, air, and visual changes that affect quality of environmental setting. This effect is carried forward.</li> </ul>
<b>Operations</b>			
All Project operation activities and works	All marine and land based activities during operations	○	Changes in access to terrestrial resources are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.
		○	Changes in availability and quality of terrestrial resources are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.
		●	Changes in quality of use experience, including quality of environmental setting, during harvesting of terrestrial resources are the same for both construction and operations phases, and are carried forward.

## AGGREGATE PROJECT

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Project Activities	Description	Harvesting Terrestrial Resources	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	<ul style="list-style-type: none"> <li>■ All marine and land based activities during reclamation and closure</li> </ul>	○	Changes in access to terrestrial resources: <ul style="list-style-type: none"> <li>▪ All Proposed Project effects identified in construction and operations are anticipated to cease. Reclamation during decommissioning is anticipated to have beneficial effects on terrestrial resources, which in turn may have a positive effect on harvesting quantities. Positive effects are not carried forward.</li> </ul>
		○	Changes in availability and quality of terrestrial resources: <ul style="list-style-type: none"> <li>▪ No ongoing effects from the Proposed Project are anticipated for terrestrial resources (see Volume 2, Part B - Section 5.3)</li> </ul>
		○	Changes in quality of use experience, including quality of environmental setting, during harvesting of terrestrial resources: <ul style="list-style-type: none"> <li>▪ No ongoing effects from the Proposed Project are anticipated post-closure (see Volume 2, Part B - Section 5.3).</li> </ul>

*Notes:*

○ = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.

● = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

**Table 11-19: Project-VC Interaction Table: Aboriginal Title**

Project Activities	Description	Aboriginal Title	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	All marine and land based activities during construction	○	None of the Aboriginal groups considered in Section 11.4 have asserted Aboriginal Title to specific locations within the LSA or RSA; therefore, no potential effects on Aboriginal Title have been identified and carried forward.
<b>Operations</b>			
All Project operation activities and works	All marine and land based activities during operations	○	None of the Aboriginal groups considered in Section 11.4 have asserted Aboriginal Title to specific locations within the LSA or RSA; therefore, no potential effects on Aboriginal Title have been identified and carried forward.
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	All marine and land based activities during reclamation and closure	○	None of the Aboriginal groups considered in Section 11.4 have asserted Aboriginal Title to specific locations within the LSA or RSA; therefore, no potential effects on Aboriginal Title have been identified and carried forward.

*Notes:*

- = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.
- = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration.

Table 11-20: Project-VC Interaction Table: Intangible Cultural Heritage

Project Activities	Description	Intangible Cultural Heritage	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Construction</b>			
All Project construction activities and works	All marine and land based activities during construction	○	<p>Changes in access to locations associated with transmission of culture and history:</p> <ul style="list-style-type: none"> <li>▪ Construction activities are anticipated to have the following effects:                             <ul style="list-style-type: none"> <li>- Improvements to wharf and access roads may improve access, which is a potentially positive effect.</li> <li>- Access limitations may be expected due to Proposed Project-related vessel traffic. By including Tsleil-Waututh Nation in the mitigation measures described in Volume 2, Part B - Section 7.2: Marine Transport and Volume 3, Part E - Section 16.0: Marine Transport Management Plan, anticipated effects on access are considered negligible and not carried forward.</li> </ul> </li> </ul>
		●	<p>Changes in quality of experience associated with the sensory environment / environmental setting at locations associated with transmission of culture and history:</p> <ul style="list-style-type: none"> <li>▪ Increased vessel traffic due to construction of the Proposed Project may also affect quality of current use experience due to concerns of safety. This effect is carried forward.</li> <li>▪ Proposed Project may potentially affect quality of current use experience through noise, air, and visual changes that affect quality of environmental setting. This effect is carried forward.</li> <li>▪ Alterations to the landscape could result in effects to visual cues related to intangible cultural heritage and the transmission of culture and history. This effect is carried forward.</li> </ul>



Project Activities	Description	Intangible Cultural Heritage	
		Potential Interaction (See Notes)	Potential Effect / Rationale for Exclusion
<b>Operations</b>			
All Project operation activities and works	All marine and land based activities during operations	○	Changes in access to locations associated with transmission of culture and history are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.
		●	Changes in quality of experience associated with the sensory environment / environmental setting at locations associated with transmission of culture and history are the same for both the construction and operations phases and are explained in the construction section of this table. Residual effects are rated as negligible and not carried forward.
<b>Reclamation and Closure</b>			
All Project reclamation and closure Activities and Works	All marine and land based activities during reclamation and closure	○	Changes in access to locations associated with transmission of culture and history: <ul style="list-style-type: none"> <li>▪ All Proposed Project effects identified in construction and operations are anticipated to cease. Reclamation during decommissioning is anticipated to have beneficial effects on terrestrial resources, which in turn may have a positive effect on harvesting quantities. Positive effects are not carried forward.</li> </ul>
		○	Changes in quality of experience associated with the sensory environment / environmental setting at locations associated with transmission of culture and history: <ul style="list-style-type: none"> <li>▪ It is anticipated that the environmental setting would be returned to a natural state, lessening effects of visual changes. Potential effects related to changes in noise and air during construction and operations would end; therefore, effects of reclamation and closure activities on intangible cultural heritage are not carried forward.</li> </ul>

**Notes:**

- = Potential effect of Proposed Project activity on VC is positive, none or negligible; no further consideration warranted.
- = Potential effect of Proposed Project activity on VC that may require mitigation/benefit enhancement; warrants further consideration

#### **11.4.4.2 *Potential Project-Related Effects on Tsleil-Waututh Nation Aboriginal Rights, including Current Use***

##### **11.4.4.2.1 *Potential Effects on Fishing and Harvesting Freshwater and Marine Resources***

Of those considered in this part of the assessment, Tsleil-Waututh Nation is the only Aboriginal Group that reports using Howe Sound to obtain fish (e.g., salmon, smelt, cod and flounder) and shellfish (e.g., crabs, prawns and oysters). The other Aboriginal Groups considered in this section of the Application (i.e., Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia) have not reported fishing and harvesting of freshwater or marine resources in the Proposed Project Area. Therefore, potential Project-related effects on fishing and harvesting freshwater and marine resources are assessed only in relation to Tsleil-Waututh Nation. For clarity, potential Project-related effects on the Aboriginal Rights of other Aboriginal Groups in relation to fishing and harvesting freshwater and marine resources, including current use associated with these resources, are not carried forward in the assessment.

##### **11.4.4.2.1.1 *Construction***

Construction activities have the potential to affect access to freshwater and marine resources, availability or quality of freshwater and marine resources in the LSA and RSA, and the quality of current use experience related to fishing and harvesting those resources.

##### **11.4.4.2.1.1.1 *Changes in Access to Freshwater and Marine Resources***

Proposed Project construction activities would prevent access to fishing and harvesting of freshwater and marine resource activities around the jetty and on land within areas under construction. However, as the jetty is located within an existing log boom tenure and fishing and harvesting activities are concentrated on the eastern side of the LSA, generally in front of the mouth of McNab Creek, this effect is considered negligible and not carried forward.

Access limitations would also occur on an intermittent basis as a result of Proposed Project-related vessel traffic, which would require users to alter direction and/or speed when navigating at the same time as water taxis or barges. These navigational challenges are currently present in the LSA due to forestry activity. As the Proponent will develop and implement an Access Management Plan (Volume 3, Part E - Section 16.0) to communicate relevant access restrictions for public safety and security, resulting effects on fishing and harvesting activities due to potential interactions of angler vessels and equipment and construction-associated vessels are not detectable or not measureable, so potential effects of the Proposed Project on access during construction are considered negligible and are not carried forward. Access limitations may have an effect on quality of current use experience, which is carried forward in the assessment.

#### **11.4.4.2.1.1.2 Changes in Availability or Quality of Freshwater and Marine Resources**

Construction activities have the potential to degrade the quality of freshwater in the Proposed Project Area, which may affect habitat for freshwater fish. However, the effects on freshwater habitat for salmon are anticipated to be positive, with a slight increase in salmon productivity (see Volume 2, Part B - Section 5.1).

For marine fish, the following construction activities are anticipated to have Project-related effects:

- Direct loss of 1.4 m<sup>2</sup> of subtidal fish habitat as a result of pile installation;
- Effects on habitat quality due to construction activities and propeller scour; and
- Noise effects which could result in injury and disturbance.

Effects on salmon in the marine environment were rated as negligible (see Volume 2, Part B - Section 5.2). The Proposed Project is not anticipated to result in serious harm to fish that are part of a CRA fishery, or to fish that support such a fishery. The net residual effects of the Proposed Project on freshwater and marine fish are considered negligible; as such, potential effects on Aboriginal Rights, including current use, related to fishing and harvesting freshwater and marine fish are considered to be negligible and are therefore not carried forward in the assessment.

- Construction activities are anticipated to have the following effects on benthic resources (e.g., crabs, shellfish):
- Loss of habitat and shading effects from infrastructure;
- Change in habitat quality due to construction activities and propeller scour; and
- Direct mortality due to construction activities and propeller scour.

After the implementation of mitigation measures provided in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat in combination with habitat offsetting, the residual effect on benthic marine resources is considered to be negligible; therefore, potential effects on Aboriginal Rights, including current use, related to harvesting benthic resources are not carried forward in the assessment.

- For marine mammals, the following construction activities are anticipated to have Project-related effects:
- Noise from pile driving and vessels may have behavioural effects; and
- Vessel strikes could result in injury and mortality.

With implementation of recommended mitigation measures described in Volume 2, Part B - Section 5.2: Marine Resources, the residual effects of the Proposed Project on marine mammals are considered negligible; therefore, potential effects on Aboriginal Rights, including current use, related to harvesting marine mammals are not carried forward.

In-air noise from construction activities may have an effect on the behaviour of marine birds (causing avoidance); however, the effect is anticipated to be negligible on marine bird populations therefore potential effects related to Aboriginal Rights, including current use, related to harvesting marine birds is not carried forward.

#### **11.4.4.2.1.1.3 Changes in Quality of Experience During Fishing or Harvesting Freshwater and Marine Resources**

Proposed Project-related construction activities would affect quality of current use experience through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources). Construction noise emissions would occur over the duration of the Proposed Project construction, and are expected to be greatest during road, warehouse and facilities upgrade and construction, pile driving, and initial dry excavation of pit. The primary noise sources are various pieces of large off-road equipment. Effects on air quality during the construction phases of the Proposed Project were identified as minor potential interaction and were not assessed. Visual changes during the construction phase include changes in visibility of Proposed Project features and changes in the scenic character of the Proposed Project site and landscape features.

Following implementation of mitigation measures regarding noise (Volume 2, Part B - Section 9.2), a residual effect is expected but it is considered to be negligible. Noise due to construction is temporary and the activities are variable and move between the processing plant, the pit location and barge loading dock. As it is anticipated that there would be construction-related noise during times of day when fishing and harvesting of freshwater and marine resources would occur, potential effects of noise on quality of experience during fishing and harvesting of freshwater and marine resources is carried forward.

After the implementation of mitigation measures to address changes in visual resources (Volume 2, Part B - Section 7.4), a small level of residual visual change to the landscape is expected. Marine users in Thornbrough Channel are likely to be the most affected by the expected residual effect. As visible changes are anticipated to persist following mitigation, potential effects of these residual visual changes on quality of experience during fishing and harvesting of freshwater and marine resources are carried forward.

#### **11.4.4.2.1.2 Operations**

Operations activities have the potential to affect access to freshwater and marine resources, availability or quality of freshwater and marine resources in the LSA and RSA, and the quality of current use experience related to fishing and harvesting those resources.

##### **11.4.4.2.1.2.1 Changes in Access to Freshwater and Marine Resources**

Proposed Project operations would prevent access to fishing and harvesting of freshwater and marine resources around the jetty and on land within areas used in operations. However, as the jetty is located within an existing log boom tenure and fishing and harvesting activities are concentrated on the eastern side of the LSA, generally in front of the mouth of McNab Creek, this effect is considered to be negligible and not carried forward.

Access limitations during operations would be similar to those described under construction. Following development and implementation of an Access Management Plan (Volume 3, Part E - Section 16.0) for operations, residual effects are expected to be negligible; however, access limitations may have an effect on quality of experience during fishing or harvesting freshwater and marine resources, and is therefore considered under that indicator (see below).

#### **11.4.4.2.1.2.2 Changes in Availability or Quality of Freshwater and Marine Resources**

Operations activities have the potential to affect habitat for freshwater fish, including direct loss of freshwater and riparian habitat. The excavation of the mine pit would produce a primarily groundwater fed pit lake, which may cause changes to groundwater conditions in McNab Creek. Mitigation measures, including habitat offsetting, are anticipated to result in a positive effect (Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat), therefore potential effects are considered negligible and are not carried forward.

Operations activities anticipated to affect marine fish are the same as those identified for construction. Effects on salmon in the marine environment were rated negligible, as potential effects were deemed not measurable or detectable (see Volume 2, Part B - Section 5.2: Marine Resources). The Proposed Project is not anticipated to result in serious harm to fish that are part of a CRA fishery, or to fish that support such a fishery. The net residual effects of the Proposed Project are determined to be negligible; therefore, potential effects on marine fish are not carried forward.

Operations activities anticipated to have an effect on benthic communities are the same as those identified for construction. Implementation of mitigation measures provided in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat in combination with habitat offsetting, results in a residual effect that is considered to be negligible; therefore, potential effects on benthic resources are not carried forward.

Operations activities anticipated to have an effect on marine mammals are the same as those identified for construction. With implementation of recommended mitigation measures described in Volume 2, Part B - Section 5.1: Fisheries and Freshwater Habitat, the residual effects of the Proposed Project on marine mammals are considered negligible; therefore, potential effects on marine mammals are not carried forward.

Similar to construction phase, only in-air noise from may have an effect on the behaviour of marine birds; however, the effect is anticipated to be negligible and is not carried forward.

#### **11.4.4.2.1.2.3 Changes in Quality of Experience During Fishing or Harvesting Freshwater and Marine Resources**

Proposed Project-related operations activities may affect quality of current use experience through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources) as well as the presence of barge traffic in Howe Sound. Operations phase noise emissions sources include screens, crushers, washers, and falling gravel. Particulate matter would be emitted from a variety of onsite activities during aggregate extraction operation, which would have an effect on air quality. Emissions

from tugboats used for transport of gravel are expected to be minimal. Visual changes during the operations phase include visibility of Proposed Project features and infrastructure and security lighting.

To mitigate the potential noise effects associated with Proposed Project operations, the Proponent would construct a dirt berm around the processing area (e.g. the Processing Area Dirt Berm) to serve as noise screens (see Volume 2, Part B - Section 9.2). After the implementation of mitigation measures regarding noise (Volume 2, Part B - Section 9.2), a residual effect is expected but it is considered to be negligible. However, as it is anticipated that there could be operations-related noise during times of day when fishing and harvesting of freshwater and marine resources would occur, potential effects of noise on quality of experience is carried forward.

Following the implementation of mitigation measures for air quality provided in Volume 2, Part B - Section 5.7, a residual effect is expected but it is considered to be negligible. As such, potential effects due to changes in air quality on quality of experience during fishing or harvesting freshwater or marine resources are not carried forward.

After implementation of mitigation measures regarding changes to visual resources provided in Volume 2, Part B - Section 7.4, residual visual effects are expected to be not significant. As is the case with the construction phase, all marine users in Thornbrough Channel are likely to be the most affected by the potential visual effects and changes in the scenic character of the Proposed Project Area. The Processing Area Dirt Berm proposed as a mitigation measure for noise effects may also have an effect on the scenic character of the Proposed Project Area. As visible changes on Aboriginal marine users are expected to persist following mitigation (Volume 2, Part B - Section 7.4), potential effects of visual changes on quality of experience are carried forward.

Marine transportation associated with the Project is also expected to have an effect on quality of experience due to increased barge traffic in Howe Sound. Mitigation measures proposed in Volume 2, Part B - Section 7.2 include the development of a Marine Transport Management Plan (described in (Volume 3, Part E - Section 16.0)). Prior to operations, the Proponent would consult with Tsleil-Waututh Nation to investigate routing options to avoid times when Tsleil-Waututh Nation members use Howe Sound for harvesting resources or practicing cultural activities.

#### **11.4.4.2.1.3 Reclamation and Closure**

Decommissioning activities could degrade fresh water quality through the direct introduction of indirect transport of contaminants. The magnitude of the effects on freshwater fish and habitat, if any, is anticipated to be low; therefore, the effects are not carried forward.

Although the flooded pit would remain in place and would continue to affect surface flows, an outlet structure would maintain a water level that would lead to a slight increase in McNab Creek baseflow. This is anticipated to result in positive effects on freshwater habitat; therefore, this effect is not carried forward.

No ongoing effects from the Proposed Project are anticipated for other freshwater, marine or terrestrial resources.

No ongoing effects to quality of experience from the Proposed Project are anticipated post-closure.



#### **11.4.4.2.2 Potential Effects on Harvesting Terrestrial Resources**

Of the Aboriginal Groups considered in this part of the assessment, Tsleil-Waututh Nation is the only Aboriginal Group that reports using Howe Sound to harvest terrestrial resources. Musqueam Indian Band report harvesting birds on Bowen and Passage islands; however, there are no potential effects from the Proposed Project on terrestrial resources on Bowen or Passage islands. The other Aboriginal groups considered in this Application (i.e., Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia) have not reported harvesting terrestrial resources in the Proposed Project Area. Therefore, potential Project-related effects on harvesting terrestrial resources are assessed only in relation to Tsleil-Waututh Nation. For clarity, potential Project-related effects on the Aboriginal Rights of other Aboriginal Groups in relation to harvesting terrestrial resources, including current use associated with these resources, are not carried forward in the assessment.

Construction activities have the potential to affect access to terrestrial resources, availability or quality of terrestrial resources in the LSA and RSA, and the quality of current use experience related to harvesting those resources.

##### **11.4.4.2.2.1 Changes in Access to Terrestrial Resources**

Access limitations would occur on an intermittent basis as a result of Proposed Project-related vessel traffic, which would require users to alter direction and/or speed when navigating at the same time as water taxis or barges. These navigational challenges are currently present in the LSA due to forestry activity. As the Proponent would develop and implement an Access Management Plan (Volume 3, Part E - Section 16.0) to communicate relevant access restrictions for public safety and security, resulting effects on access to terrestrial harvesting locations due to potential interactions of angler vessels and equipment and construction-associated vessels are not detectable or not measureable, so potential effects of the Proposed Project on access matters in the construction phase are determined to be negligible and are not carried forward. Improvements to the wharf and access roads in the Proposed Project Area are anticipated to improve access to locations for harvesting of terrestrial resources. As this is a positive potential effect, access to terrestrial resources is not carried forward in the assessment. However, access limitations may have an effect on quality of experience during harvesting of terrestrial resources, and is therefore considered further under that indicator (see below).

##### **11.4.4.2.2.2 Changes in Availability or Quality of Terrestrial Resources**

Construction activities are anticipated to have the following effects on ungulates (Roosevelt elk):

- Direct habitat loss;
- Sensory disturbance may cause avoidance behavior and reduced reproductive success;
- Habitat fragmentation could relocate elk to edge habitat;
- Barriers to movement due to construction activities;
- Direct and indirect mortality; and
- Increase access by hunters and poachers due to improvements to wharf and roads.

With implementation of mitigation measures described in Volume 2, Part B - Section 5.3: Terrestrial Resources, the net effect of loss of Roosevelt elk habitat, barriers to movement and change in Roosevelt elk mortality are predicted to result in low (i.e., not expected to exceed ecological thresholds) and negligible magnitude effects. The possible increase in access by non-Aboriginal hunters would be managed through existing provincial hunting regulations; therefore, potential effects on quality and quantity of ungulates for the exercise of Aboriginal Rights, including current use, would be expected to be negligible and are not carried forward in the assessment.

Construction activities are anticipated to have the following effects on:

- Direct habitat loss; and
- Direct and indirect mortality.

With implementation of mitigation measures for effects on birds described in Volume 2, Part B - Section 5.3: Terrestrial Resources, potential loss of habitat and change in mortality are predicted to result in negligible residual effects on availability or quality of bird resources; therefore, potential effects on current use of birds are not carried forward in the assessment.

Construction activities are anticipated to have the following effects on terrestrial plants:

- Potential introduction of invasive species;
- Potential introduction of dust and sediments; and
- Potential loss of extent of species that were not detected during the rare plant surveys.

Implementation of mitigation measures for effects on terrestrial plants described in Volume 2, Part B - Section 5.3: Terrestrial Resources results in negligible residual effects on availability or quality of bird resources; therefore, potential effects on current use of terrestrial plants are not carried forward in the assessment.

### **Changes in Quality of Experience During Harvesting of Terrestrial Resources**

As Tsleil-Waututh Nation is not known to use Howe Sound to harvest Roosevelt elk and other ungulates, potential effects of an increase in numbers of non-Aboriginal hunters that may affect quality of experience during harvesting of terrestrial resources are not considered, and therefore not carried forward.

Proposed Project-related construction activities would affect quality of experience through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources). Construction noise emissions would occur over the duration of the Proposed Project construction, and effects on noise levels would vary based on type of construction activity, and are expected to be greatest during road, warehouse and facilities upgrade and construction, pile driving, and initial dry excavation of pit. The primary noise sources associated with construction are various pieces of large off-road equipment. Effects on air

quality during the construction phases of the Proposed Project were identified as minor potential interaction and were not assessed. Visual changes during the construction phase include changes in visibility of Proposed Project features and changes in the scenic character of the Project site and landscape features.

Implementation of mitigation measures regarding noise are provided in Volume 2, Part B - Section 9.2, which result in a residual effect that is considered to be negligible. Noise due to construction is temporary and the activities are variable and move between the processing plant, the pit location and barge loading dock. As it is anticipated that there could be construction-related noise during times of day when harvesting of terrestrial resources would occur, potential effects of noise on quality of experience are carried forward.

After the implementation of mitigation measures to address changes in visual resources (Volume 2, Part B - Section 7.4), a small level of residual visual change to the landscape is expected. Marine users in Thornbrough Channel are likely to be the most affected by the expected residual effects. As visible changes are anticipated to persist following mitigation, potential effects of these residual visual changes on quality of experience during harvesting of terrestrial resources are carried forward.

#### **11.4.4.2.3 Operations**

Operations activities have the potential to affect access to terrestrial resources, availability or quality of terrestrial resources in the LSA and RSA, and the quality of current use experience related to harvesting those resources.

##### **11.4.4.2.3.1 Changes in Access to Terrestrial Resources**

Potential effects on access to terrestrial resources is the same for both operations and construction phases, and are not carried forward in this assessment.

##### **11.4.4.2.3.2 Changes in Availability and Quality of Terrestrial Resources**

Potential effects on quality and quantity of terrestrial resources are the same for both the operations and construction phases, and are not carried forward in this assessment.

##### **11.4.4.2.3.3 Changes in Quality of Experience During Harvesting of Terrestrial Resources**

Proposed Project-related operations activities may affect the quality of experience through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources). Operations phase noise emission sources include screens, crushers, washers, and falling gravel. Particulate matter would be emitted from a variety of onsite activities during aggregate extraction operation, which would have an effect on air quality. Emissions from tugboats used for transport of gravel are expected to be minimal. Visual changes during the operations phase include visibility of Proposed Project features and infrastructure and security lighting.

To mitigate the potential noise effects associated with Proposed Project operations, the Proponent would construct a Processing Area Dirt Berm to serve as noise screens (see Volume 2, Part B - Section 9.2). After the

implementation of mitigation measures regarding noise (Volume 2, Part B - Section 9.2), a residual effect is expected but it is considered to be negligible. However, as it is anticipated that there could be operations-related noise during times of day when harvesting of terrestrial resources would occur, potential effects of noise on quality of experience is carried forward.

Following the implementation of mitigation measures for air quality provided in Volume 2, Part B - Section 5.7, a residual effect is expected but it is considered to be negligible. As such, potential effects on quality of experience as a result of potential changes in air quality are not carried forward.

After implementation of mitigation measures regarding changes to visual resources provided in Volume 2, Part B - Section 7.4, residual visual effects are expected to be not significant. As is the case with the construction phase, users in Thornbrough Channel would be the most affected by visual effects and changes in the scenic character and landscape features of the Proposed Project Area. The Processing Area Dirt Berm proposed as a mitigation measure for noise effects may also have an effect on the scenic character of the Proposed Project Area. As visible changes would persist following mitigation (Volume 2, Part B - Section 7.4), potential effects of visual changes on quality of experience are carried forward.

#### **11.4.4.2.4 Reclamation and Closure**

All Proposed Project effects identified in construction and operations would cease. Reclamation during decommissioning would have beneficial effects on terrestrial resources that may have a positive effect on harvesting quantities. Therefore, effects during reclamation are not carried forward.

#### **11.4.4.3 Aboriginal Title**

None of the Aboriginal groups considered in Section 11.4– Tsleil-Waututh Nation, Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia – have asserted Aboriginal Title to specific locations within the Proposed Project Area; therefore, no potential effects on Aboriginal Title have been identified and are not carried forward.

#### **11.4.4.4 Intangible Cultural Heritage**

Only Tsleil-Waututh Nation has stated that Howe Sound is important to cultural practices, although no information on specific locations has been provided by Tsleil-Waututh Nation to the Proponent. The other Aboriginal groups considered in this Application - Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia – have not reported using the Proposed Project Area for cultural activities. Therefore, only Tsleil-Waututh Nation is considered in the following sections.

#### **11.4.4.4.1 Construction**

Construction activities have the potential to affect access to locations where associated with transmission of culture and history, as well as the quality of experience at those locations.

##### **11.4.4.4.1.1 *Changes in Access to Locations Associated with Transmission of Culture and History***

Access limitations would occur on an intermittent basis as a result of Proposed Project-related vessel traffic, which would require users to alter direction and/or speed when navigating at the same time as water taxis or barges. These navigational challenges are currently present in the LSA due to forestry activity. As the Proponent will develop and implement an Access Management Plan (Volume 3, Part E - Section 16.0) to communicate relevant access restrictions for public safety and security, resulting effects on access to specific locations due to potential interactions of non-Project vessels with equipment and construction-associated vessels are not detectable or not measureable (see Volume 3, Part E - Section 16.0: Environmental Management Programme). Potential effects of the Proposed Project on access for Tsleil-Waututh Nation during the construction phase are therefore determined to be negligible and are not carried forward; however, these access limitations may have an effect on quality of experience when visiting locations related to intangible cultural heritage, and this effect is considered further under that indicator (see below).

Improvements to the wharf and access roads in the Proposed Project Area are anticipated to improve access to locations for practices related to intangible cultural heritage. As this is a positive potential effect, access to locations associated with transmission of culture and history is not carried forward in the assessment. However, these improvements may also result in higher numbers of non-Aboriginal users due to improved access which may have an adverse effect on quality of experience, and this effect is considered further under that indicator (see below).

##### **11.4.4.4.1.2 *Changes in Quality of Experience at Locations Associated with the Transmission of Culture and History***

Proposed Project-related construction activities would affect quality of experience through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources). Construction noise emissions will occur over the duration of construction, and are expected to be greatest during road, warehouse and facilities upgrade and construction, pile driving, and initial dry excavation of pit. The primary noise sources associated with construction are various pieces of large off-road equipment. Effects on air quality during the construction phases of the Proposed Project were identified as minor potential interaction and were not assessed. Visual changes during the construction phase include changes in visibility of Proposed Project features and changes in the scenic character of the Proposed Project Area and landscape features.

Implementation of mitigation measures regarding noise are provided in Volume 2, Part B - Section 9.2, which result in a residual effect that is considered to be negligible. Noise due to construction is temporary and the activities are variable and move between the processing plant, the pit location and barge loading dock. As it is anticipated that there would be construction-related noise during times of day when practices related to intangible cultural heritage may occur, potential effects of noise on quality of experience for conducting such activities is carried forward.

After the implementation of mitigation measures to address changes in visual resources (Volume 2, Part B - Section 7.4), a small level of residual visual change to the landscape is expected. Marine users in Thornbrough Channel are likely to be the most affected by the expected residual effects. As visible changes are anticipated to persist following mitigation, potential effects of these residual visual changes on quality of experience at locations associated with transmission of culture and history are carried forward.

#### **11.4.4.4.2 Operations**

Operations activities have the potential to affect access to locations to locations associated with transmission of culture and history, as well as the quality of experience at those locations.

##### **11.4.4.4.2.1 *Changes in Access to Locations Associated with Transmission of Culture and History***

Potential effects on access to locations for activities related to intangible cultural heritage are the same for the operations and construction phases, and are not carried forward in this assessment.

##### **11.4.4.4.2.2 *Changes in Quality of Experience at Locations Associated with Transmission of Culture and History***

Proposed Project-related operations activities may affect quality of experience at locations associated with transmission of culture and history through noise, air, and visual changes that affect the quality of the environmental setting (Sections 9.2 Noise, 5.7 Air Quality and 7.4 Visual Resources). Operations phase noise emissions sources include screens, crushers, washers, and falling gravel. Particulate matter would be emitted from a variety of onsite activities during aggregate extraction operation, which would have an effect on air quality. Emissions from tugboats used for transport of gravel are expected to be minimal. Visual changes during the operations phase include visibility of Proposed Project features and infrastructure and security lighting.

To mitigate the potential noise effects associated with Proposed Project operations, the Proponent would construct a Processing Area Dirt Berm to serve as noise screens (see Volume 2, Part B - Section 9.2). After the implementation of mitigation measures regarding noise (Volume 2, Part B - Section 9.2), a residual effect is expected but it is considered to be negligible. However, as it is anticipated that there would be operations-related noise during times of day when activities related to transmission of culture and history may occur, potential effects of noise on quality of use experience as carried forward.

Following the implementation of mitigation measures for air quality provided in Volume 2, Part B - Section 5.7, a residual effect is expected but it is considered to be negligible. As such, potential effects on quality of use experience are not carried forward.

After implementation of mitigation measures regarding changes to visual resources provided in Volume 2, Part B - Section 7.4, residual visual effects are expected to be not significant. As is the case with the construction phase, users in Thornbrough Channel are likely to be the most affected by the potential visual effects and changes in the scenic character of the Project site and landscape features. The proposed Processing Area Dirt Berm would serve as a mitigation measure for noise effects may also have an effect on the scenic character of the Proposed Project



Area. As visible changes would persist following mitigation (Volume 2, Part B - Section 7.4), potential effects of visual changes on quality of experience are carried forward.

#### **11.4.4.4.3 Reclamation and Closure**

Following reclamation and closure of the Proposed Project, the environmental setting would be returned to a natural state which would lessen the effects of visual changes to quality of experience at locations associated with transmission of culture and history. Effects related to changes in noise and air during construction and operations would end. Therefore, effects on quality of experience are not carried forward.

#### **11.4.5 Mitigation Measures**

The effects assessment has identified potential effects on Aboriginal Rights, including current use, only for Tsleil-Waututh Nation. A detectable or measurable incremental Project-related effect is anticipated on the following subcomponents during both construction and operations:

- Fishing and Harvesting Freshwater and Marine Resources – quality of experience;
- Harvesting Terrestrial Resources – quality of experience; and
- Intangible Cultural Heritage – quality of experience.

Mitigation measures are proposed to avoid, minimise, control, restore on-site conditions or offset potential adverse environmental effects on freshwater, marine and terrestrial resources and on the users of those resources. Mitigation measures are any practical means taken to manage potential adverse effects. Mitigation measures can be used alone or in combination to avoid, minimise, or control the potential adverse effects on land and resource use. These measures are described below and summarised in Table 11-21.

Mitigation measures proposed in other sections of the EA relevant to this assessment include:

- Marine Transport (Volume 2, Part B - Section 7.2) includes the development of a Marine Transport Management Plan (described in Volume 3, Part E - Section 16.0). Prior to operations, the Proponent would also consult with Aboriginal groups to investigate further passage routing options to avoid times when Tsleil-Waututh Nation members use Howe Sound for harvesting resources or practicing cultural activities, which would mitigate effects on quality of experience.
- Visual Resources (Volume 2, Part B - Section 7.4) proposes that a minimal amount of vegetation and topsoil be removed during construction and that additional and/or maintenance planting be considered. In addition, the scale and size of infrastructure components and processing area layout would be concentrated to avoid visibility. During operations, natural screening would be maintained and the height of stockpiles kept low to decrease the visibility of extraction and processing activity. The aggregate pit would be shaped where possible, so that the final profile of the opening emulates natural contours and form with the surrounding landscape. Re-

contouring and re-vegetating would occur through-out operation phase where possible, including planting of berms and the dyke and temporary planting.

- Noise (Volume 2, Part B - Section 9.2) includes scheduling significant noise-causing activities to reduce disruption to people using Howe Sound. During construction, heavy equipment muster points would be established at least 500 m from any receptor and acoustical screening from existing on-site barriers would be used. During operations, the Processing Area Dirt Berm would be constructed to serve as noise screens and dry screens and crusher in the processing plant would be housed in fabric enclosures.

In addition to the above measures, the following measures are also planned and would have mitigative effects on Aboriginal Rights, including current use, in the LSA:

- Barge movements would occur mostly during weekdays from Monday to Friday, but there may be infrequent movements during weekends depending on the operational requirements of the mine. However, loading of barges during operations would not occur on weekends when peak recreational activity occurs.
- As part of the Marine Transportation Management Plan outlined in Volume 3, Part E - Section 16.0, the Proponent would also develop and implement strategies, best management practices and guidelines to avoid and minimise Proposed Project-related disruption of marine-based activities during construction and operations. As part of the development of this plan, the Proponent would consult with Tsleil-Waututh Nation to discuss strategies (including but not limited to routing options) to manage the interaction of Proposed Project vessel traffic with users during times of harvesting or other cultural use.
- To address the expected incremental effects on quality of experience for Tsleil-Waututh Nation, the following additional mitigation measures are recommended:
  - Provide Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan, develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect quality of experience when using fishing and harvesting locations or locations associated with transmission of culture and history.
  - Consult with Tsleil-Waututh Nation to identify locations within Howe Sound where members may conduct practices related to intangible culture heritage, timing of such practices, if relevant, and measures that would reduce effects from the Proposed Project on the ability to conduct those practices.
  - Consult with Tsleil-Waututh on measures that could reduce effects of visual changes from the Proposed Project on the quality of use experience and on cultural activities and transmission of culture and history within Howe Sound.
  - If implemented, the above measures are expected to be effective at addressing the expected incremental effects of the Proposed Project on quality of experience and activities related to intangible cultural heritage, and therefore on Tsleil-Waututh Nation Aboriginal Rights, including current use. Confidence in the

effectiveness of the mitigation for the identified effect is moderate as it is based on ongoing consultations with Tsleil-Waututh Nation and the nature of the concerns expressed by Tsleil-Waututh Nation to the Proponent.

### 11.4.5.1 Summary Table of Potential Effects and Mitigation Measures Related to Aboriginal Rights, including Current Use

Table 11-21: Summary of Potential Effects and Mitigation Measures Related to Aboriginal Rights, including Current Use

Valued Component/ Subcomponent	Potential Effect	Mitigation Measures	Residual Effect (yes/no)
<b>Construction</b>			
Fishing and Harvesting of Freshwater and Marine Resources	Change in Quality of Use Experience	<ul style="list-style-type: none"> <li>▪ Measures outlined in Volume 2, Part B - Section 7.2 Marine Transport.</li> <li>▪ Measures outlined in Sections 9.2 Noise, 5.7 Air Quality, and 7.4 Visual Resources.</li> <li>▪ Measures outlined in Volume 2, Part B - Section 11.4.5 related specifically to Tsleil-Waututh Nation</li> </ul>	No
Harvesting of Terrestrial Resources	Change in Quality of Use Experience	<ul style="list-style-type: none"> <li>▪ Measures outlined in Volume 2, Part B - Section 7.2 Marine Transport.</li> <li>▪ Measures outlined in Volume 2, Part B - Sections 9.2 Noise, 5.7 Air Quality, and 7.4 Visual Resources.</li> <li>▪ Measures outlined in Section 11.3.5 related specifically to Tsleil-Waututh Nation</li> </ul>	No
Intangible Cultural Heritage	Change in Quality of Use Experience	<ul style="list-style-type: none"> <li>▪ Measures outlined in Volume 2, Part B - Section 7.2 Marine Transport.</li> <li>▪ Measures outlined in Volume 2, Part B - Sections 9.2 Noise, 5.7 Air Quality, and 7.4 Visual Resources.</li> <li>▪ Measures outlined in Section 11.4.5 related specifically to Tsleil-Waututh Nation</li> </ul>	No
<b>Operations</b>			
Same as for Construction			
<b>Reclamation and Closure</b>			
No effects identified			

### 11.4.6 Residual Effects Assessment

As no measurable residual effects are expected on Tsleil-Waututh Aboriginal Rights, including current use, following the implementation of mitigation identified in Section 11.4.5 and Table 11-21 above, these effects are not considered further in the assessment.

### **11.4.7 Cumulative Effects**

As no measurable residual effects are expected on Tsleil-Waututh Aboriginal Rights, including current use, following the implementation of mitigation identified in Section 11.4.5 and Table 11-21 above, Project-related effects are not expected to interact cumulatively with other projects and activities that have been or would be carried out.

### **11.4.8 Summary of Effects on Aboriginal Rights, including Current Use**

Four subcomponents were identified for the assessment of potential effects on Aboriginal Rights, including current use, considered in Section 11.4 as a result of the Proposed Project:

- Fishing and Harvesting Freshwater and Marine Resources
- Harvesting Terrestrial Resources
- Aboriginal Title
- Intangible Cultural Heritage

Only Tsleil-Waututh Nation reports use of the LSA and RSA for fishing, harvesting and cultural activities. Use of the LSA and RSA for fishing, harvesting and cultural activities by the other Aboriginal Groups – Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia – was not identified in sources reviewed. Therefore, of the Aboriginal Groups considered in Section 11.4 of the assessment, potential effects from the Proposed Project on Aboriginal Rights, including current use, were identified only for Tsleil-Waututh Nation. None of the Aboriginal Groups considered in Section 11.4, including Tsleil-Waututh Nation are known to assert Aboriginal Title to specific locations within the LSA, and consequently an assessment of potential effects from the Proposed Project on Aboriginal Title was not undertaken.

A review of the effects assessments and suggested mitigation measures of relevant VCs in Part B indicated that the following Project-related effects on Tsleil-Waututh Nation Aboriginal Rights, including current use, may result:

- Fishing and Harvesting of Freshwater and Marine Resources – quality of experience;
- Harvesting of Terrestrial Resources – quality of experience; and
- Intangible Cultural Heritage – quality of experience.

The mitigation proposed to address these potential Project-related effects (Section 11.4.5) contemplates further consultation with Tsleil-Waututh Nation. With implementation of the proposed mitigation, no measurable residual effects are expected.

## 12.0 OTHER ABORIGINAL INTERESTS

As provided in the AIR/EIS Guidelines, this section of the Application:

- Identifies, in consultation with Aboriginal Groups identified in Section 10.0, aboriginal interests with respect to potential social, economic, environmental, heritage and health effects (to the extent not already identified in Section 11.0 above). Aboriginal interests regarding potential social, economic, environmental, heritage and health effects that are not included in Section 11.0 are addressed in Volume 2, Part B of the Application ; and
- Describes how these effects have been or will be addressed.

### 12.1 Tsleil-Waututh Nation

Only Tsleil-Waututh Nation has provided information to the Proponent or BC EAO regarding other Aboriginal interests with respect to potential social, economic, environmental, heritage and health effects (to the extent not already identified in Section 11.0 above).

In correspondence addressed to the BC EAO and the Proponent regarding the Proposed Project, Tsleil-Waututh Nation requested that shipping routes in the Strait of Georgia and Fraser River and all the estuaries in the region be included in the scope of the assessment. The Proponent provided an analysis of incremental changes to existing barge traffic within the waters of Tsleil-Waututh Nation's Consultation Area (Figure 10-5) as a result of the Proposed Project, which confirmed the exclusion of the Strait of Georgia and Fraser River from the effects assessment.

In correspondence addressed to the BC EAO and the Proponent regarding the Proposed Project, Tsleil-Waututh Nation stated that they have an interest in being involved in planning and development of projects within the Tsleil-Waututh Nation Consultation Area, which, as Figure 10-5 indicates, includes Howe Sound. Tsleil-Waututh Nation also noted that the Nation is actively involved in conservation and planning efforts in Howe Sound.

## 13.0 ABORIGINAL CONSULTATION

As set out in the Section 11 Order for the proposed Project, issued by the BC EAO on June 1, 2010, the following Aboriginal groups were identified as potentially affected by Proposed Project and requiring consultation:

- *Skwxwú7mesh* Nation; and
- Tsleil-Waututh Nation.

In a letter dated November 12, 2013, CEA Agency subsequently identified information requirements to be included in the Application for the following Aboriginal groups:

- Musqueam Indian Band;
- Stz'uminus First Nation;
- Cowichan Tribes;
- Halalt First Nation;
- Lake Cowichan First Nation;
- Lyackson First Nation;
- Penelakut Tribe; and
- Métis Nation British Columbia.

The following sections provide summaries of consultation activities, information discussed, comments received, and concerns and interests raised during those activities with the above-noted Aboriginal Groups. Volume 4, Part G – Section 22.0: Appendix 13.0-A presents key issues identified by Aboriginal groups identified in Section 10.0 that are of relevance to the EA and provide the Proponent's responses to these issues.

### 13.1 Pre-Application Consultation Activities

#### 13.1.1 *Skwxwú7mesh* Nation

The following summary of consultation activities between *Skwxwú7mesh* Nation was written with input from *Skwxwú7mesh* Nation. The *Skwxwú7mesh* Nation is the Aboriginal group primarily affected by the Project. Certain duties of consultation (and accommodation) were delegated by the Crown to the Proponent under the BC EAO's Section 11 Order for the Proposed Project. In discussions with the Proponent, *Skwxwú7mesh* Nation has stated that it was not consulted by the Crown respecting the delegation of these duties by the Crown to the Proponent, and *Skwxwú7mesh* has not agreed this delegation is appropriate. *Skwxwú7mesh* has noted to the Proponent significant concerns regarding the effectiveness of the environmental assessment process undertaken by the Crown, particularly respecting the assessment of project impacts on *Skwxwú7mesh* Nation Aboriginal Rights



(including Aboriginal Title) and the utilization of the process by the Crown to discharge legal obligations of consultation and accommodation.

- *Skwxwú7mesh* Nation technical representatives have participated, to the extent deemed necessary by *Skwxwú7mesh*, in the Crown EA process. Technical representatives have attended Working Group meetings, reviewed documents and assisted *Skwxwú7mesh* in the preparation of comments on documents (e.g., draft AIR/EIS Guidelines), and participated in discussions with Crown agencies concerning the Proposed Project and its potential effects. Numerous concerns regarding the Proposed Project's potential to affect *Skwxwú7mesh* Nation Aboriginal Rights have been raised by *Skwxwú7mesh* throughout the pre-Application phase, including but not limited to, effects on: freshwater and marine resources and habitat, particularly salmon and eulachon; water quality and quantity in, and the integrity of, McNab Creek; *Skwxwú7mesh* members' access to and through, and use of the site, and adjacent areas, for various traditional harvesting purposes; elk and elk habitat; the nature of *Skwxwú7mesh* members' traditional practices in the area; *Skwxwú7mesh* governance over the area; and impacts on the Nation's traditional village site *Kn'ech'tenm*.
- *Skwxwú7mesh* representatives and technical representatives have also participated in confidential discussions regarding the potential for effects on *Skwxwú7mesh* as a result of the Proposed Project, among other things, with the Proponent. The outcome of these discussions is reflected in the discussion of potential effects on *Skwxwú7mesh*, and the mitigation, avoidance, offsetting and/or accommodation otherwise of these effects in other sections of this Part C of the Application. An important outcome of these discussions is conditions for the Proposed Project, which are also set out herein (see in particular Table 11-21). *Skwxwú7mesh* and the Proponent have agreed to these conditions for the Proposed Project and have agreed to ongoing discussions to ensure these conditions are met.
- Representatives of the *Skwxwú7mesh* have participated in pre-Application activities as set out above. *Skwxwú7mesh* has also had the opportunity to review and comment on this consultation report and its views have been incorporated. The Nation will also participate in the Application review and subsequent phases of the Crown EA process.
- A confidential OUS was undertaken by *Skwxwú7mesh* to inform its participation in discussions with the Proponent and in the Crown EA process. The OUS collected and articulated information regarding *Skwxwú7mesh* rights and interests in the areas with the potential to be affected by the Proposed Project; some of this information is set out in other sections of this Part C of the Application. This information has informed the assessment of effects from the Proposed Project on *Skwxwú7mesh* rights and interests as described above in Part C of the Application and the identification of measures to mitigate, avoid, offset and/or otherwise accommodate these effects, particularly those conditions agreed to by *Skwxwú7mesh* and the Proponent.
- In *Skwxwú7mesh*'s view, the Crown's legal duties for meaningful consultation on, and the accommodation as necessary of, *Skwxwú7mesh*'s Aboriginal Rights have not been fully addressed yet and will be ongoing throughout the Crown EA process.

### 13.1.2 Tsleil-Waututh Nation

The following summary of consultation activities between Tsleil-Waututh Nation was written by the Proponent and reviewed by Tsleil-Waututh Nation. Following their review, Tsleil-Waututh Nation provided clarification that they do not consider the following activities or communications to be part of the consultation process (inclusive of information sharing):

- Communications unrelated to the Proposed Project;
- Interactions with Tsleil-Waututh members or staff not identified as part of Tsleil-Waututh's consultation team;
- Interactions with Tsleil-Waututh field crews; and
- Any involvement with Tsleil-Waututh-owned businesses, such as Inlailwatash.

From February to March 2010, the Proponent attempted to initiate discussions with the Tsleil-Waututh Nation Band Office through email and telephone communications. These communications were followed by the issuance of a letter of introduction from the Proponent to the Chief and Council via email and letter mail. The Proponent enclosed the Project Description with the letter and informed Tsleil-Waututh Nation that the Project Description had been submitted to initiate review under the *British Columbia Environmental Assessment Act* (BCEAA) and the *Canadian Environmental Assessment Act* (CEAA). The Proponent then offered to meet with Tsleil-Waututh Nation to provide more Project information and to discuss how Tsleil-Waututh Nation would like to participate in the environmental review process.

Having received no response from the Tsleil-Waututh Nation, the Proponent telephoned the Tsleil-Waututh Nation Treaty, Land and Resources Department in April 2010 to discuss the Project Description and request a meeting. The Proponent followed up by providing another copy of the Project Description via email and hand-delivery to the Tsleil-Waututh Nation Band Office later that month.

In June 2010, the Proponent telephoned Tsleil-Waututh Nation's Stewardship Coordinator to discuss the archaeological impact assessment (AIA) for the Proposed Project and to notify Tsleil-Waututh Nation of the issuance of the Project's *Heritage Conservation Act* permit, a copy of which was provided via email.

The Proponent then sent a letter to Chief and Council in June 2012 to update Tsleil-Waututh Nation on the status of the Project and next steps. The latest iteration of the Project Description was included. The Proponent also advised Tsleil-Waututh Nation that the Proposed Project was subject to review both under the BCEAA and the CEAA and stated that work had commenced on the draft AIR/EIS Guidelines for the Application and that the Application was to be submitted to the EAO and CEAA later in 2012. The Proponent requested a meeting with Tsleil-Waututh Nation to provide additional Project information, to discuss Tsleil-Waututh Nation's preferred protocols for communication and consultation on the Proposed Project and to discuss potential opportunities for wider Tsleil-Waututh Nation participation in the Proposed Project.

In March 2013, the EAO contacted Tsleil-Waututh Nation requesting comments on the draft AIR/EIS Guidelines for the Proposed Project. Tsleil-Waututh Nation responded in May 2013 requesting the requirement for information on heritage sites, wash water, surface water, ground water, waste water, and environmentally sensitive areas be

included in the AIR/EIS Guidelines. The Proponent provided proposed responses to Tsleil-Waututh Nation's comments on the draft AIR/EIS Guidelines in a tracking table via email in July 2013. In the email, the Proponent stated it was providing the comments to Tsleil-Waututh Nation for review in advance of submitting them to EAO and CEAA, requesting a response from Tsleil-Waututh Nation in early August. The Proponent also provided a brief explanation of the Proposed Project's next steps in the EA process and offered to meet separately with the Tsleil-Waututh community during the upcoming 30-day public comment period to discuss the Proposed Project. The "BURNCO Aggregate Project - Draft AIR Comment Tracking Table" attached to the July 29, 2013 email outlined how the Proponent considered and incorporated Tsleil-Waututh Nation's feedback into the revised draft AIR/ EIS Guidelines. Tsleil-Waututh Nation's questions and concerns, as presented in the tracking table could be categorized under four key themes:

- Definition of environmentally sensitive areas;
- Interest in the identification of heritage sites within the Project Area and its vicinity as well as related baseline studies, potential impacts and mitigation strategies;
- Surface water and groundwater resources; and
- Wastewater treatment and disposal.

Where applicable, the Proponent revised the draft AIR/ EIS Guidelines to address Tsleil-Waututh Nation concerns. In cases where adjustments to the draft AIR/ EIS Guidelines were not made in response to Tsleil-Waututh Nation concerns, the Proponent provided an explanation of how the concern was already being addressed, such as elsewhere within the AIR/EIS Guidelines.

Tsleil-Waututh Nation confirmed receipt of the Proponent's proposed responses to Tsleil-Waututh Nation's comments on the draft AIR/ EIS Guidelines, stating they had no further comments and indicating they would appreciate staying updated on the Project in August 2013. In September 2013, the Proponent responded to Tsleil-Waututh Nation with an update on the Proposed Project, notifying Tsleil-Waututh Nation of the upcoming 30-day public comment period on the draft AIR/ EIS Guidelines document (September 19, 2013 to October 19, 2013) and the two public open houses scheduled to take place during this period (October 1, 2013 and October 2, 2013). A public notice advertising the comment period and public open houses was attached for reference. The Proponent reiterated the offer to have a separate meeting with Tsleil-Waututh Nation to discuss the draft AIR/ EIS Guidelines during the public comment period.

In correspondence addressed to the BC EAO and the Proponent regarding the Proposed Project, Tsleil-Waututh Nation requested that shipping routes in the Strait of Georgia and Fraser River and all the estuaries in the region be included in the scope of the assessment. The Proponent provided an analysis of incremental changes to existing barge traffic within the waters of Tsleil-Waututh Nation's Consultation Area (Figure 10-5) as a result of the Proposed Project, which confirmed the exclusion of the Strait of Georgia and Fraser River from the effects assessment.

In January 2014, the Proponent sent a letter to follow up on the parties' communications in August 2013 and to provide another update on the Proposed Project. The Proponent reported that comments received during the

public comment period in fall 2013 resulted in an update to the draft AIR/ EIS Guidelines, and that an updated version was in progress. The Proponent also noted that the Aboriginal Information Requirements (Part C) was not being updated and that compilation of background information regarding Tsleil-Waututh Nation, based on publicly available information, had commenced. The Proponent attached the draft summary of Tsleil-Waututh Nation background information to the letter and asked that Tsleil-Waututh Nation review the information and provide comments. The letter also requested Tsleil-Waututh Nation to provide comments on potential effects of the Proposed Project on Tsleil-Waututh Nation interests and what measures the Proponent should consider to avoid, limit or otherwise mitigate effects associated with the Proposed Project. Noting that Tsleil-Waututh Nation had expressed interests in the marine shipping route, the Proponent included in the letter the analysis of incremental changes to existing barge traffic within the waters of Tsleil-Waututh Nation's Consultation Area as a result of the Proposed Project.

The Proponent emailed Tsleil-Waututh Nation in late March 2014 requesting a meeting to discuss Tsleil-Waututh Nation's questions and concerns with the final draft of the AIR/EIS Guidelines for the Proposed Project.

In April 2014, Tsleil-Waututh Nation provided comments on the draft AIR/EIS Guidelines directly to BC EAO highlighting Tsleil-Waututh Nation's goal to expand their participation in the planning and development processes that take place within their Consultation Area as part of their stewardship of land and resources. Tsleil-Waututh Nation requested clarification on BC EAO's changes to wording around review of the AIR/EIS Guidelines and the cumulative effects assessment. Wording changes were requested regarding fish habitat, marine resources and consultation and a definition of the term country foods was requested. Tsleil-Waututh Nation requested the scope of the Proposed Project include Strait of Georgia and the Fraser River shipping routes and all estuaries within the region be included in the LSARSA. Tsleil-Waututh Nation also requested copies of maps showing the VC Local and Regional Study Area boundaries for the Proposed Project.

Tsleil-Waututh Nation provided the Proponent with a letter on June 19, 2014 commenting on the background information for the Aboriginal Information Requirements (Part C) of the AIR/ EIS Guidelines. Tsleil-Waututh Nation requested that the Tsleil-Waututh Nation Statement of Intent Map not be used to identify the Tsleil-Waututh Nation territory requesting the Tsleil-Waututh Nation Consultation Area be used instead. Tsleil-Waututh Nation requested additional foods be added to the list of foods harvested, provided additional DFO management subareas where Tsleil-Waututh Nation Food, Social, Ceremonial fisheries take place, and requested wording changes regarding traditional foods and activities.

In August 2014, the Proponent provided a letter to Tsleil-Waututh Nation indicating refinements to the design of the Proposed Project had occurred since the design was presented at the Public Open Houses. A letter was attached describing the changes to the design and the key revisions to the AIR/EIS Guidelines in response to comments received from Aboriginal groups, the Technical Working Group, and the public. The Proponent confirmed that the design refinements do not affect the scope of the Proposed Project for the purpose of the environmental assessment, but modelling for the air quality, noise, and visual quality effects will be re-modelled and re-assessed.

Tsleil-Waututh Nation provided a letter to the BC EAO in September 2014 responding to the memo from the Proponent regarding the refinements to the design of the Proposed Project. The letter reiterated Tsleil-Waututh Nation's goal to expand their participation in the planning and development processes that take place within their Consultation Area as part of their stewardship of land and resources. Tsleil-Waututh Nation identified concern

regarding the increase in the size of stockpiles and requested information regarding the percentage of second growth forest that would be fallen in comparison to the 2013 Project design. In addition, Tsleil-Waututh Nation indicated concern that locating the barge load out area closer to the McNab Creek estuary could result in greater potential for impact to estuary. Tsleil-Waututh Nation requested all reports and studies on McNab Creek's fish and fish habitat, marine mammals, intertidal zone, and marine water quality as they become available. Tsleil-Waututh Nation also noted appreciation for the more robust Processing Area Dirt Berm included in the new Proposed Project design.

In October 2014 the Proponent provided an email answering the questions raised by Tsleil-Waututh Nation in their September email to BC EAO regarding the refinements to the Proposed Project's design. The Proponent indicated that the rationale for the increased size of stockpiles was included in the memo provided to Tsleil-Waututh Nation in the August 2014 correspondence. The Proponent confirmed an additional 6.85 acres of second growth forest would be removed compared to the September 2013 conceptual layout. The Proponent also attached the reports and studies on the fish and fish habitat, marine mammals, intertidal zone, and water quality including the following documents:

- Appendix 5.1-A: Fisheries and Freshwater Habitat Baseline;
- Appendix 5.2-A: Marine Biophysical Baseline;
- Appendix 5.2-B: Marine Mammal Baseline;
- Appendix 5.5-A: Surface Water Hydrological Baseline;
- Appendix 5.5-B: Baseline Data Report: McNab Valley Surface Water Quality, 2009 – 2014;
- Appendix 5.6-A: Hydrogeological Characterization (Groundwater Flow); and
- Appendix 5.6-B: Geochemical Evaluation of Groundwater Samples (Groundwater Quality).

The Proponent also confirmed the vegetated Processing Area Dirt Berm included in the refined Project design would be more substantial than previously proposed and would cover 9,083 m<sup>2</sup>, compared to 1,348 m<sup>2</sup> in the September 2013 conceptual layout. In addition, the shorter large loading conveyor requires a buffer area of 962 m<sup>2</sup> compare to 3,305 m<sup>2</sup> proposed previously.

In November 2015, the Proponent sent a letter to Tsleil-Waututh Nation thanking them for their input on the preliminary draft description of the background information for the Aboriginal Information Requirements (Part C) of the AIR/ EIS Guidelines and providing them with a copy of the revised summary for their review. The Proponent requested additional information pertaining to Tsleil-Waututh Nation's interests and the suggested measures the Proponent could undertake to avoid, limit, or mitigate effects of the Proposed Project on Tsleil-Waututh interests. The Proponent reiterated their understanding that the Proposed Project Area is not within Tsleil-Waututh Nation's Consultation Area but Tsleil-Waututh Nation may have interests in the marine shipping route. The Proponent provided Tsleil-Waututh Nation with the expected incremental changes from the Proposed Project to existing barge traffic within Tsleil-Waututh Nation's Consultation Area and requested input on potential adverse effects on Tsleil-Waututh Nation's Aboriginal rights, title, or other interest.

In January 2016, the Proponent provided Tsleil-Waututh Nation with portions of Part C relevant to Tsleil-Waututh Nation and a previous version of this consultation report for review and comment. In February 2016, Tsleil-Waututh Nation provided comments on both documents that have been incorporated and/or responded to by the Proponent.

### **13.1.3 Other Aboriginal Groups**

For the other Aboriginal groups subsequently identified by CEA Agency for inclusion (Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia), consultation activities have been limited to providing each Aboriginal group with information to be included in the Application for review and requesting that each Aboriginal group provide information on potential effects on their Aboriginal Rights and concerns related to the Proposed Project. CEA Agency had previously notified each Aboriginal group about the Proposed Project and to provide background information.

In January 2016, the Proponent provided each of the above-noted Aboriginal groups with portions of Part C relevant to each Aboriginal group and a previous version of this consultation report for review and comment. Only Cowichan Tribes and Penelakut Tribe responded to the email.

In a letter dated January 21, 2016, Cowichan Tribes provided suggestions for edits to sections of Part C, which have been incorporated by the Proponent.

Penelakut Tribe noted in email correspondence dated January 12 that they do not support the use of information that is in the public domain without their express permission. Penelakut Tribe noted that information could be incorrect or out-of-date. Penelakut also noted in the January 12 email, as well as a follow up email dated January 22, that the Proponent has not engaged in consultation with the Aboriginal group and that the protocol for having Penelakut review documents requires a participation agreement. The Proponent added text to relevant section of Part C stating: "Penelakut Tribe has not reviewed this Part C Aboriginal Information Requirements of the EAC Application/EIS. Penelakut Tribe has not provided information to the Proponent and does not support the use of publicly-available information in the Application to support the assessment."

## **13.2 Proposed Consultation Activities during Application Review**

Upon acceptance of the EAC Application/Environmental Impact Statement (Application) for review by the BC EAO and the CEA Agency, The Proponent will comply with Part E – First Nations Consultation Assessment – Assessment Procedures of the Section 11 Order by making reasonable efforts to undertake the following activities during the Application Review stage, subject to modification ordered by the BC EAO, as necessary. The following activities are proposed for *Skwxwú7mesh* Nation and Tsleil-Waututh Nation:

- The Proponent will immediately provide copies of the Application, in digital formats and hard copy if required, to Aboriginal groups to facilitate review and comment on the Application, either through the Working Group or independently, as required by the BC EAO and the CEA Agency.
- The Proponent will arrange consultation meetings by mutual agreement with *Skwxwú7mesh* Nation and Tsleil-Waututh Nation, as necessary, to continue the process of identifying:



- Any specific asserted Aboriginal Rights and/or Title and interests that may be potentially affected by the Project, as identified in Part C, or other sources of information; and
- Measures to avoid or mitigate the potential adverse effects of the Project and/or to otherwise address or accommodate concerns expressed by *Skwxwú7mesh* Nation and Tsleil-Waututh Nation.
- The Proponent will seek to develop a decision-making framework for consultation meetings with *Skwxwú7mesh* Nation and Tsleil-Waututh Nation to enable consistent and fair dialogue, while facilitating any minor dispute resolution at preliminary stages of discussions;
- Within the time limits specified by the BC EAO, the Proponent will provide the BC EAO and *Skwxwú7mesh* Nation and Tsleil-Waututh Nation with a written report on the results of the consultation activities, identifying:
  - Issues and concerns raised with respect to the Project's potential adverse effects on asserted Aboriginal Rights and interests and on the potential for adverse environmental, economic, social, health and heritage effects; and
  - How the Proponent intends to address these issues and concerns.
- Based on the above written report, the Proponent will, if required by the BC EAO, implement additional measures for consultation and accommodation of concerns expressed by Aboriginal groups, where appropriate and in consultation with those Aboriginal groups.
- At the request of the BC EAO, the Proponent will provide the BC EAO with any information the BC EAO considers relevant with respect the Province's legal duties of consultation and accommodation.
- The Proponent acknowledges that the provision of information to Aboriginal groups does not constitute consultation on its own accord but is rather one step of the larger consultation process.

For the other Aboriginal Groups subsequently identified by the CEA Agency for inclusion (Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Halalt First Nation, Lake Cowichan First Nation, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia), consultation activities will consist of notifications. The following activities are proposed for the Application Review stage, subject to modification ordered by the BC EAO or CEA Agency, as necessary:

- Written (i.e., letter and e-mail) communications with leadership and identified representatives as appropriate to provide updates on the Proposed Project, including achievement of EA-related milestones or changes to the Potential Project.
- Written communications would include an offer to meet with leadership and identified representatives. If the Proponent is requested to host or attend community meetings, the need for such meetings will be explored as early as possible after the request.
- Where and when formally requested, the Proponent will respect Aboriginal Groups' requests to keep information confidential. Where needed, the Proponent will work with Aboriginal Groups to develop suitable terms or agreements to protect confidentiality, while ensuring that the Proponent can fulfill requirements to

provide information to regulators for review of the EAC Application/EIS. The Proponent will seek Aboriginal Group approval, not just review and comment, before sharing confidential information with BC EAO.

- The Proponent will demonstrate where they have incorporated feedback of Aboriginal Groups during the review of the EAC Application/EIS, and provide a rationale for instances where feedback was not incorporated.

### **13.3 Proposed Consultation Post-Environmental Assessment Certificate**

The following key consultation activities are proposed for the Environmental Assessment Certificate (EAC) is issued and during the construction and operations phases. The proposed activities are preliminary and subject to input from BC EAO and CEA Agency and will be informed by conditions related to the EAC or in ancillary agreements with Aboriginal Groups.

During the construction period, which is expected to be initiated as soon as possible after the EAC is issued, the Proponent will continue to consult with *Skwxwú7mesh* Nation and Tsleil-Waututh Nation to identify and resolve any outstanding issues or monitor conditions as required under Environmental Monitoring Plans. The Proponent will also continue to provide updates on construction activities at regular intervals or as needed to keep Aboriginal groups informed.

During operations, the Proponent will continue to consult with *Skwxwú7mesh* Nation and Tsleil-Waututh Nation and work towards resolution of issues or concerns through the operations phase. Consultation through correspondence and meetings or teleconference to address outstanding issues will continue through operations. The Proponent will also continue to provide updates on the operations activities at regular intervals or as needed to keep Aboriginal groups informed.

Where and when formally requested, the Proponent will respect Aboriginal groups' requests to keep information confidential. Where needed, the Proponent will work with Aboriginal groups to develop suitable terms or agreements to protect confidentiality, while ensuring that the Proponent is able to comply with conditions of the EAC related to provision of information. The Proponent will seek approval, not just review, from the relevant Aboriginal group before sharing information with BC EAO.

The Proponent will demonstrate where they have incorporated feedback of Aboriginal groups within all phases of the Project, and provide a rationale for instances where feedback was not incorporated.

## 14.0 SUMMARY OF POTENTIAL EFFECTS ON ABORIGINAL RIGHTS, INCLUDING CURRENT USE

Information on the Aboriginal Groups identified by BC EAO and the CEA Agency for inclusion in Part C of this Application was compiled through consultation with the Aboriginal Groups and from publicly available sources. This information was used to develop Background Information (Section 10.0) and summaries of use of the LSA and RSA by *Skwxwú7mesh* Nation (Section 11.3.3) and by Tsleil-Waututh Nation, Musqueam Indian Band, Stz'uminus First Nation, Cowichan Tribes, Lyackson First Nation, Penelakut Tribe and Métis Nation British Columbia (Section 11.4.4). This information formed the basis of the effects assessment on Aboriginal Rights, including current use, as a result of the Proposed Project.

Consultation activities during the Pre-Application stage focused mainly on the Aboriginal Groups listed in the Section 11 Order (Schedule B): *Skwxwú7mesh* Nation and Tsleil-Waututh Nation. These activities are summarized in Section 13.1. Consultation with these Aboriginal Groups will continue throughout the Application Review stage as described in Section 13.2 and post-EAC as described in Section 13.3 or as otherwise required under the EAC.

Potential effects on Aboriginal Rights, including current use, as a result of Proposed Project activities were identified for *Skwxwú7mesh* Nation (Section 11.3.3.2) and Tsleil-Waututh Nation (Section 11.4.3). Following implementation of the recommended mitigation measures described in Section 11.3.4 for *Skwxwú7mesh* Nation Aboriginal Rights and Section 11.4.5 for Tsleil-Waututh Nation Aboriginal Rights, residual effects will remain. In the case of *Skwxwú7mesh* Nation Aboriginal Rights, the measurable residual effects following mitigation are considered not significant. No measurable residual effects are expected on Tsleil-Waututh Aboriginal Rights, including current use, following mitigation. The results of the effects assessment on Aboriginal Rights, including current use, are summarized in Table 14-1 for *Skwxwú7mesh* Nation and Table 14-2 for Tsleil-Waututh Nation.

For *Skwxwú7mesh* Nation, the conclusion of “acceptable impacts” is contingent on the mitigation documented in this Application, most of which requires further implementation and/or deep consultation with *Skwxwú7mesh* Nation. It is also limited to the Proposed Project as defined: the size of operations and relatively short lifespan of the Proposed Project are very important considerations. Consequently, the conclusion of non-significant residual effects is presented with moderate confidence. Due to this uncertainty, *Skwxwú7mesh* Nation has reserved the right to revise this conclusion should new and important information be revealed, or should the Proposed Project details change.

Consultation activities are also the recommended mitigation between the Proponent and Tsleil-Waututh Nation to address incremental effects on quality of experience from the Proposed Project on Tsleil-Waututh Nation Aboriginal Rights. Without further consultation and, potentially, accommodation of Tsleil-Waututh's Aboriginal Rights, the Proposed Project may have ongoing effects on quality of current use experience for Tsleil-Waututh users of the LSA.

Table 14-1: Summary of Potential Effects on *Skwxwú7mesh* Nation Aboriginal Rights and Mitigation or Accommodation Measures

Aboriginal Group	Identified Right / Interest	Potential Project Effect	Mitigation / Accommodation Measure(s)	Status / Next Steps
<i>Skwxwú7mesh</i> Nation	Terrestrial Resources	<ul style="list-style-type: none"> <li>Direct habitat loss to ungulates (i.e., elk and deer)</li> <li>Sensory disturbance to ungulates (i.e., elk and deer)</li> </ul>	<ul style="list-style-type: none"> <li>As provided in Volume 2, Part B - Section 5.3: Terrestrial Resources</li> <li>The Proponent to engage in deep consultation with <i>Skwxwú7mesh</i> Nation during ongoing regulatory review of the Application. Where feasible and practical, the Proponent will adopt additional <i>Skwxwú7mesh</i> Nation recommendations for protection of terrestrial resources.</li> <li><i>Skwxwú7mesh</i> Nation involvement and approval role, for development and implementation of mitigation (including offsetting), and management and monitoring plans related to deer and elk. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing deep consultation during and subsequent to regulatory review</li> <li>Direct discussions between <i>Skwxwú7mesh</i> Nation and the proponent during and subsequent to regulatory review</li> <li>Implementation and long-term (life of project) monitoring of agreed upon conditions</li> </ul>
<i>Skwxwú7mesh</i> Nation	Aquatic Resources	<ul style="list-style-type: none"> <li>Loss of freshwater spawning habitat</li> <li>Disturbance to marine habitat by vessel noise and barge loading</li> <li>Water quality effects (i.e. increased turbidity)</li> <li>Direct loss of marine habitat</li> </ul>	<ul style="list-style-type: none"> <li>As provided in Volume 2, Part B – Sections: 5.1 Fisheries and Freshwater Habitat and Section 5.2 Marine Resources and 5.2 Marine Resources.</li> <li>Addition of a marine component to the Fish Habitat Offset Plan (Volume 4, Part G - Section 22.0: Appendix 5.1-B).</li> <li>The Proponent to demonstrate, to the satisfaction of <i>Skwxwú7mesh</i> Nation, hydraulic feasibility of the proposed habitat offset plan (provided in Volume 4, Part G – Section 22.0: Appendix 5.1-B).</li> <li><i>Skwxwú7mesh</i> Nation involvement and decision making role, for development and implementation of management and monitoring plans. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> <li>The Proponent to provide financial contribution to <i>Skwxwú7mesh</i> Nation's Marine Use Planning</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing deep consultation during and subsequent to regulatory review</li> <li>Direct discussions between <i>Skwxwú7mesh</i> Nation and the proponent during and subsequent to regulatory review</li> <li>Implementation and long-term (life of project) monitoring of agreed upon conditions</li> </ul>

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Aboriginal Group	Identified Right / Interest	Potential Project Effect	Mitigation / Accommodation Measure(s)	Status / Next Steps
			<p>process. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</p> <ul style="list-style-type: none"> <li>▪ The Proponent will place McNab Creek ecological function as the highest management priority. Should follow-up monitoring reveal Proposed Project-related effects on habitat quantity or quality in McNab Creek, adaptive management actions will be taken as necessary – including but not limited to voluntary stoppage of operations until solutions are in place.</li> </ul>	
<p><i>Skwxwú7mesh</i> Nation</p>	<p>Governance of <i>Skwxwú7mesh</i> Nation Lands</p>	<ul style="list-style-type: none"> <li>▪ Consistency with Xay Temíxw</li> <li>▪ Decision Making Authority</li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Skwxwú7mesh</i> Nation involvement and decision making role, for development of management and monitoring plans.</li> <li>▪ The Proponent to consult with <i>Skwxwú7mesh</i> Nation on actions that can achieve greater consistency with Xay Temíxw. This will be achieved through a negotiated decision making role for <i>Skwxwú7mesh</i> Nation in the management and monitoring plans as noted above.</li> <li>▪ Subject to agreement through ongoing discussion, the Proponent to formally acknowledge the Proposed Project's impacts on <i>Skwxwú7mesh</i> Nation's Aboriginal Rights.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ongoing deep consultation during and subsequent to regulatory review</li> <li>▪ Direct discussions between <i>Skwxwú7mesh</i> Nation and the proponent during and subsequent to regulatory review</li> <li>▪ Implementation and long-term (life of project) monitoring of agreed upon conditions</li> </ul>

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Aboriginal Group	Identified Right / Interest	Potential Project Effect	Mitigation / Accommodation Measure(s)	Status / Next Steps
<i>Skwxwú7mesh</i> Nation	Use and Occupancy of <i>Skwxwú7mesh</i> Nation Territory	<ul style="list-style-type: none"> <li>Direct Loss (Footprint)</li> <li>Indirect Loss (Accessibility)</li> <li>Indirect Loss (Sensory) Disturbance)</li> </ul>	<ul style="list-style-type: none"> <li>Co-development between the Proponent and <i>Skwxwú7mesh</i> Nation of an Access and Communication Protocol that seeks to minimize access, disruption and inconvenience to <i>Skwxwú7mesh</i> for activities undertaken in and around the Proposed Project Area.</li> <li>Explore ways to return direct stewardship and use of the Proponent property<sup>12</sup> back to <i>Skwxwú7mesh</i> after decommissioning. Details of agreement will be negotiated through ongoing discussion.</li> <li>The Proponent to compensate residual net losses incurred by the Nation.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing deep consultation during and subsequent to regulatory review</li> <li>Direct discussions between <i>Skwxwú7mesh</i> Nation and the proponent during and subsequent to regulatory review</li> <li>Implementation and long-term (life of project) monitoring of agreed upon conditions</li> </ul>
<i>Skwxwú7mesh</i> Nation	Transmission of <i>Skwxwú7mesh</i> Nation Culture and History	<ul style="list-style-type: none"> <li>Adverse direct effects on kw'ech'tenm</li> <li>Visual changes to kw'ech'tenm</li> </ul>	<ul style="list-style-type: none"> <li>The Proponent to fund <i>Skwxwú7mesh</i> Nation in honouring kw'ech'tenm; including but not limited to a plaque or other signage. Details of agreement to be negotiated through ongoing discussion between the Nation and the Proponent.</li> <li><i>Skwxwú7mesh</i> Nation decision making role in development and implementation of chance-find protocols for heritage sites and any other AIA-related mitigation measures.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing deep consultation during and subsequent to regulatory review</li> <li>Direct discussions between <i>Skwxwú7mesh</i> Nation and the proponent during and subsequent to regulatory review</li> <li>Implementation and long-term (life of project) monitoring of agreed upon conditions</li> </ul>

<sup>12</sup> This refers to the lands owned by 0819042 BC Ltd and BURNCO Rock Products Ltd., including DL 677 LD 37 New Westminster Group 1; DL 677A LD 37 New Westminster Group 1; DL 677B LD 37 New Westminster Group 1; PCL 1 DL 677B LD 37 New Westminster Group1; and Foreshore Tenure #240515.



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**Table 14-2: Summary of Potential Effects on Tsleil-Waututh Nation Aboriginal Rights and Mitigation or Accommodation Measures**

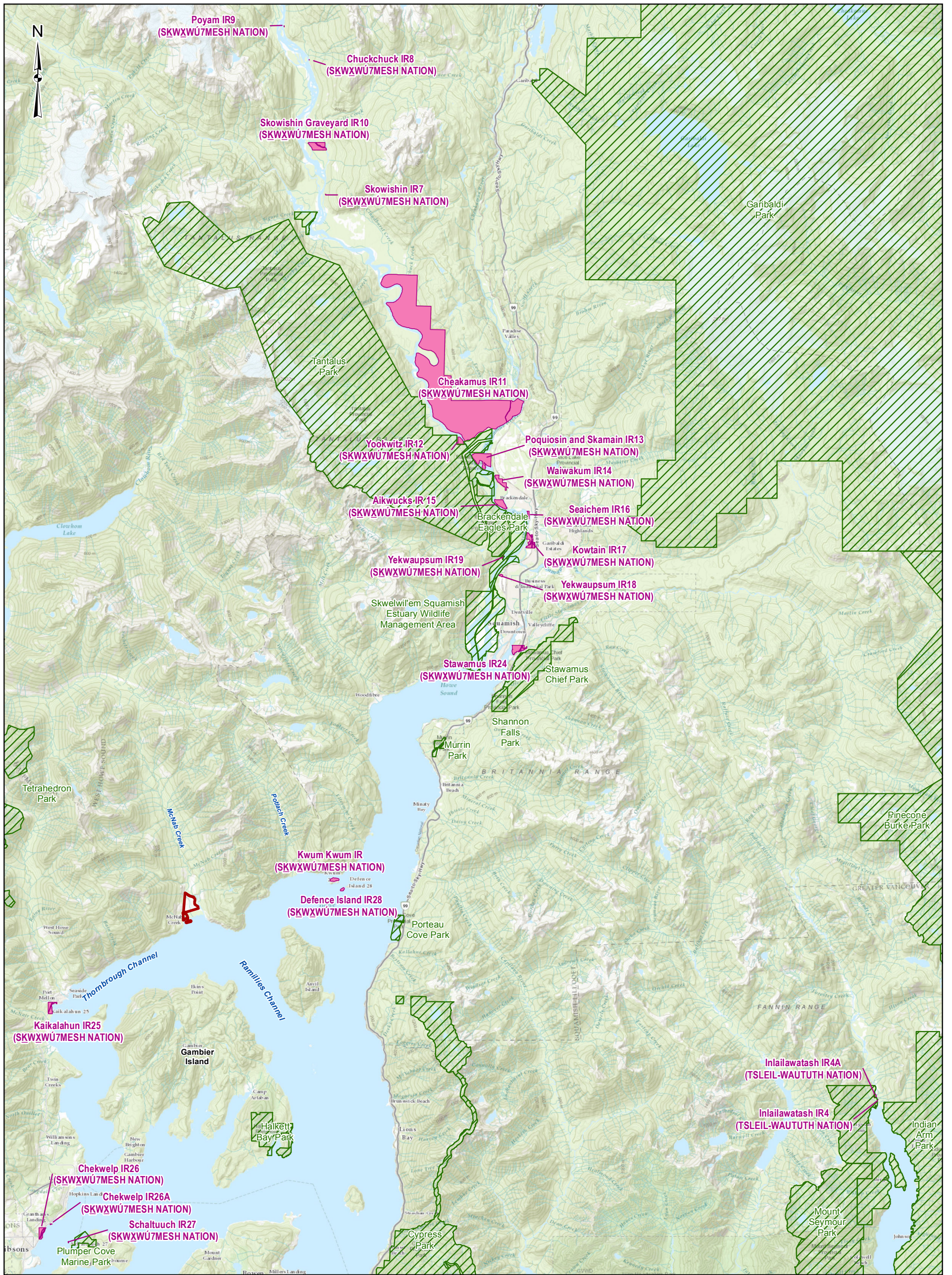
Aboriginal Group	Identified Right / Interest	Potential Project Effect	Mitigation / Accommodation Measure(s)	Status / Next Steps
Tsleil-Waututh Nation	Fishing and Harvesting Freshwater and Marine Resources	<ul style="list-style-type: none"> <li>Changes in access to freshwater and marine resources;</li> <li>Changes in availability or quality of freshwater and marine resources (including freshwater and marine habitat quality and quantity); and</li> <li>Changes in quality of experience during fishing or harvesting freshwater or marine resources current use experience.</li> </ul>	<ul style="list-style-type: none"> <li>As provided in Sections 5.1 Fisheries and Freshwater Habitat, 5.2 Marine Resources, 7.2 Marine Transport, 7.4 Visual Resources and 9.2 Noise</li> <li>Provide Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan (Volume 3, Part E - Section 16.0), develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect opportunities or access to pursue fishing, hunting and cultural activities in the Proposed Project Area</li> <li>Consult with Tsleil-Waututh on measures that could reduce effects of visual changes from the Proposed Project on the quality of use experience and on cultural activities and transmission of culture and history within Howe Sound.</li> </ul>	<ul style="list-style-type: none"> <li>Initiate discussions with Tsleil-Waututh Nation to develop terms for ongoing consultation during review of the EA Application/EIS and future consultations</li> </ul>
Tsleil-Waututh Nation	Harvesting of Terrestrial Resources	<ul style="list-style-type: none"> <li>Changes in access to terrestrial resources;</li> <li>Changes in availability or quality of terrestrial resources (with a focus on ungulate quality and quantity); and</li> <li>Changes in quality of experience during harvesting of terrestrial resources.</li> </ul>	<ul style="list-style-type: none"> <li>As provided in Sections 5.3 Terrestrial Resources, 7.2 Marine Transport, 7.4 Visual Resources and 9.2 Noise</li> <li>Provide Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan, develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect opportunities or access to pursue fishing, hunting and cultural activities in the Proposed Project Area</li> </ul>	<ul style="list-style-type: none"> <li>Initiate discussions with Tsleil-Waututh Nation to develop terms for ongoing consultation during review of the EA Application/EIS and future consultations</li> </ul>

## AGGREGATE PROJECT

## Volume 3

Aboriginal Group	Identified Right / Interest	Potential Project Effect	Mitigation / Accommodation Measure(s)	Status / Next Steps
			<ul style="list-style-type: none"> <li>Consult with Tsleil-Waututh on measures that could reduce effects of visual changes from the Proposed Project on the quality of use experience and on cultural activities and transmission of culture and history within Howe Sound.</li> </ul>	
Tsleil-Waututh Nation	Aboriginal Title	<ul style="list-style-type: none"> <li>Changes in access to specific locations where Aboriginal Title has been asserted.</li> </ul>	<ul style="list-style-type: none"> <li>Tsleil-Waututh Nation has not asserted Aboriginal Title to specific locations within the LSA or RSA; therefore, no potential effects on Aboriginal Title were identified and carried forward in the assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Initiate discussions with Tsleil-Waututh Nation to develop terms for ongoing consultation during review of the EA Application/EIS and future consultations</li> </ul>
Tsleil-Waututh Nation	Intangible Cultural Heritage	<ul style="list-style-type: none"> <li>Changes in access to locations associated with transmission of culture and history; and</li> <li>Changes in quality of experience associated with the sensory environment / environmental setting at locations associated with the transmission of culture and history.</li> </ul>	<ul style="list-style-type: none"> <li>As provided in Sections 7.2 Marine Transport, 7.4 Visual Resources and 9.2 Noise</li> <li>Provide Tsleil-Waututh Nation with opportunities to review and provide input to the Access Management Plan described in Volume 3, Part E - Section 16.0. Based on provisions of the Access Management Plan, develop a communications plan with Tsleil-Waututh Nation to provide Tsleil-Waututh Nation with real-time information on construction and operations activities, including movement of Proposed Project-associated vessels, that may affect opportunities or access to pursue fishing, hunting and cultural activities in the Proposed Project Area</li> <li>Consult with Tsleil-Waututh Nation to identify locations within Howe Sound where members may conduct practices related to intangible culture heritage, timing of such practices, if relevant, and measures that would reduce effects from the Proposed Project on the ability to conduct those practices.</li> <li>Consult with Tsleil-Waututh on measures that could reduce effects of visual changes from the Proposed Project on the quality of use experience and on cultural activities and transmission of culture and history within Howe Sound.</li> </ul>	<ul style="list-style-type: none"> <li>Initiate discussions with Tsleil-Waututh Nation to develop terms for ongoing consultation during review of the EA Application/EIS and future consultations</li> </ul>

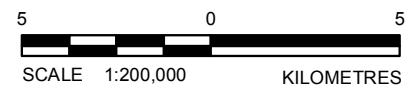
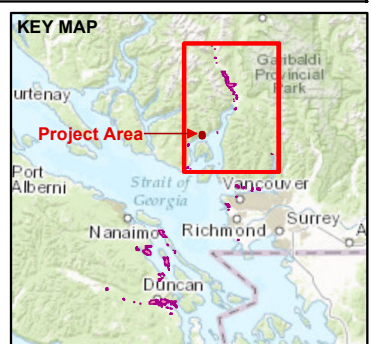




- LEGEND**
- Project Area
  - Indian Reserve
  - Park / Protected Area

**REFERENCE**

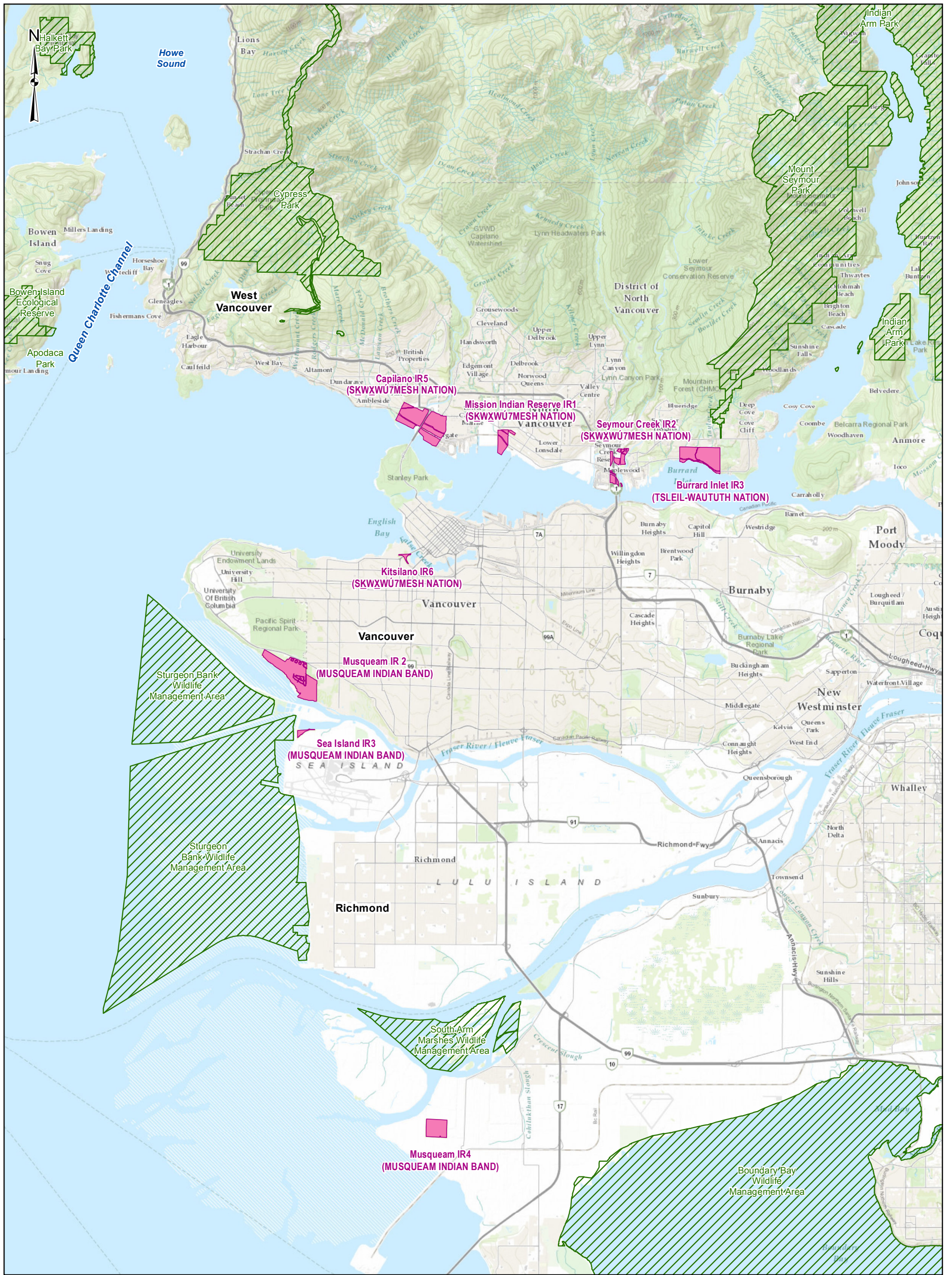
Parks/protected areas from BC LRDW. Indian reserves from Geobase. Topo basemap copyright ESRI and its licensors. All Rights Reserved. Projection: UTM Zone 10 Datum: NAD 83



PROJECT		BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.	
TITLE		INDIAN RESERVES OF LOWER MAINLAND-BASED ABORIGINAL GROUPS IN OR NEAR HOWE SOUND	
	PROJECT NO.	11-1422-0046	PHASE No.
	DESIGN	LM 06 Jul. 2015	SCALE AS SHOWN
	GIS	DL 05 Apr. 2016	REV. 0
	CHECK	MK 05 Apr. 2016	<b>FIGURE 10-1</b>
REVIEW	SMR 05 Apr. 2016		

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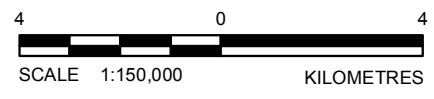
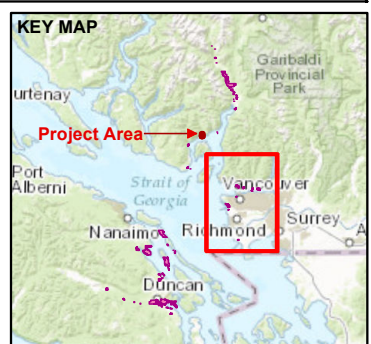




- LEGEND**
- Project Area
  - Indian Reserve
  - Park / Protected Area

**REFERENCE**

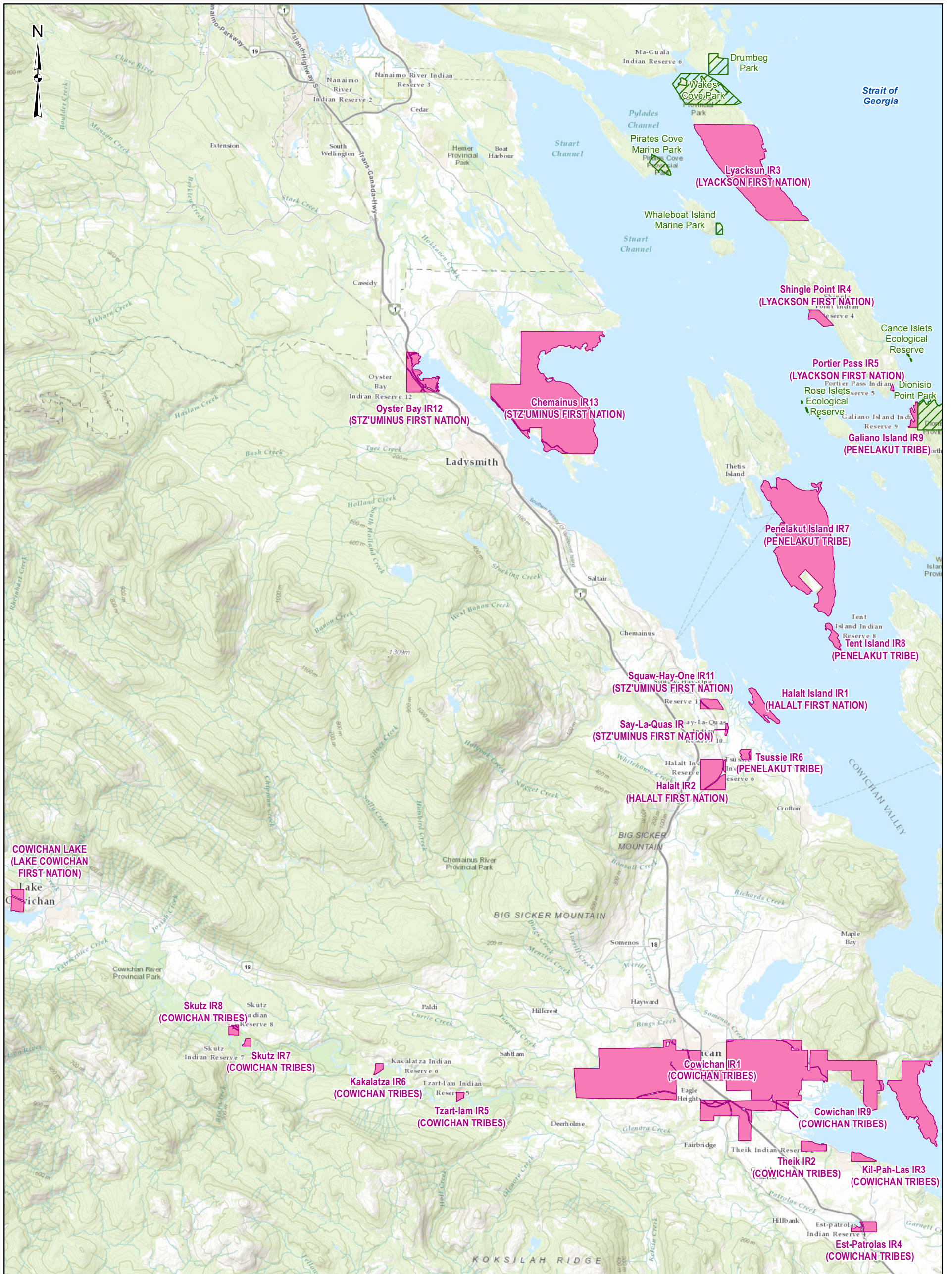
Parks/protected areas from BC LRDW. Indian reserves from Geobase. Topo basemap copyright ESRI and its licensors. All Rights Reserved. Projection: UTM Zone 10 Datum: NAD 83



PROJECT				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
TITLE				
<b>INDIAN RESERVES OF LOWER MAINLAND-BASED ABORIGINAL GROUPS OUTSIDE HOWE SOUND</b>				
		PROJECT NO. 11-1422-0046	PHASE No.	
		DESIGN LM 06 Jul. 2015	SCALE AS SHOWN	REV. 0
		GIS DL 05 Apr. 2016	<b>FIGURE 10-2</b>	
		CHECK MK 05 Apr. 2016		
REVIEW SMR 05 Apr. 2016				

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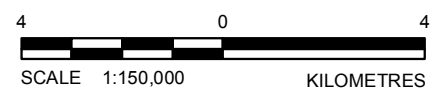
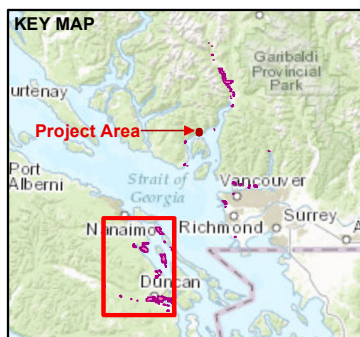




- LEGEND**
- Project Area
  - Indian Reserve
  - Park / Protected Area

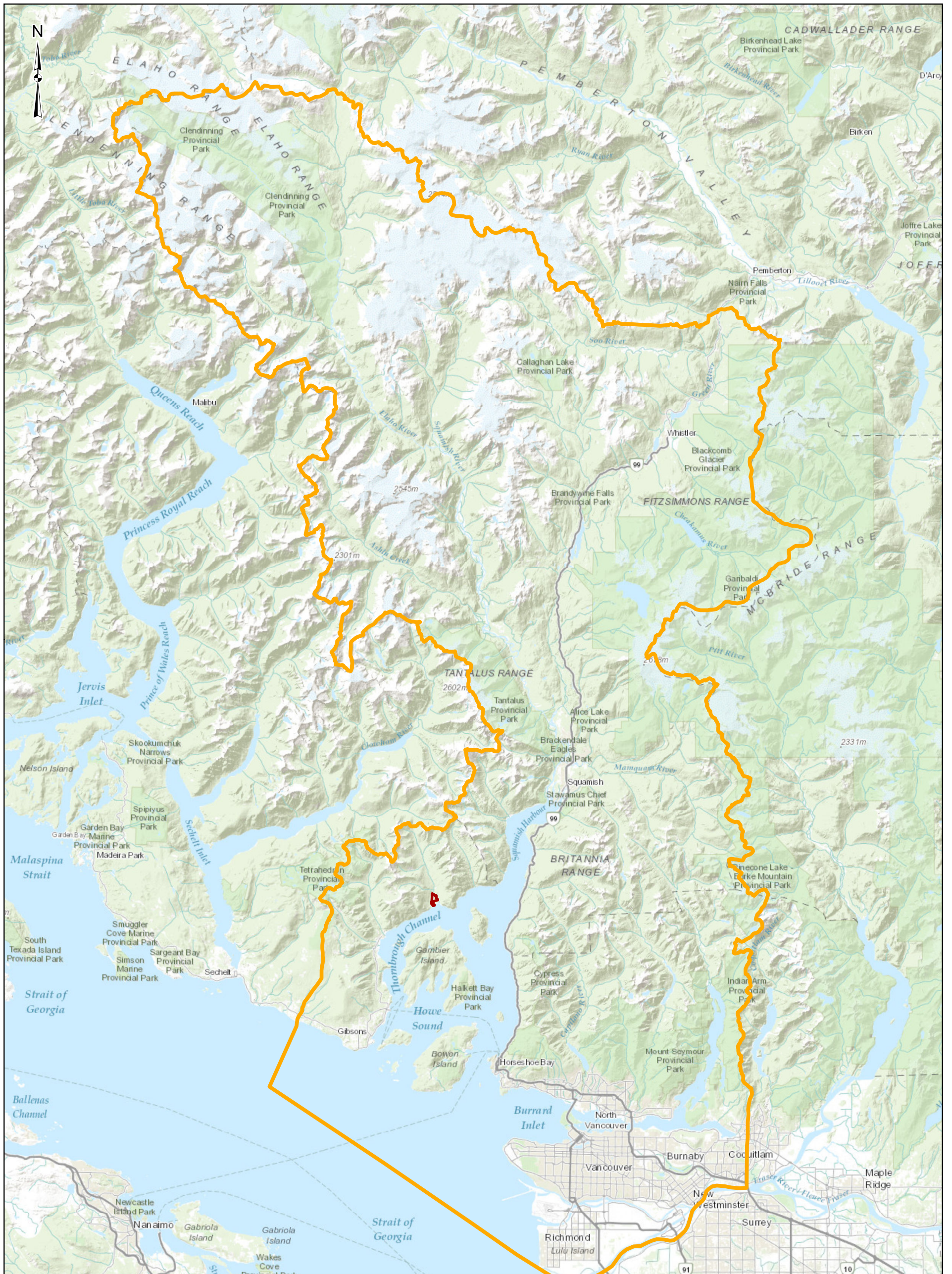
**REFERENCE**

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PROJECT				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
TITLE				
<b>INDIAN RESERVES OF VANCOUVER ISLAND-BASED ABORIGINAL GROUPS</b>				
	PROJECT NO. 11-1422-0046		PHASE No.	
	DESIGN	LM	06 Jul. 2015	SCALE AS SHOWN
	GIS	DL	05 Apr. 2016	REV. 0
	CHECK	MK	05 Apr. 2016	FIGURE 10-3
REVIEW	SMR	05 Apr. 2016		



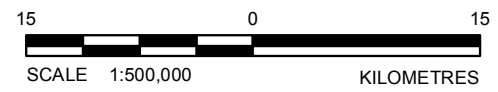


**LEGEND**

- Skwxwú7mesh Nation Traditional Territory and Consultation Area
- Project Area

**REFERENCE**

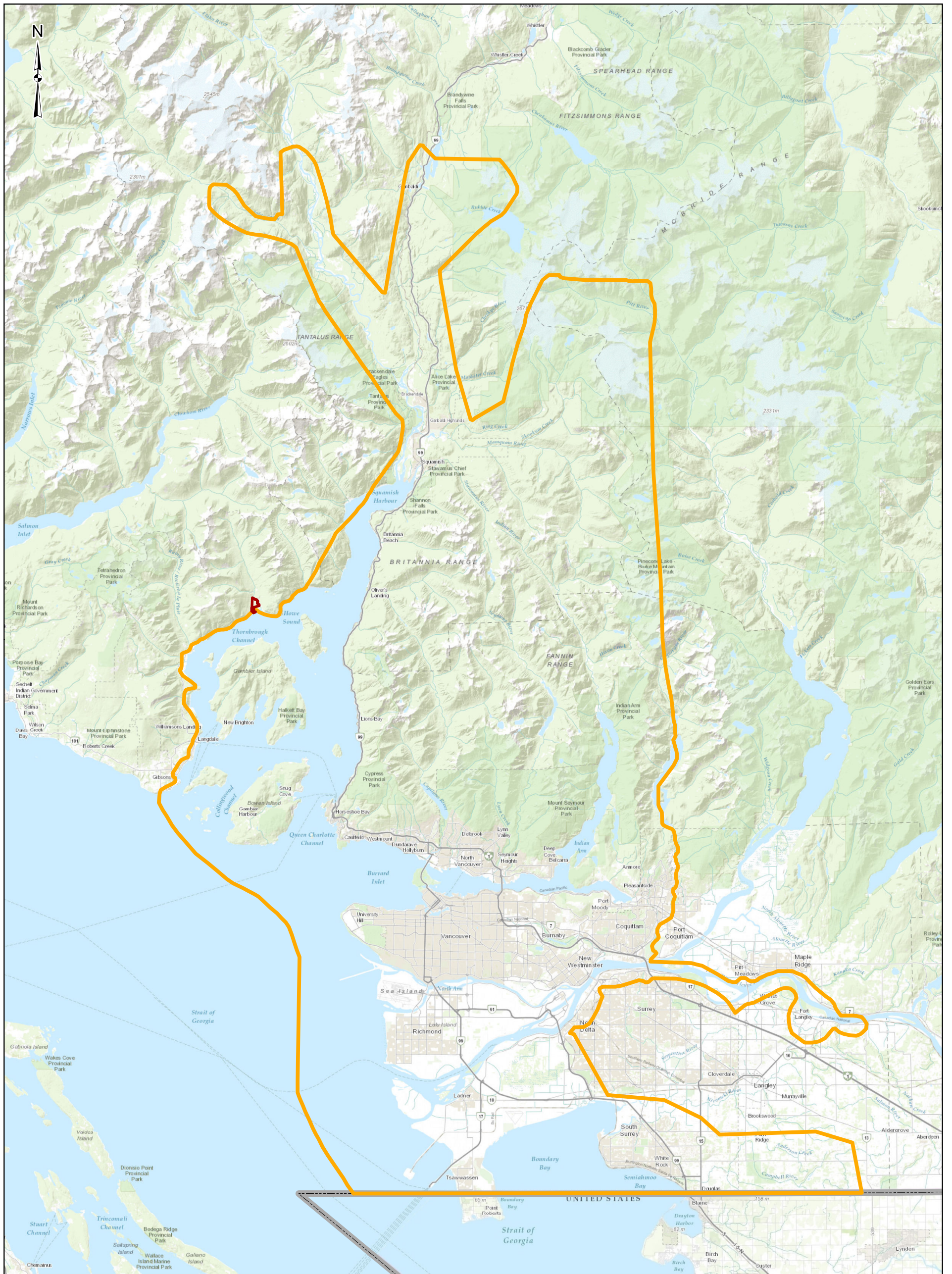
Skwxwú7mesh Nation traditional territory from Skwxwú7mesh Nation. Topo basemap copyright ESRI and its licensors. All Rights Reserved. Projection: UTM Zone 10 Datum: NAD 83



PROJECT				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
TITLE				
<b>SKWXWÚ7MESH NATION TRADITIONAL TERRITORY AND CONSULTATION AREA</b>				
	PROJECT NO. 11-1422-0046		PHASE No.	
	DESIGN	LM	06 Jul. 2015	SCALE AS SHOWN
	GIS	DL	05 Apr. 2016	REV. 0
	CHECK	MK	05 Apr. 2016	<b>FIGURE 10-4</b>
REVIEW	SMR	05 Apr. 2016		

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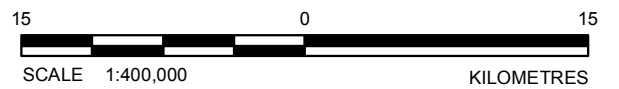




- LEGEND**
- Tsleil-Waututh Nation Consultation Area
  - Project Area
  - Watercourse
  - Canadian and United States Border

**REFERENCE**

Tsleil-Waututh Nation consultation area digitized from Tsleil-Waututh Nation. Topo basemap copyright ESRI and its licensors. All Rights Reserved. Projection: UTM Zone 10 Datum: NAD 83

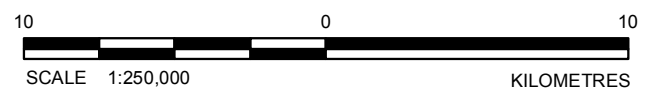


<b>PROJECT</b>				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
<b>TITLE</b>				
TSLEIL-WAUTUTH NATION CONSULTATION AREA				
	PROJECT NO. 11-1422-0046		PHASE No.	
	DESIGN	LM	06 Jul. 2015	SCALE AS SHOWN
	GIS	DL	05 Apr. 2016	REV. 0
	CHECK	MK	05 Apr. 2016	FIGURE 10-5
REVIEW	SMR	05 Apr. 2016		





- LEGEND**
- Musqueam Indian Band Traditional Territory
  - Project Area
  - Canadian and United States Border



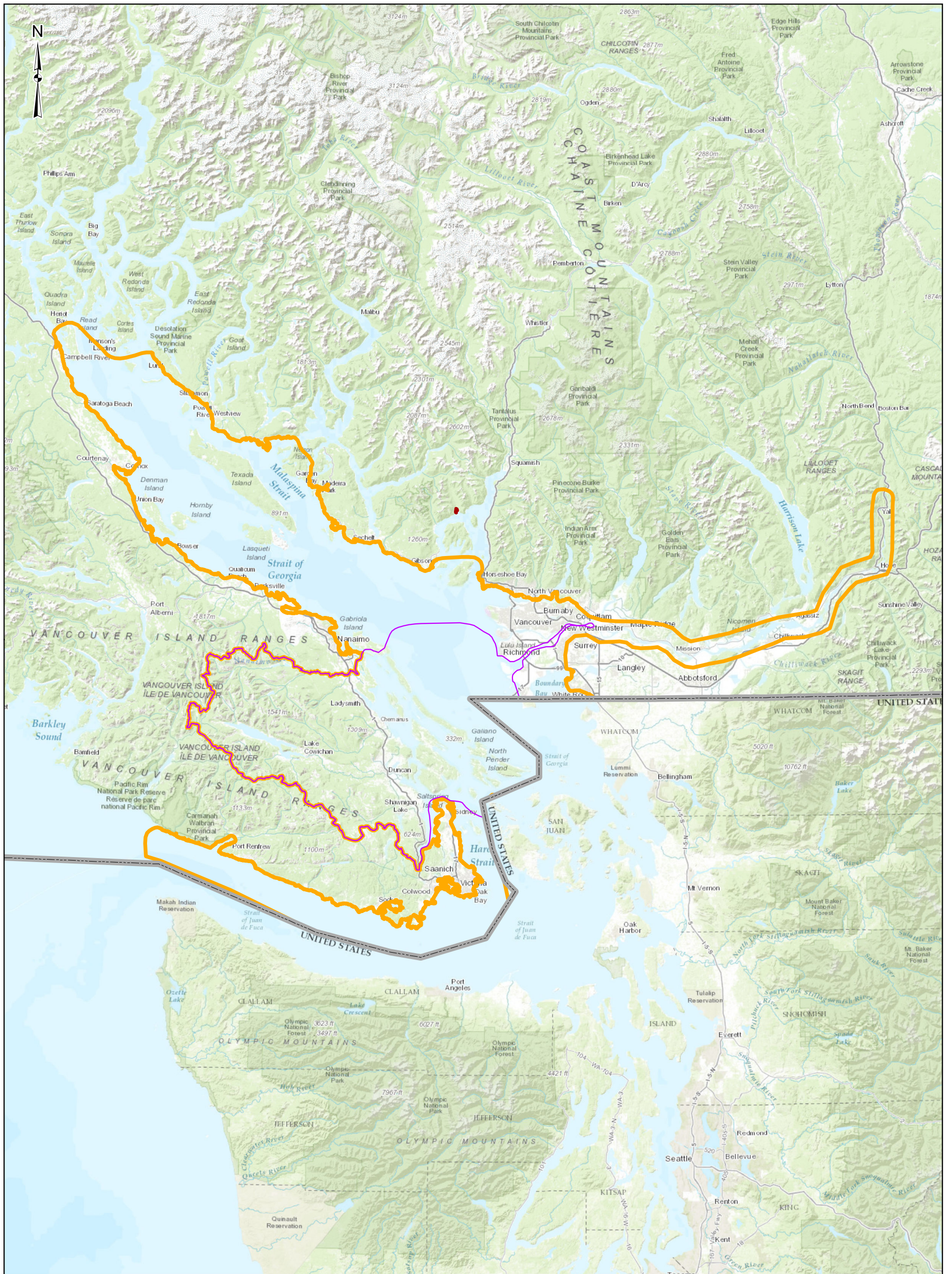
**REFERENCE**

Musqueam Indian Band traditional territory from Data BC. Topo basemap copyright ESRI and its licensors. All Rights Reserved.  
 Projection: UTM Zone 10 Datum: NAD 83

PROJECT				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
TITLE				
<b>MUSQUEAM INDIAN BAND TRADITIONAL TERRITORY</b>				
	PROJECT NO. 11-1422-0046		PHASE No.	
	DESIGN	LM	06 Jul. 2015	SCALE AS SHOWN
	GIS	DL	05 Apr. 2016	REV. 0
	CHECK	MK	05 Apr. 2016	<b>FIGURE 10-6</b>
REVIEW	SMR	05 Apr. 2016		

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**LEGEND**

- Hul'qumi'num Treaty Group Traditional Territory (Marine)
- Hul'qumi'num Treaty Group Traditional Territory (Core)
- Project Area
- Canadian and United States Border

**REFERENCE**

Hul'qumi'num Treaty Group traditional territories from Data BC. Topo basemap copyright ESRI and its licensors. All Rights Reserved.  
 Projection: UTM Zone 10 Datum: NAD 83

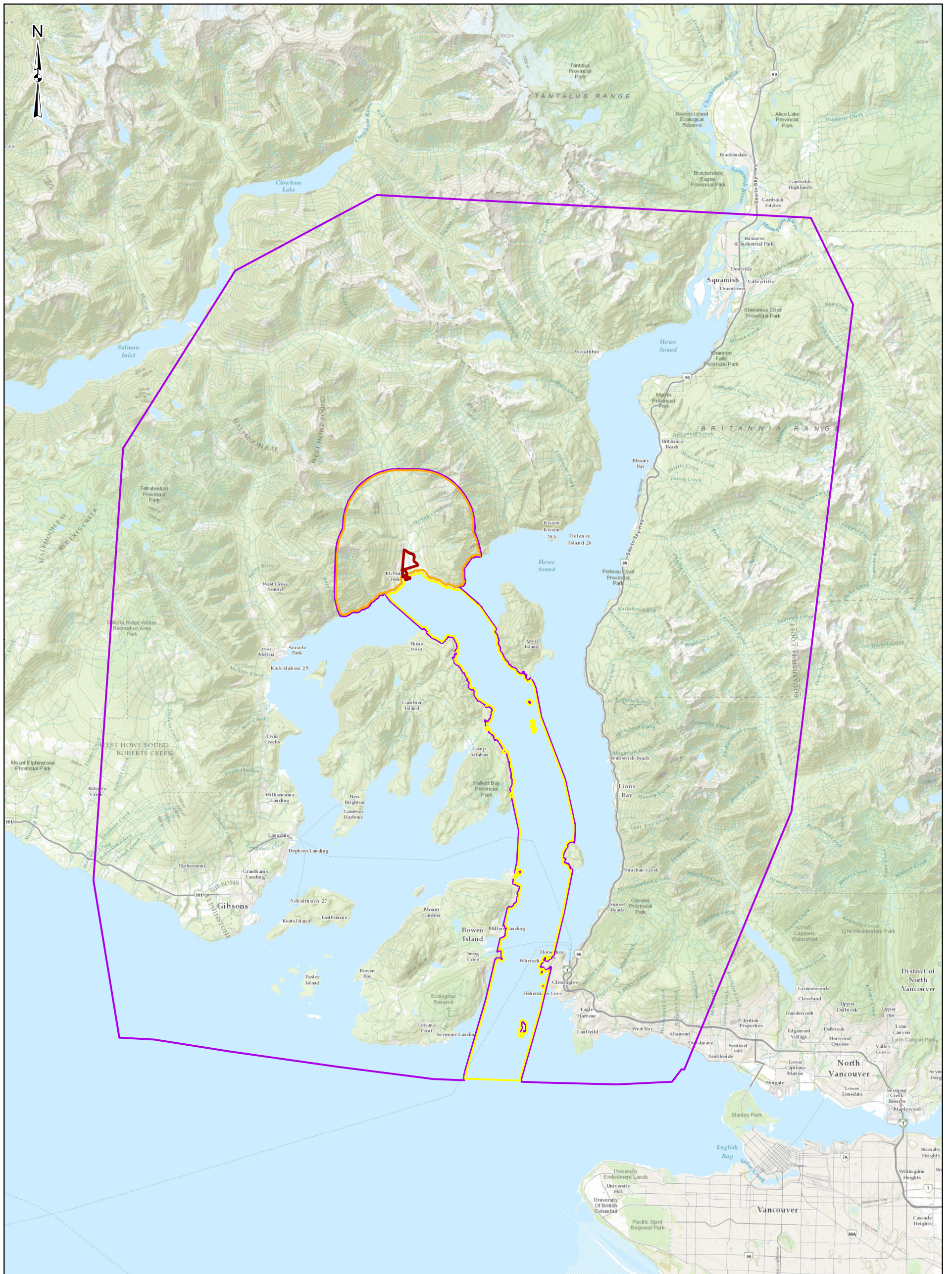


<b>PROJECT</b>				
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.				
<b>TITLE</b>				
HUL'QUMI'NUM TREATY GROUP TRADITIONAL TERRITORY				
PROJECT NO. 11-1422-0046		PHASE No.		
DESIGN	LM	06 Jul. 2015	SCALE AS SHOWN	REV. 0
GIS	DL	05 Apr. 2016	<b>FIGURE 10-7</b>	
CHECK	MK	05 Apr. 2016		
REVIEW	SMR	05 Apr. 2016		



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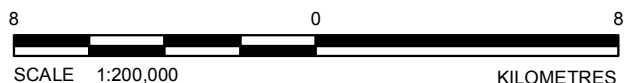


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- LEGEND**
- Project Area
  - Skwxwú7mesh Nation Aboriginal Rights Study Areas**
  - Local Study Area - Marine
  - Local Study Area - Terrestrial
  - Regional Study Area

**REFERENCE**

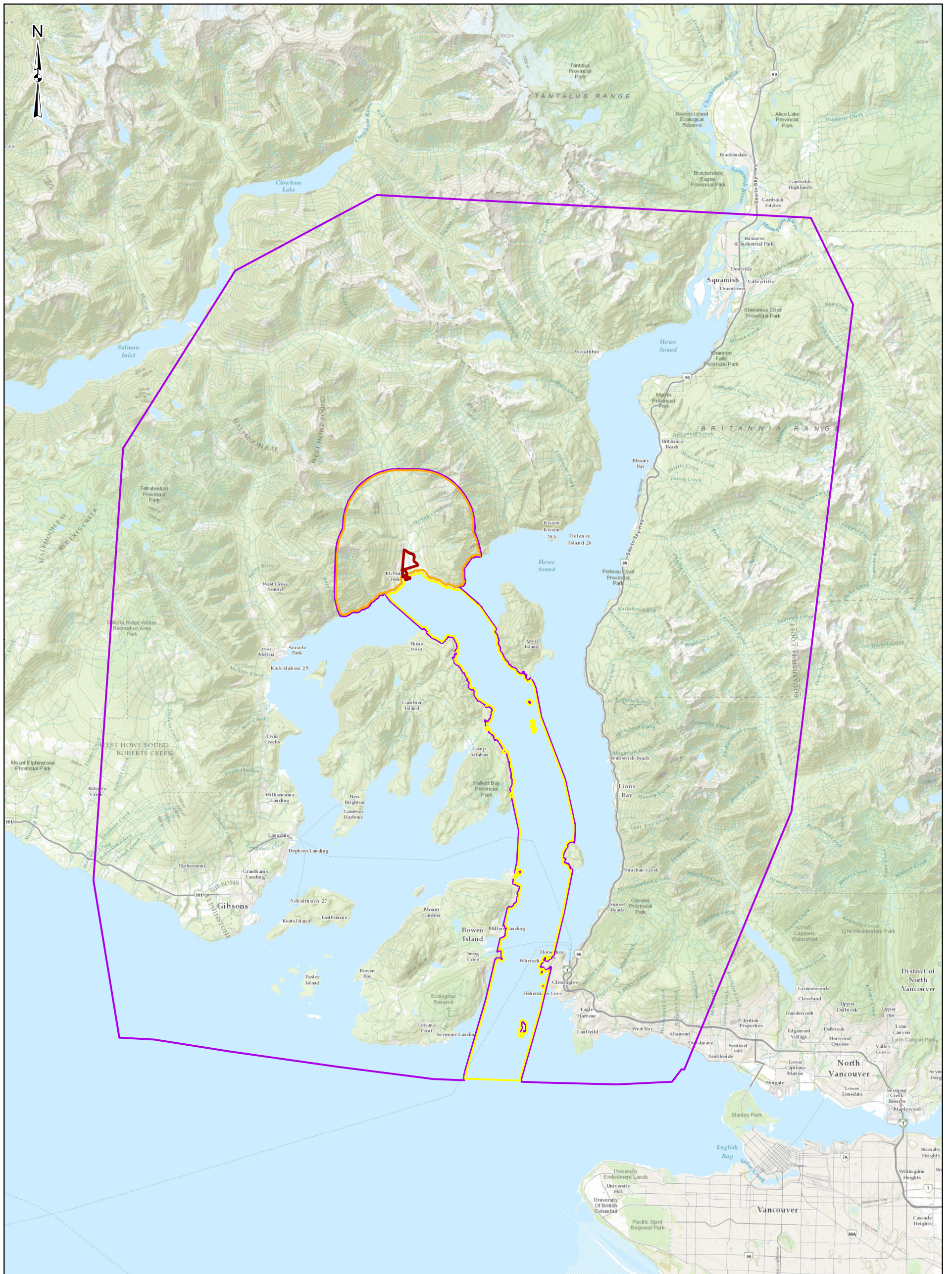
Skwxwú7mesh Nation aboriginal rights study areas from traditional territory from Ratcliff & Company LLP.  
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<b>PROJECT</b>		BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.	
<b>TITLE</b>		<b>SKWXWÚ7MESH NATION ABORIGINAL RIGHTS STUDY AREAS</b>	
PROJECT NO. 11-1422-0046		PHASE No.	
DESIGN	MK	06 Jan. 2016	SCALE AS SHOWN
GIS	DL	05 Apr. 2016	REV. 0
CHECK	MK	05 Apr. 2016	<b>FIGURE 10-8</b>
REVIEW	SMR	05 Apr. 2016	





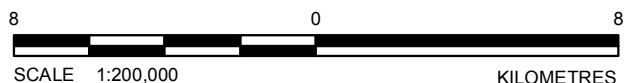


**LEGEND**

- Project Area
- Tsileil-Waututh Nation and other Aboriginal Groups**
- Aboriginal Rights Study Areas**
- Local Study Area - Marine
- Local Study Area - Terrestrial
- Regional Study Area

**REFERENCE**

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<b>PROJECT</b>					
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.					
<b>TITLE</b>					
<b>TSLEIL-WAUTUTH NATION AND OTHER ABORIGINAL GROUPS ABORIGINAL RIGHTS STUDY AREAS</b>					
	PROJECT NO. 11-1422-0046			PHASE No.	
	DESIGN	MK	06 Jan. 2016	SCALE AS SHOWN	REV. 0
	GIS	DL	05 Apr. 2016	<b>FIGURE 10-9</b>	
	CHECK	MK	05 Apr. 2016		
REVIEW	SMR	05 Apr. 2016			

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