

KSI LISIMS LNG

Natural Gas Liquefaction and Marine Terminal

Project Description Summary (BC EAA 2018, IAA 2019)

Date: July 2, 2021



KSI LISIMS LNG

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Table of Contents

Acronyms and Abbreviations		iii
1	Introduction	1
2	General Information	2
2.1	Project Name, Sector and Location.....	2
2.2	Proponent Information	2
2.3	Purpose of and Need for the Project, and Potential Benefits.....	2
3	Project Overview	3
3.1	Activities and Components	3
3.2	Construction.....	4
3.3	Operations and Maintenance	7
3.4	LNG Shipping.....	7
3.5	Decommissioning.....	7
3.6	Emissions, Discharges and Waste	9
	3.6.1 Construction.....	9
	3.6.2 Operations	9
3.7	Project Location, Land and Water Use.....	10
3.8	Schedule and Constraints	10
3.9	Alternative Means of Carrying Out the Project	10
3.10	Alternatives to the Project.....	11
4	Environmental Setting	11
4.1	Physical Setting	12
	4.1.1 Atmospheric, Climate, and Physical Environment.....	12
	4.1.2 Marine Communities and Species.....	13
	4.1.3 Freshwater Communities and Species	13
	4.1.4 Terrestrial Communities and Species.....	13
4.2	Human and Social Setting	14
	4.2.1 Project Proximity to Communities	14
	4.2.2 Land and Marine Use Planning	16
	4.2.3 Federal, Provincial, Nisga’a Nation or Foreign Lands.....	17
	4.2.4 Land and Water Use.....	17
5	Project Potential Biophysical, Social and Economic Effects	18
5.1	Potential Environmental, Social and Economic Effects.....	18
5.2	Potential effect of Project-Related Changes on Indigenous Peoples.....	21
5.3	Potential Effects in Relation to Requirements of the Impact Assessment Act	21
6	Legislative and Regulatory Context	22
6.1	Nisga’a Treaty	22
6.2	Provincial Environmental Assessment	24
6.3	Federal Impact Assessment	25
6.4	Regional or Strategic Environmental Impact Assessments.....	25
6.5	Substitution.....	25
6.6	Applicable International Agreements between BC and Alaska.....	25
6.7	Federal Funding	26
6.8	Studies, Plans or Regional Assessments	26
7	Indigenous Nation Engagement	26
7.1	Engagement with Indigenous Nations	26

7.2	Indigenous Nation Engagement Activities to Date	27
7.3	Issues identified by Indigenous Nations to Date.....	27
7.4	Potential Impacts to Indigenous Nations Resulting from Project Activities	28
7.5	Plan for Future Indigenous Nation Engagement.....	28
8	Government, Public and Stakeholder Engagement	28
8.1	Engagement with Provincial, Federal and Local Governments.....	28
8.2	Engagement with the Public and Stakeholders	29

List of Tables

Table 1 – Approximate Project Schedule.....	10
Table 2 – Project Component Alternatives.....	11
Table 3 – Proximity of Site to Treaty Lands and Federal Lands	17
Table 4 – Potential Effects between Project Phase and Environmental Components	19
Table 5 – Chapter 10, Paragraph 8 (e) and 8 (f) and Associated Valued Components.....	23
Table 6 – Summary of General Issues Raised to date.....	27
Table 7 – Summary of General Issues Raised by Provincial, Federal, Municipal and Regional Government	29

List of Figures

Figure 1 – Project Location	5
Figure 2 – Conceptual Site Plan	6
Figure 3 – Expected Marine Transit Route	8

ACRONYMS AND ABBREVIATIONS

AK	Alaska
BC	British Columbia
BC CDC	British Columbia Conservation Data Centre
BC EAO	British Columbia Environmental Assessment Office
BC Hydro	British Columbia Hydro and Power Authority
BC EAA	British Columbia <i>Environmental Assessment Act</i>
Bcf/d	billion cubic feet per day
Bcf/yr	billion cubic feet per year
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CWH Zone	Coastal Western Hemlock Biogeoclimatic Zone
EA	environmental assessment
FLNG	floating liquefaction module
GHG	greenhouse gas
ha	hectare
IAA	Federal <i>Impact Assessment Act</i>
IAAC	Impact Assessment Agency of Canada
IPD	Initial Project Description
km	kilometre
LNG	liquefied natural gas
m ³	cubic metres
MLA	Member of Legislative Assembly
MOU	memorandum of understanding
MP	Member of Parliament
Mtpa	million tonne(s) per annum
MW	megawatt
Net Zero	Net zero refers to a state in which the GHGs going into the atmosphere are balanced by removal of an equivalent amount of GHGs out of the atmosphere
NO _x	nitrogen oxide
PM	particulate matter
PRGT	Prince Rupert Gas Transmission
SARA	Federal <i>Species at Risk Act</i>
SO ₂	sulphur dioxide
SoC	Statement of Cooperation on Protection of Transboundary Waters
TPA	tonnes per annum
t/t	tonnes per tonne
UTM	Universal Transverse Mercator
VC	Valued Component
VOC	volatile organic compounds
WCGT	Westcoast Connector Gas Transmission
WCSB	Western Canadian Sedimentary Basin

1 INTRODUCTION

The Nisga’a Nation and its project partners, Rockies LNG Limited Partnership (Rockies LNG) and Western LNG LLC (via its subsidiaries, Western LNG), (each a Proponent and collectively referred to herein as the Proponents), propose to jointly develop a floating natural gas liquefaction facility and marine terminal, including related infrastructure, on Category A Lands, as defined in the Nisga’a Final Agreement (the Nisga’a Treaty), owned in fee simple by the Nisga’a Nation on British Columbia’s (**BC’s**) northwest coast.

The Ksi Lisims LNG - Natural Gas Liquefaction and Marine Terminal Project (the Project) is to be located at Wil Milit on the far northern end of Pearse Island on Portland Canal (the Site; Figure 1). The Site is remote, located approximately 15 kilometres (**km**) west of the Nisga’a community of Gingolx at the mouth of the Nass River.

The Project will convert Canadian natural gas from the Western Canadian Sedimentary Basin (**WCSB**) of northeastern BC and northwest/central Alberta to liquefied natural gas (**LNG**). Natural gas will be transported to the Site via a natural gas transmission pipeline originating in northeastern BC. The Project will select either TC Energy’s Prince Rupert Gas Transmission (**PRGT**) or Enbridge’s Westcoast Connector Gas Transmission (**WCGT**) to provide natural gas transportation services to the Project. Both pipeline projects have valid BC Environmental Assessment Certificates and approved routes from northeastern BC to the BC northwest coast.

Once completed, the Project will produce 12 million tonnes per annum (**Mtpa**) of LNG and is proposing to use two to three floating liquefaction modules (**FLNGs**) and will receive 1.7 to 2.0 billion cubic feet per day (**Bcf/d**) of natural gas. The Proponents are designing the Project to be one of the lowest carbon emitting LNG export projects in the world. The Project’s objective is to be Net Zero within 3 years of operations start-up. This will be achieved after the Project connects to the BC Hydro and Power Authority (BC Hydro) power transmission system. BC Hydro renewable energy in combination with a strong monitoring and measurement program, other project design elements intended to reduce greenhouse gas (**GHG**) emissions, an operating culture focused on low emissions, purchase of carbon offsets and the potential for carbon capture and sequestration.

The Project will operate under a governance structure that provides each of the Proponents meaningful input into the management and operation of the Project, ensuring that it is operated in a manner that is consistent with the Nisga’a Nation’s commitment to stewardship of the land and its people. The Project has the potential to fulfill the economic development aspirations of the Nisga’a Nation, and provincial and federal government-led economic recovery measures and bring significant benefits to other Indigenous nations in the surrounding area while still meeting sustainable economic development objectives of all three levels of government.

2 GENERAL INFORMATION

This document is a plain language summary of the Initial Project Description (IPD) as required by the Impact Assessment Agency of Canada (IAAC) per Schedule 1, paragraph 25 of the 2019 *Information and Management of Time Regulations* and the *Guide to Preparing an Initial Project Description and a Detailed Project Description* under the *Impact Assessment Act (IAA)*.

This document is a summary of the official English language version of the IPD. In case of discrepancy, the original IPD in English shall prevail.

2.1 Project Name, Sector and Location

Project Name	Ksi Lisims LNG – Natural Gas Liquefaction and Marine Terminal Project
Type/Sector	LNG Production and Export; Marine Terminal
Proposed Location	Approximately 15 km west of the Nisga’a community of Gingolx on the northern point of Pearse Island (see Figure 1).

2.2 Proponent Information

Project Name	Ksi Lisims LNG – Natural Gas Liquefaction and Marine Terminal Project
Proponents	Nisga’a Nation, Rockies LNG and Western LNG
Address	1000, 600 – 3 rd Avenue SW Calgary, AB T2P 0G5
Project Regulatory Leadership (reporting to Ksi Lisims LNG Steering Committee)	Charlotte Raggett, President and CEO, Rockies LNG craggett@rockieslng.com 403-828-0802
	Collier Azak, CEO, Nisga’a Lisims Government colliera@niscga.net 250-633-3001
Principal Contact(s) for the Environmental-Impact Assessment	Mike Lambert, Director, Environmental and Regulatory Affairs mlambert@rockieslng.com 250-739-8839
URL	www.ksilisimslng.com

2.3 Purpose of and Need for the Project, and Potential Benefits

The Project will provide the Nisga’a Nation with an opportunity for greater economic self-determination and prosperity. In so doing, the Project will contribute to economic reconciliation by recognizing and implementing the Nisga’a Nation’s wishes in respect of sustainable development on lands they own under the Nisga’a Treaty. The Project will be an important component in the Nisga’a Nation’s social development strategy, providing extensive opportunities for jobs, training, and new businesses to be formed, both during the construction and operation phases of the Project.

Other Indigenous Nations in the region will also see Project related direct and indirect benefits, including economic benefit opportunities during the construction phase of the Project, and construction of the pipeline by the pipeline proponent selected by the Project. At a provincial level, the Project will generate significant revenue and direct and indirect jobs and businesses opportunities.

Other key benefits and objectives of the Project are to:

- Enable the export of rich natural gas deposits of the WCSB by natural gas producers in BC and Alberta to serve the growing demand for natural gas.
- Create tax and royalty revenues to the BC, Alberta and to the Federal Governments.
- Create direct and indirect benefits for Indigenous and non-Indigenous peoples through opportunities for jobs, training and business investment.
- Assist Canada, BC, Alberta and Indigenous Nations in meeting objectives to address global climate change through reduced GHG emissions.
- Create significant revenue for BC through tax payments, direct and indirect economic impacts, cumulative corporate taxes, and payments to BC Hydro.

3 PROJECT OVERVIEW

3.1 Activities and Components

The Project includes:

- Up to three FLNGs.
- Upland infrastructure, including electrical and natural gas distribution lines, roads, monitoring equipment, office space, workshop and warehouse to support the FLNGs.
- Operation support facilities, including potable water supply and waste management systems.
- Marine terminal including berths, jetty(s) and LNG off-loading systems.
- High-efficiency, natural gas-fired power facilities.
- Temporary (construction) and permanent (operation) workforce accommodation.
- Supporting marine traffic.
- Third party owned and operated transmission connection to the BC Hydro transmission system.
- Third party owned and operated natural gas pipeline with connection to BC and Alberta producers.

See Figure 2 for a conceptual plan of on land and in-water Project components.

Access to the Project Site will likely be by helicopter or float plane originating in Prince Rupert or Terrace or by suitable vessels originating from Gingolx or the Prince Rupert area. Project regional supply centres may include the Nisga'a community of Gingolx, other Nisga'a communities, the Nass Camp airstrip, the regional airport at Terrace, the Prince Rupert Airport, and the Port of Prince Rupert.

The Project will receive up to 1.7 to 2 Bcf/d (i.e., 56.6 million cubic metres (m³) per day) of pipeline grade treated natural gas and produce up to 12 Mtpa of LNG. The Project will process approximately 575 to 695 Bcf/yr of natural gas during an expected Project life of at least 30 years.

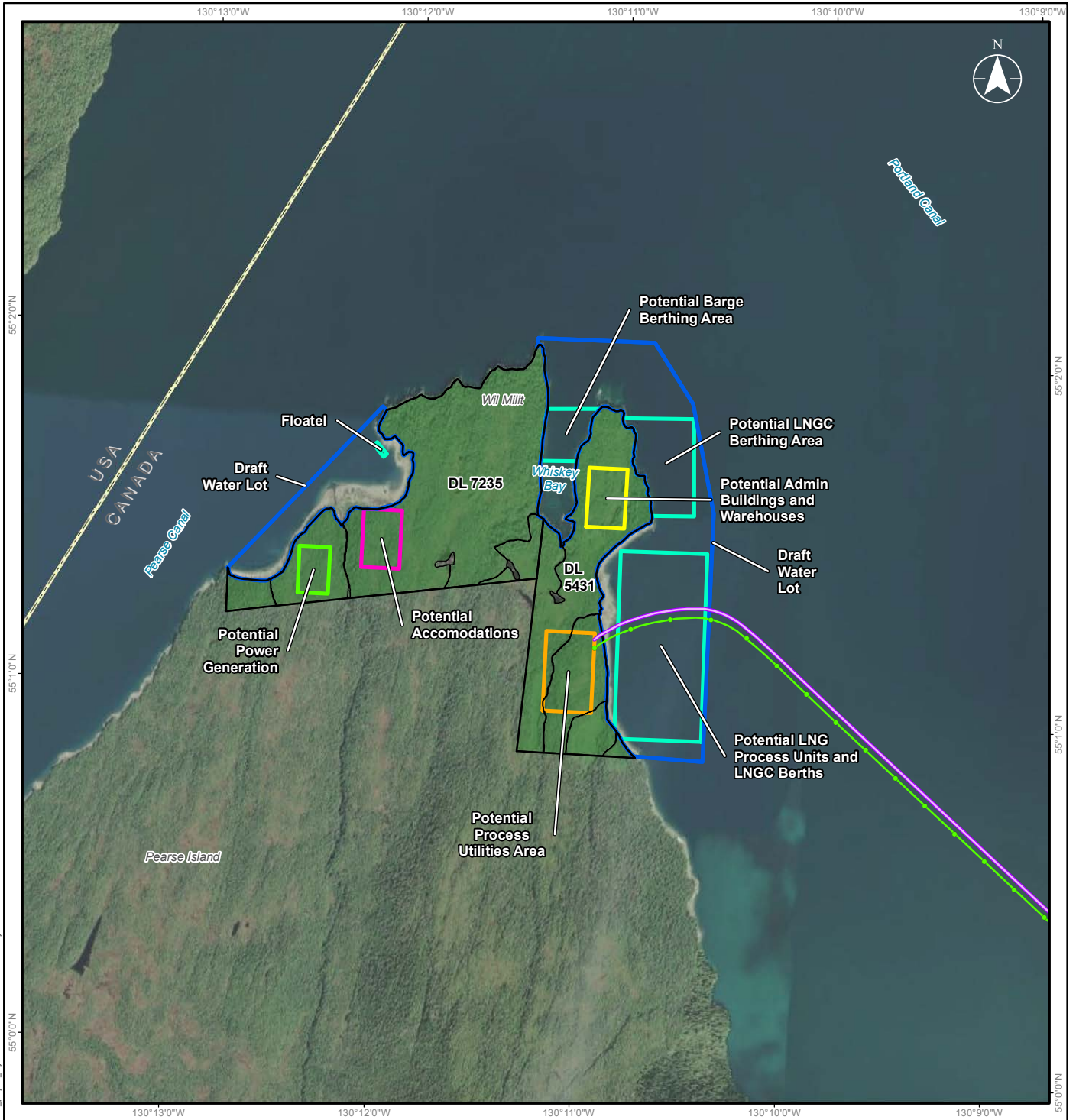
3.2 Construction

Construction is expected to take approximately three and a half years (i.e., 2024–2027) with commissioning estimated for 2027.

Peak construction workforce may be up to 200 workers. Project construction is planned as 24 hours a day, 7 days a week, safety and weather permitting. All construction activities will be conducted by third parties under contract to the Project.

Temporary construction support requirements may include:

- Initial pioneer dock.
- Storage and lay-down areas.
- Self-contained temporary construction workforce accommodation.
- Diesel power generation.
- Construction offices.
- Concrete batching plant.



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- Notes**
1. Coordinate System: NAD 1983 BC Environment Albers
 2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada, Maxar, Rockies LNG
 3. NTS Sheets: 103J, 103O

- Potential Deep Sea Pipeline
- Potential Transmission Line
- Potential Accommodations
- Potential Admin Buildings and Warehouses
- Potential Marine Feature
- Potential Power Generation
- Potential Process Utilities Area
- Potential Water Lot
- International Boundary
- Cadastral (Legal Lot) Boundary
- Nisga'a Nation Category A Land



Project Location: Pearse Island, BC
 Project Number: 123221820
 Prepared by SMOSS on 20210615
 Requested by SWEBSTER on 20210611
 Checked by TQUILICHINI on 20210615

Client/Project/Report
 Ksi Lisims LNG
 Natural Gas Liquefaction and Marine Terminal
 Initial Project Description

Figure No.

2

Title

Conceptual Site Plan

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3.3 Operations and Maintenance

The Project is designed to operate 24 hours per day, 365 days per year. Permanent operational workforce estimates are estimated to be between 150 and 200 employees.

Major operations activities include:

- Gas pre-treatment
- LNG production and storage
- Refrigerant and condensate management
- Loading of LNG and condensate carriers
- Process control
- Provision of Safety and Emergency Response Systems
- Potential only, maintenance dredging

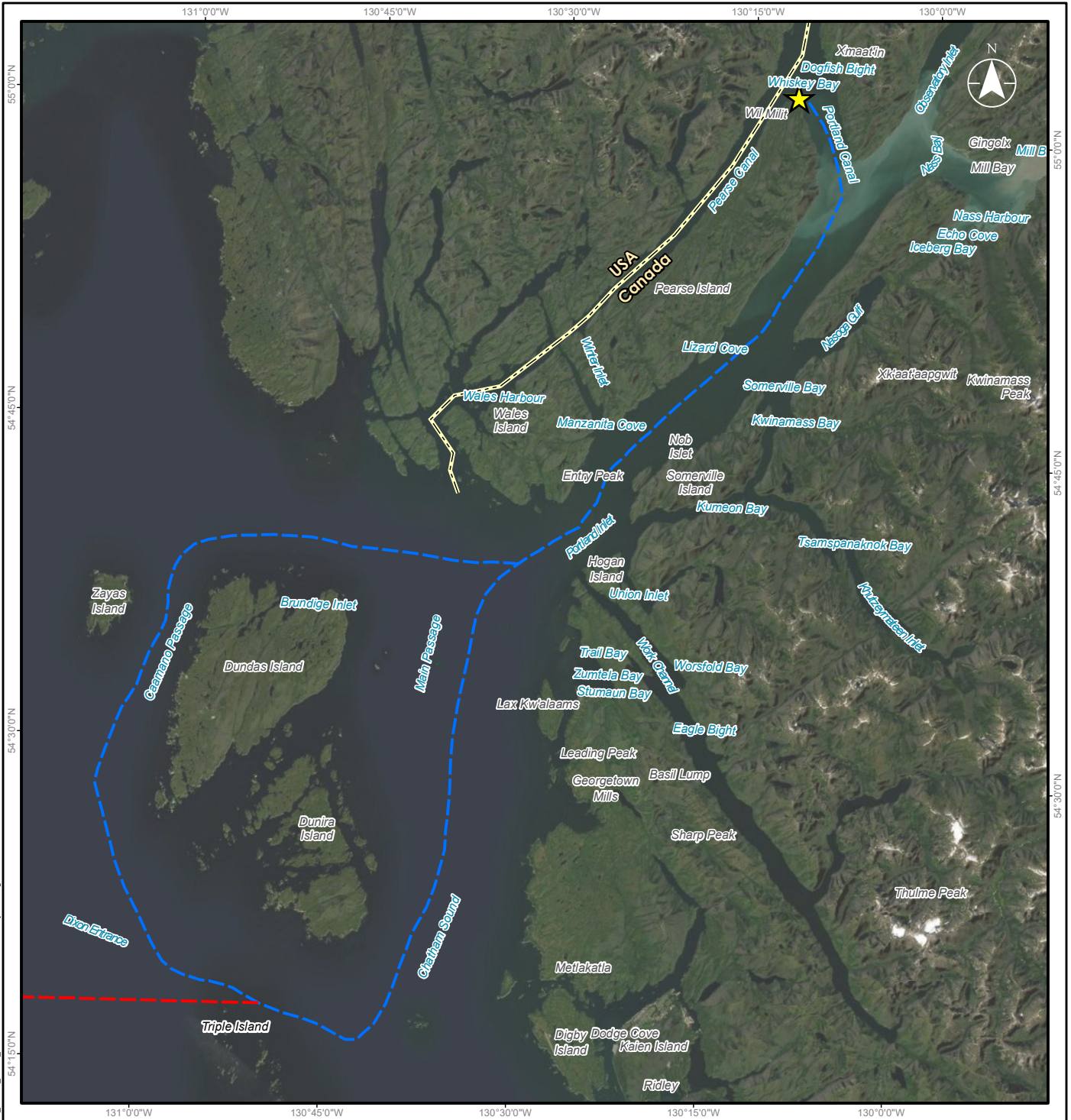
3.4 LNG Shipping

LNG carriers will be operated by third parties and are anticipated to have a capacity of up to 216,000 m³. LNG carriers are expected to enter Canadian waters through Dixon Entrance north of Haida Gwaii and will pick up a pilot at a designated location near Triple Island. With the pilot on board, vessels will travel north through Chatham Sound and Main Passage or through Caamano Passage, and then northeast through Portland Inlet, and Portland Canal (Figure 3).

The number of LNG shipments per year is estimated to be between 140 and 160, depending on the size of the LNG carriers used and the total LNG produced by the Project. It is anticipated that three or more suitably equipped tugboats will be used to safely assist berthing LNG carriers.

3.5 Decommissioning

It is anticipated that a decommissioning and abandonment plan would be developed in consultation with the Nisga'a Lisims Government (the land owner) and applicable regulatory authorities following Project operation, anticipated as approximately 30 years. Decommissioning would include removal of the FLNGs for refurbishing or salvage, dismantling and recycling of ancillary facility equipment and infrastructure, and reclamation of the Project Site.

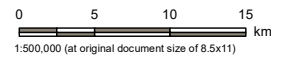


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- Notes**
1. Coordinate System: NAD 1983 BC Environment
 2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada, Maxar, Rockies LNG
 3. NTS Sheets: 1031, 103J, 103O, 103P

- Project Location
- Expected Marine Transit Route to Triple Island
- Expected Marine Transit Route
- International Boundary



Project Location: Pearse Island, BC
 Project Number: 123221820
 Prepared by SMOSS on 20210512
 Requested by SWEBSTER on 20210510
 Checked by CSTEINER on 20210512

Client/Project/Report
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 Natural Gas Liquefaction and Marine Terminal
 Initial Project Description

Figure No.

3

Title

Expected Marine Transit Route

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3.6 Emissions, Discharges and Waste

The FLNGs and accompanying upland infrastructure will generate a variety of wastes, emissions, and effluents over the life of the Project. Each of these wastes will be managed in compliance with the applicable Nisga'a and provincial and federal regulatory requirements and guidelines according to a management plan that will be developed for the Project.

Key considerations for the reduction in emissions, discharges and wastes for the Project include use of renewable power, carbon offsets and potential carbon sequestration to achieve Net Zero carbon emissions.

3.6.1 Construction

During construction, it is anticipated that most (i.e., except potential dredged seabed material) construction wastes will be managed, stored, and shipped to approved disposal locations. Solid and liquid wastes are expected from:

- biomass, soil and rock waste (e.g., from land clearing and excavation)
- construction wastes (e.g., wood, scrap metal, concrete, etc.)
- regulated hazardous materials (e.g., used oil or solvents)
- potentially, disposal at sea of dredge material (if dredging is necessary)
- domestic solid and liquid waste

The primary sources of air emissions during construction will be from construction equipment and power generation from portable diesel-powered generators.

3.6.2 Operations

During operations, solid and liquid wastes are expected to be generated from:

- domestic solid and liquid waste (e.g., from offices, workshops, warehouses)
- wood and scrap metal originating from maintenance activities
- treated stormwater
- treated process water
- hazardous wastes including those removed during natural gas treatment

During operations, NO_x, CO, SO₂, PM, VOC, and GHGs will be released into the atmosphere from:

- gas-fired facilities to produce power for the Project
- flaring (in the event of emergency or maintenance activities)
- LNG carriers and support vessels

3.6.2.1 Greenhouse Gases

The GHG emissions produced by the Project will be dependent upon the availability of power from the BC Hydro transmission system. If the full amount of power required by the Project is available, the Project is expected to produce less than approximately 600,000 of carbon dioxide equivalent (**CO₂e**) tonnes per annum (**TPA**) (or 0.05 CO₂e tonnes per tonne (**t/t**) LNG). If the Project had to self-generate 100% of its power, the Project is expected to produce approximately 1,870,000 CO₂e TPA (or 0.156 CO₂e t/t LNG). Both figures would be offset through the purchase of government recognized offsets to achieve Net Zero status. These estimates will be more fully developed in Pre-FEED.

3.7 Project Location, Land and Water Use

The Project will be located on Category A Lands owned in fee simple by the Nisga'a Nation, as defined in the Nisga'a Treaty, on undeveloped but previously logged land on District Lots 5431 and 7235 on Pearse Island and on the proposed Water Lot (Figure 2). The Project will be located on 164 hectares (**ha**) of land with a gentle topographic profile at UTM coordinates 423886 E, 6098716 N.

During construction, water will be shipped for use at Site. During operations, required water may be shipped to the Site or come from desalination units or well water if available. No surface water use is anticipated.

3.8 Schedule and Constraints

Table 1 outlines the current, estimated Project schedule for the primary Project Phases. Currently, there are no known seasonal activities in the region that are anticipated to affect Project schedule.

Table 1 – Approximate Project Schedule

Project Phase	Estimated Timeline
Environmental assessment	mid 2021 to early 2024
Engineering design	early to mid 2021 to late 2022
Permitting and environmental management plans	late 2022 to early 2024
Construction activities	early to mid 2024 to late 2027
Operations and maintenance	2027–2057 (approximately)
Decommissioning, abandonment, and reclamation	Post-2057

3.9 Alternative Means of Carrying Out the Project

Through Project design the Proponent will evaluate alternative means of carrying out the Project that are technically and economically feasible including alternatives that will avoid or mitigate negative impacts of the Project. These alternatives are presented in Table 2. The assessment of these alternatives will be informed by engagement with local Indigenous communities and regulators.

Table 2 – Project Component Alternatives

Project Component	Alternatives Considered
Site Options	Several sites were evaluated for this Project based on preferred site information assembled by the Nisga'a Nation. Sites were selected based on a number of risk factors, including constructability, operations, environmental impact and land ownership. Two other properties, Sgawban and Xmaat'in, owned and controlled by the Nisga'a Nation were deemed less desirable due to physical properties. Final upland and marine footprint will be informed by available engineering design, baseline environmental information and engagement with Indigenous Nations including the Nisga'a Nation.
Marine Terminal Design	Final design will consider the need to provide adequate vessel clearance while avoiding critical sensitive marine habitats.
Electric Power Supply	The Project is working with BC Hydro for renewable power supply options. It is anticipated that final design, construction and operation for the transmission connection from a BC Hydro sub-station to the Site will be provided by a 3 rd party. The Project will incorporate power generation at the site using efficient gas-fired power facilities.
Third-party Pipeline	The Project requires a natural gas transmission pipeline to convey natural gas from northeast BC and Alberta. The Project is currently considering two potential pipeline options that would be designed, constructed, owned and operated by a third party – PRGT proposed by TC Energy and WCGT proposed by Enbridge. Final selection will be made following further Project design.

3.10 Alternatives to the Project

An LNG facility at a different location with a different proponent partnership structure, or a different Nisga'a-led economic opportunity on their treaty lands, could contribute towards one of the three primary objectives of the Project. However, no alternative for the Project has been identified that is both technically and economically feasible and that would contribute towards each of the Project's three primary objectives.

4 ENVIRONMENTAL SETTING

The following section provides an overview of the biological and human environment setting in the vicinity of the Project. An image of the proposed Project Site is shown in Photo 1.



Photo 1 – Wil Milit Project Site at the Northern End of Pearse Island, View to the South

4.1 Physical Setting

4.1.1 Atmospheric, Climate, and Physical Environment

4.1.1.1 Climate and Physical Environment

The Site and Project shipping routes are within the Coastal Air Zone. The Site climate is humid with a long growing season, heavy rainfall, and mild, cool, cloudy summers. Strong outflow winds commonly blow down the inlets during winter.

The marine waters in the vicinity of the Site are within the Inner Pacific Shelf Ecoregion and North Coast Fjords Ecoregion. Water levels throughout the area are strongly tidal. Marine currents within Portland Inlet and Portland and Pearse Canals are highly variable due to a combination of wind and tidal forcing. Wind forcing is particularly important in the fall and winter under the combined influence of frequent Pacific storms and Arctic outflow winds.

The majority (98%) of the 908 km of marine shoreline in the Nass Area is undeveloped, with approximately 3 km (~0.3%) classified as being altered by human development.

4.1.1.2 Air Quality

Given the remoteness of the Project Site and its distance from industrial operations, the existing air quality is expected to be natural, unaltered by anthropogenic activity.

4.1.1.3 Acoustic Environment

The existing acoustic environment is characterized by the natural environment including wind, waves and marine and terrestrial wildlife. Due to the remoteness of the Site, anthropogenic sounds are limited to marine and air traffic. The closest community is Gingolx, approximately 15 km east of the Site.

4.1.2 Marine Communities and Species

The region surrounding the Project Site sustains a diverse marine community within a variety of marine ecosystem types. The distribution and abundance of marine mammals and birds fluctuates greatly in response to changes in food availability, with migration of eulachon and salmon drawing large numbers of marine birds, seals, and sea lions. Intertidal habitats at the Site include rocky shorelines and sand/gravel beaches vegetated with various forms of marine plants and seaweeds.

No notable concentrations of cetaceans are known to occur in the marine waters near the Project Site. The marine waters in the proposed Project Water Lot and the marine waters of the shipping lanes comprise fish habitat for many species of marine organisms. Of note are species important to Indigenous, commercial, and recreational fishers such as salmon, eulachon, Dungeness crab, Pacific halibut, numerous rockfish species, and other finfish, invertebrates, and aquatic plants. The Nass/Skeena stock of eulachon is listed as special concern by the Committee on the Status of Endangered Wildlife in Canada as well as by the BC Conservation Data Centre (**BC CDC**) on the BC Blue list (special concern).

4.1.3 Freshwater Communities and Species

Pacific salmon occur in many of the rivers and streams in the vicinity of the Site. Dogfish Creek on the eastern side of Portland Canal across from the Site is an important salmon stream.

The largest salmon-producing river in the region is the Nass River which supports abundant runs of sockeye, chinook, coho, pink and chum salmon as well as steelhead and anadromous Dolly Varden and cutthroat trout. Additional species include rainbow trout, mountain whitefish, Pacific lamprey, northern pikeminnow, peamouth chub, redbreast shiner, longfin smelt, sucker, and sculpin species. Cutthroat trout are included on the BC CDC's Blue list (special concern).

4.1.4 Terrestrial Communities and Species

The Project Site is within the Northern Coast Fjords Ecosection, the rugged Coast Mountains of the Hecate Lowland Ecosection and the Coastal Western Hemlock Biogeoclimatic Zone (**CWH Zone**).

The vegetation of the CWH Zone is dominated by old growth and second growth forests of western hemlock, sometimes with codominant western red cedar and amabilis fir. Sitka spruce is common on alluvial soils on lower slopes and along the river valleys. Most early seral communities in the CWH Zone are products of human activities because fires and other natural stand-replacing disturbances are patchy and infrequent. Logged areas develop a thick canopy of western hemlock or red alder and other deciduous trees and shrubs.

Foreshore habitats and salmon-bearing streams in the general area of the Project Site provide important foraging habitat for many species of wildlife, including grizzly bear, black bear, grey wolf, river otter, mink, bald eagle and gulls. Old forests provide important habitat for migratory and non-migratory birds.

Several species of conservation status have the potential to occur at or near the Site including grizzly bear, marbled murrelet and northern goshawk.

4.2 Human and Social Setting

4.2.1 Project Proximity to Communities

The Project Site is within the boundaries of the Regional District of Kitimat-Stikine. There are no schools, provincial or regional parks, hospitals, houses, water supplies, roads, or railways within approximately 15 km of the Project Site.

The nearest communities to the Site are as follows:

- The Nisga'a Village of Gingolx, BC (see Photo 2) is approximately 15 km east.
- The Nisga'a Village of Laxgalts'ap is approximately 38 km east.
- Lax Kw'alaams, BC is approximately 58 km south-southwest.
- Metlakatla, BC and the City of Prince Rupert, BC are both approximately 80 km south.
- Metlakatla, Alaska (**AK**) is approximately 90 km west.
- Port Edward, BC is approximately 92 km south
- The City of Ketchikan, AK is approximately 100 km to the west-northwest.
- The District of Stewart, BC and the village of Hyder, AK, are approximately 103 km north
- City of Terrace, Kitsumkalum IR 1 (~5 km west of Terrace) and Kitselas IR 1 (just west of Terrace) are approximately 120 km southeast

Four Nisga'a Villages (Gingolx, Gitwinksihlkw, Laxgalts'ap and Gitlaxt'aamiks) could potentially be affected by the Project. Gingolx is connected to the provincial highway grid by the Nisga'a Highway (113) to Terrace, BC. These Villages may become supply and service centres for the Project. The Project may use a ferry service from Gingolx for the marine transport of people, supplies and materials.



Photo 2 – Gingolx, BC

4.2.1.1 Indigenous Groups Setting

The Project Site is located within lands that are owned and controlled by the Nisga'a Nation and within the Nass Area, where the Nisga'a Nation has constitutionally protected treaty rights and interests, as set out in the Nisga'a Treaty. The traditional territories for the following Indigenous groups intersect or are in proximity to components of the Project (listed in order of proximity of each community's primary reserve to the Site):

- Lax Kw'alaams Band – based in Lax Kw'alaams (formally Port Simpson) near the north end of the Tsimpsean Peninsula, approximately 30 km northwest of Prince Rupert. Lax Kw'alaams Band has approximately 3,836 members, of which 17% live on reserve land. Lax Kw'alaams Band have 81 reserves throughout their traditional territory, covering approximately 16,497 ha. Lax Kw'alaams Band traditional territory includes Nass Bay and Nass River to the west, and Wales and Pearse Islands, the Dundas and Stephens Islands groups as well as lands and waters at the mouth of the Skeena River.
- Metlakatla First Nation – based in Metlakatla, on the south half of Tsimpsean 2 reserve near Prince Rupert. Metlakatla First Nation has approximately 944 members; 9% of which live on reserve land in Metlakatla. Metlakatla First Nation has 21 reserves, covering approximately 7,742 ha. Metlakatla First Nation traditional territory extends from the coastal islands in eastern Hecate Strait to Lakelse Lake near Terrace with Portland Canal and Observatory Inlet marking the northern extent of the territory.

- Kitsumkalum First Nation – based 5 km west of Terrace and has a population of approximately 800 members. About 30% of Kitsumkalum First Nation members live on reserve land, primarily in the main community at Kitsumkalum IR 1. Kitsumkalum First Nation has four reserves totaling 597 ha, including a reserve at Port Essington co-managed with Kitselas First Nation. Kitsumkalum traditional territory encompasses the areas around the Kalum River and Lakelse Lake watersheds, westward along the Skeena River, to the headwaters of Ecstall River, and out to the coast and marine waters including south down Grenville Channel, west past Arthur Island and north into Portland Canal.
- Kitselas First Nation – has a population of 705 members, of which approximately 43% live on two reserves: Kitselas IR 1 and Kulspai IR 6. These reserves are located along the Skeena River; IR 1 is just outside of Terrace, and IR 6 is in the Kitselas Canyon to the east of Terrace. Kitselas First Nation has 10 reserves covering 1069 ha; one reserve (Port Essington) is co-managed with Kitsumkalum First Nation. Kitselas First Nation’s Marine Harvest Area encompasses the coastal waters from the southern tip of Banks Island to the northern tip of Pearse Island.
- Gitxaala Nation – based in the Village of Kitkatla on Dolphin Island in Kitkatla Channel, located approximately 120 km west of Kitimat and 55 km south of Prince Rupert. The Gitxaala Nation has approximately 2,008 members, 25% of which live on reserve. Gitxaala Nation has 21 reserves covering 1,885 ha. Gitxaala Nation traditional territory covers just over 3,000 ha.
- Haida Nation – comprised of two bands: Old Masset Village Council or Haida Village, located 5 km northwest of Masset, and the Skidegate Mission, located on the southeast corner of Graham Island on Haida Gwaii. Haida Gwaii consist of two main islands, the more northerly Graham Island and Moresby Island in the south, and approximately 150 smaller islands; Haida Gwaii is located approximately 85 km west of Prince Rupert. Old Masset Village Council has 27 reserves covering 970 ha, and Skidegate Mission has 11 reserves covering 842 ha. Haida Nation has approximately 4,848 members, 28% of which live on two reserves: Masset IR 1 and Skidegate IR 1.
- Region 6 Prince Rupert and District Métis Nation of BC – members may access marine areas in the vicinity of the Project in pursuit of recreational, commercial, and Indigenous fisheries.

4.2.2 Land and Marine Use Planning

The Project Site is within the Regional District of Kitimat-Stikine but is not subject to an Official Community Plan or Zoning By-law as might be administered by a regional district or municipality.

The Nisga’a Nation has developed a land use plan that sets out important considerations during Project planning including the principle of sustainable use of resources for the benefit of all Nisga’a citizens. There are also a number of marine use plans that have been developed for areas that will be transected by the shipping route to the Project. These include:

- Interim Land and Marine Resource Plan of the Allied Tsimshian Tribes of Lax Kw’alaams Band
- Metlakatla Draft Marine Use Plan
- Kitsumkalum Marine Use Plan
- Gitxaala Marine Use Plan

4.2.3 Federal, Provincial, Nisga’a Nation or Foreign Lands

The Project is located on Nisga’a Nation Treaty Lands. The Project disturbance area does not overlap with any Federal lands or lands outside of BC or Canada. The proximity of federal lands, including First Nation reserve lands, from the Site (out to 55 km) are listed in Table 3.

Table 3 – Proximity of Site to Treaty Lands and Federal Lands

Federal Lands and Treaty Areas and Lands	Proximity to Project Site (km)
Treaty Area	
Nisga’a Nation Nass Wildlife Area	n/a within area
Treaty Lands	
Nisga’a Lands	11
Treaty Related Lands	
Nisga’a Category A (12)	0–52
Nisga’a Category B (6)	17–48
First Nation Reserve Lands	
Maklaksadagmaks 42, Knames 45, Knames 46, Red bluff 88	20–30
Maklaksadagmaks 41, Ksadagmks 43, Ksadsks 44, Me-yan-law 47, Spokwan 48, Spakels 17, Birnie Island 18	31–40
Finlayson Island 19, Union Bay 31, Carm Creek 38, Kateen River 39, Ksabasn 50, Ktamgaodzen 51, Knamadeek 52, Lax Kw’alaams 1, Tymgowzan 12	41–55
Fisheries and Ocean Canada	
Kincolith CEDP Hatchery	~15

4.2.4 Land and Water Use

The socio-economic conditions of the Project area can be described as generally natural, sparsely populated, with some history of commercial fishing, tourism, and forest harvesting. Coastal forest harvesting in the general area has diminished in recent years. Economic, cultural and social value near the Site and marine waters of the region are derived from the harvest of aquatic resources.

The marine waters of the region serve as marine navigation routes for commercial, industrial, Indigenous, and recreational users. Gingolx is connected to Terrace, BC via BC Highway 113.

Project operations will result in the movement of LNG carriers, tugs, and other vessel traffic through the area.

4.2.4.1 Past and Present Land Use

The Project Site is a former reserve (IR. No. 43) and can be considered undeveloped but was logged in areas near the shore several decades ago and does not have a history of any other developments aside from the past inhabitation and use by Indigenous people.

4.2.4.2 *Past and Present Surface or Groundwater Use*

There is no known past or present surface water or groundwater use at the Site.

4.2.4.3 *Past and Present Marine Use*

The proposed Water Lot boundaries at and adjacent to the Project Site are shown in Figure 2.

4.2.4.4 *Tourism and Recreation*

Maritime-based commercial tourism and non-commercial recreational users use the Portland Canal and Inlet areas – generally in the summer season. These tourism and recreation activities generally have had historically unhindered and unrestricted access within Portland and Pearse canals.

4.2.4.5 *Marine Fishing*

Marine fisheries in the area generally target all species of salmon, herring, eulachon, halibut, shrimp, bivalves and Dungeness crab. Marine plants (algae) are also harvested.

Commercial fishing by the Nisga'a Nation, Tsimshian Indigenous Nations and non-Indigenous groups is an economic staple in the local regional economy.

5 PROJECT POTENTIAL BIOPHYSICAL, SOCIAL AND ECONOMIC EFFECTS

5.1 Potential Environmental, Social and Economic Effects

Project construction, operation and decommissioning activities have the potential to result in effects to Nisga'a Treaty rights and to biophysical (ecological) and human (social, economic) effects. A summary of potential effects is presented in Table 4.

Table 4 – Potential Effects between Project Phase and Environmental Components

Biophysical or Human Component	Project Phase	Pathway of Effects	Potential Effect
Atmospheric Environment	Construction Operation Decommissioning	Construction and Decommissioning: Land clearing activities, power generation, construction equipment, vehicle traffic Operations: FLNG liquefaction, gas-fired facilities, flares, acid-gas incinerators, LNG carriers and support vessels	<ul style="list-style-type: none"> • Increase in ambient concentrations of criteria air contaminants, including SO₂, NO_x, CO and particulate matter • Increase in emission of GHGs including CO₂, CH₄, N₂O expressed as CO₂e. • Increased noise levels causing nuisance; displacement and sensory disturbance to wildlife. • Potential for air emissions to disperse to Alaska.
Freshwater Fish and Fish Habitat	Construction	Site clearing activities, construction of land-base components, roads and temporary-use areas	<ul style="list-style-type: none"> • The harmful alteration, disruption or destruction of fish habitat under the Project's upland and marine disturbance area from the construction and operation of the proposed facility. • Potential mortality or physical injury of fish and/or fish eggs from the Project's construction activities and large vessel movements to and from the marine terminal. • Sensory disturbance or hearing injury from underwater construction noise generated during construction of the marine terminal infrastructure. • Changes to fish food and nutrient content. • Mortality or physical injury as a result of physical impact due to construction activities (e.g., by machinery or covering by sediment).
Marine Fish and Fish Habitat	Construction Operation Decommissioning	Construction of the pioneer dock, temporary construction workforce accommodation, and marine terminal and installation of FLNGs Operations: FLNG facility and LNG carrier berth, mooring of LNG carriers, marine shipping activities, waste management Decommissioning: Dismantling of Infrastructure, remediation and reclamation	<ul style="list-style-type: none"> • The harmful alteration, disruption or destruction of fish habitat under the Project's upland and marine disturbance area from the construction and operation of the proposed facility. • Potential mortality or physical injury of fish and/or fish eggs from the Project's construction activities and large vessel movements to and from the marine terminal. • Sensory disturbance or hearing injury from underwater construction noise generated during construction of the marine terminal infrastructure. • Shading or clearing of intertidal or subtidal vegetation required as a result of the construction of the marine terminal infrastructure. • Changes in behaviour of marine fish • Mortality or physical injury as a result of physical impact due to construction activities (e.g., by machinery or covering by sediment)
Migratory Birds	Construction Operation Decommissioning	Construction: Site clearing activities, construction of land-base components, roads and temporary-use areas Operations: FLNG facility and LNG carrier berth, mooring of LNG carriers, marine shipping activities Decommissioning: Dismantling of infrastructure, remediation and reclamation	<ul style="list-style-type: none"> • Changes to migratory bird movement patterns due to an increase in large vessel marine traffic • Loss or alteration of habitat on the upland due to the construction and operation of the facility • Increased risk of mortality due to the construction and operation of the facility • Direct loss of habitat and potential habitat due to the Project footprint • Indirect loss of habitat and potential habitat due to sensory disturbance • Behavioral response due to sensory disturbance • Mortality (direct and indirect)

Biophysical or Human Component	Project Phase	Pathway of Effects	Potential Effect
Marine Mammals	Construction Operation Decommissioning	Construction of the pioneer dock, temporary construction workforce accommodation, and marine terminal and installation of FLNGs Operations: FLNG facility and LNG carrier berth, mooring of LNG carriers, marine shipping activities, waste management Decommissioning: Dismantling of Infrastructure, remediation and reclamation	<ul style="list-style-type: none"> • Potential mortality or physical injury of marine mammals from the Project's construction activities and large vessel movements to and from the marine terminal. • Shading or clearing of intertidal or subtidal vegetation required as a result of the construction of the marine terminal infrastructure. • Direct and indirect loss of habitat and potential habitat • Behavioural response due to sensory disturbance • Mortality or physical injury as a result of physical impact due to construction activities (e.g., by machinery)
Vegetation Communities	Construction	Site clearing activities, construction of land-base components, roads and temporary-use areas	<ul style="list-style-type: none"> • Change in the abundance of plant species of interest • Change in the abundance of ecological communities of interest
Wildlife and Wildlife Habitat (includes marine birds)	Construction Operation Decommissioning	Construction: Site clearing activities, construction of land-base components, roads and temporary-use areas Operations: Operations: FLNG facility and LNG carrier berth, marine shipping activities, waste management Decommissioning: Dismantling of Infrastructure, remediation and reclamation	<ul style="list-style-type: none"> • Change in the availability and/or suitability of wildlife habitat, increased mortality risk, and changes to movement patterns
Employment and Economy	Construction Operation Decommissioning	Project expenditures and employment during all Project phases	<ul style="list-style-type: none"> • Change in regional labour force • Change in regional business • Change in provincial economy
Land Use	Construction Operation	Construction and operation of on land facilities and associated infrastructure Presence of workforce and mobile equipment	<ul style="list-style-type: none"> • Change in private property and tenured land use • Change in non-tenured land use
Marine Use	Construction Operation	Construction and operation of the marine terminal and berth Shipping traffic Resource use by workforce	<ul style="list-style-type: none"> • Change in marine navigation • Change in marine fisheries and other uses
Socio-Community	Construction Operation	Changing demands for accommodation, community infrastructure and services Presence of temporary workforce (could disrupt community life)	<ul style="list-style-type: none"> • Change in community infrastructure and services • Change in accommodation availability • Change in transportation infrastructure • Change in community health and wellness
Heritage	Construction	Land disturbing activities such as site clearing, construction of land-base components, roads and temporary-use areas	<ul style="list-style-type: none"> • Loss of information about or alteration to site contents or context
Human Health	Construction Operation Decommissioning	Release of contaminants of concern into the environment where they can be inhaled or ingested through food and water.	<ul style="list-style-type: none"> • Changes to human health

Best practices and mitigation measures to avoid and reduce potential effects of the Project will be incorporated and considered in Project design and revised as appropriate as the Project progresses through the environmental assessment process. Mitigation measures will be developed in accordance with applicable provincial and federal regulations and permit requirements, best management practices, and specific measures identified through the environmental impact assessment process.

The Project has the potential to contribute cumulatively to potential effects on the environment associated with past, present and reasonably foreseeable future projects and activities in the region. Where the potential for cumulative effects are identified additional mitigation measures and management plans will be identified to manage them. No regional studies as defined by the IAA have occurred within the Project area.

Given the proximity of the Project to the United States border between BC and AK the potential exists for some effects, such as air emissions, to result in a trans-boundary effect. The potential for this effect will be evaluated once meteorological conditions are better understood. Other potential transboundary effects include under and above water noise.

Effects to provincial lands other than BC are not anticipated given that the closest provincial border is the BC--Yukon border approximately 525 km north from the Site.

5.2 Potential effect of Project-Related Changes on Indigenous Peoples

As per schedule 1, section 3 (21)(22) of IAA, the Project may result in potential impacts to Indigenous peoples including:

- Nisga'a Treaty Rights
- Changes to health and socio-economic conditions
- Physical and cultural heritage
- The current use of lands and resources for traditional purposes
- Any structure, site, or thing that is of historical, archaeological, or architectural significance

5.3 Potential Effects in Relation to Requirements of the Impact Assessment Act

Section 19 of the Information and Management of Time Limits Regulation requires the assessment of potential effects of Project activities as follows:

Fish and Fish Habitat as defined in subsection 2(1) of the *Fisheries Act* – the Project has the potential to affect fish and fish habitat as defined by the *Fisheries Act* as a result of:

- The harmful alteration, disruption and destruction of fish habitat
- Potential mortality or physical injury of fish (including marine mammals) and/or fish eggs
- Sensory disturbance or hearing injury

Aquatic Species as defined in subsection 2(1) of the *Species at Risk Act (SARA)* – the Project has the potential to affect aquatic species as defined by SARA as a result of:

- Sensory disturbance or hearing injury resulting in behavioural changes
- Shading or clearing of intertidal or subtidal vegetation
- Mortality or physical injury

Migratory Birds as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994* – the Project has the potential to affect migratory birds:

- Changes to migratory bird movement patterns
- Loss or alteration of habitat on the upland
- Increased risk of mortality

6 LEGISLATIVE AND REGULATORY CONTEXT

6.1 Nisga'a Treaty

As set out in the Nisga'a Treaty, the Nisga'a Nation owns and controls parcels of land within the Nass Area including: Nisga'a Lands and Nisga'a Fee Simple Lands (each as defined in the Nisga'a Treaty). The Site is located within Category A Fee Simple Lands. The Category A Lands include marine and/or estuary shoreline. The Nisga'a Nation owns the surface and subsurface resources of Category A Lands.

Chapter 10 of the Nisga'a Treaty, specifically states in 8 (e) and 8 (f) the following:

8 (e) assess whether the project can reasonably be expected to have adverse environmental effects on residents of Nisga'a Lands, Nisga'a Lands, or Nisga'a interests set out in this Agreement and, where appropriate, make recommendations to prevent or mitigate those effects; and

8 (f) assess the effects of the project on the existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the project.

Nisga'a interests, as identified in the Nisga'a Treaty as written above, are shown in Table 5.

Table 5 – Chapter 10, Paragraph 8 (e) and 8 (f) and Associated Valued Components

Nisga'a interests as related to residents of Nisga'a Lands, Nisga'a Lands or Nisga'a rights	Valued Component
Paragraph 8(e)	
Fish, Aquatic Plants, water and sediment (Freshwater)	Salmon (i.e., sockeye, pink, Chinook, coho, and chum) Steelhead (i.e., winter run and summer run steelhead) Non-salmon Species (i.e., Rainbow Trout, Dolly Varden, Bull trout, Cutthroat trout and Pacific lamprey) Eulachon Freshwater aquatic plants (e.g., yellow pond lily, common cattail, peat moss) Water Quality and Sediment Quality Water Quantity and Sediment Quantity
Fish, Aquatic Plants, water and sediment (Marine)	Salmon (i.e., sockeye, pink, Chinook, coho, and chum) Non-Salmon Marine Fish (e.g., halibut, rockfish, eulachon, etc.) Steelhead (i.e., winter run and summer run steelhead) Invertebrates (e.g., bivalves, prawns, crabs, sea cucumber, urchins etc.) Marine Mammals (i.e., Harbour Seal and Steller Sea Lion) Marine Plants (Kelp beds, sub-tidal and intertidal seaweeds, sea asparagus, sea (marsh) grasses etc.) Water Quality and Sediment Quality
Wildlife	Moose Mountain Goat Grizzly Bear American Marten Fisher Wolverine Black Bear Grouse
Migratory Birds	Canada Goose Dabbling Ducks Diving Ducks (including Mergansers)
Botanical Forest Products	Western Red Cedar Yellow Cedar Pine Mushroom Devil's Club Indian Hellebore Soopolallie Labrador Tea Black Huckleberry
Lands	Visual Quality (from viewpoints on the Nisga'a Memorial Lava Bed Park, Nisga'a Lands, Nisga'a fee simple properties, and the Nisga'a Highway) Air quality, aesthetic quality, quality and quantity of potable water and access for Nisga'a Lands and Nisga'a fee simple properties

Nisga'a interests as related to residents of Nisga'a Lands, Nisga'a Lands or Nisga'a rights	Valued Component
	Other land related interests in the Nisga'a Treaty (Nisga'a Memorial Lava Bed Park (and other provincially protected areas within the Nass Area)); commercial and recreation areas; guide outfitting territory; angling guide licences; traplines; water reservation for domestic, industrial and agricultural uses; water reservation for potential hydro power; intertidal bivalve harvesting areas Nisga'a citizens' access to other lands
Paragraph 8(f)	
Existing and future economic well-being of Nisga'a citizens	Employment opportunities and income for Nisga'a citizens Contracting opportunities and earnings for Nisga'a businesses Natural resource activities: economic effects Future Nisga'a Nation economic opportunities and economic development Nisga'a Nation revenues and expenditures
Existing and future social well-being of Nisga'a citizens	Migration and population ^a Infrastructure and services in Nisga'a communities Occupational health & accident risks Family and community well-being ^b Human health and well-being
Existing and future cultural well-being of Nisga'a citizens	Nisga'a cultural sites and artifacts (including Culturally Modified Trees, spiritual sites, current and historical cultural sites, provincial heritage sites etc.) Effects of changing work patterns on cultural activities and practices Natural resource activities: cultural effects Nisga'a language
NOTES: ^a Migration and population change is considered as an intermediate or pathway effect that in turn has potential implications for other VCs. Migration and population are not assessed as either a beneficial or adverse effect per se; instead population and migration projections are used as a basis for the assessment of other effects. ^b e.g., family life, social participation, leisure, security, education, poverty, children at risk, social issues such as crime, addiction, domestic violence, gambling.	

6.2 Provincial Environmental Assessment

The Project is subject to review and to a Ministerial decision required under the British Columbia *Environmental Assessment Act (BC EAA)* 2018 as it exceeds several of the thresholds (triggers) listed in the *Reviewable Projects Regulation*, for:

- **Electricity Projects** – The Project will incorporate gas fired power plant(s) that would combust natural gas to create electricity exceeding the 50-megawatt (MW) threshold.
- **Petroleum and Natural Gas Projects** – The Project's LNG storage capacity in each of the FLNGs is expected to be approximately 150,000 m³, exceeding the threshold of 136,000 m³.
- **Shoreline Modification Projects** – Construction of the FLNGs and barge mooring infrastructure is expected to result in direct physical disturbance of more than 2 ha of a combination of foreshore and submerged land.

6.3 Federal Impact Assessment

The Project will require an impact assessment decision under the IAA as it meets or exceeds the thresholds (triggers) for three criteria in the *Regulations Designating Physical Activities*, for:

- **Energy Projects** – Inclusion of a fossil fuel fired power plant(s) that would combust natural gas to create electricity exceeding the 200 MW threshold.
- **LNG Projects – Volume Produced and Storage** – LNG storage capacity in each of the FLNGs is expected to be approximately 150,000 m³, exceeding the threshold of 136,000 m³.
- **New Marine Terminal** – LNG carriers arriving at the Project's marine terminal would exceed the threshold of 25,000 dry weight tonnes.

6.4 Regional or Strategic Environmental Impact Assessments

No provincial regional or strategic environmental assessments have been carried out or are underway in an area that overlaps the Site.

The federal *Strategic Assessment of Climate Change* – July 2020 is applicable to the Project.

6.5 Substitution

The Project is anticipating that the British Columbia Environmental Assessment Office (**BC EAO**) will request a *substitution* of the impact assessment processes required by the IAAC pursuant to the *Impact Assessment Cooperation Agreement Between Canada and British Columbia* and consistent with the Nisga'a Treaty, Chapter 10, 8(a) where there is agreement between the three parties to the Treaty to harmonize environmental assessment processes.

6.6 Applicable International Agreements between BC and Alaska

The Site is within 2 km of the BC – Alaska border. A Memorandum of Understanding and Cooperation Agreement (**MOU**) between the State of Alaska and the Province of British Columbia was signed by the Alaskan Governor and the Premier of BC in 2015. Parts of this MOU that may be applicable to this Project may include:

- protection of transboundary waters
- sharing best practices on workforce development and training
- advancing marine transportation reliability and safety
- reinforcing emergency management mutual aid and response
- fostering continued growth of existing and increased transportation links
- exploring other areas for cooperative action

Appendix 1 of the MOU includes a *Statement of Cooperation on Protection of Transboundary Waters (SoC)* between the State of Alaska departments of Environmental Conservation, Fish and Game, and Natural Resources and the BC ministries of Environment and Energy and Mines. The SoC makes specific reference to the Nisga'a Nation, environmental assessment and permitting processes and other matters.

6.7 Federal Funding

The Project is not anticipated to require the use of federal funding or federal land.

6.8 Studies, Plans or Regional Assessments

Biophysical and socio-economic data pertaining to potential effects on the Nisga'a Nation have been collected during previous environmental assessments for PRGT and WCGT and are available to aid in assessing the effects of the Project. The Nisga'a Nation has also been conducting numerous fish and wildlife studies over this general area for over the past 20 years. In addition, a strategic land and resource plan was completed for the Project and provides source of general marine biophysical information applicable to marine waters potentially affected by the Project.

Several studies have been completed to date that support the Project's design concepts including site evaluations, electrification options and wave screening.

The Project plans to complete a number of baseline and/or feasibility activities and/or studies related to biophysical, socio-economic and engineering and design prior to construction. The results of these activities and/or studies will inform the assessment process for the Project. The final list of studies undertaken for the Project will be informed by Indigenous and non-Indigenous engagement. In addition, the Nisga'a Nation has compiled years of studies on biophysical values important to them and their rights and interests under the Nisga'a Treaty.

7 INDIGENOUS NATION ENGAGEMENT

7.1 Engagement with Indigenous Nations

The Project is being developed in partnership with the Nisga'a Nation. The Site is located within Category A Lands, which are lands owned in fee simple by the Nisga'a Nation and within the Nass Area, where the Nisga'a Nation has constitutionally protected treaty rights and interests as set out in the Nisga'a Treaty. As owners of the land and partners in the Project, the Nisga'a Nation will need to approve the Project.

To date, engagement has been undertaken with the following Indigenous Nations:

- Nisga'a Lisims Government
- Lax Kw'alaams Band
- Metlakatla First Nation
- Kitsumkalum First Nation
- Kitselas First Nation
- Gitxaala Nations
- Haida Nation
- Métis Nation British Columbia

7.2 Indigenous Nation Engagement Activities to Date

In March 2021, the Proponents sent written information about the Project to Lax Kw'alaams Band, Metlakatla First Nation, Kitsumkalum First Nation, Kitselas First Nation, Gitxaala Nation and Haida Nation. In addition, written information was provided to the Métis Nation British Columbia in May 2021.

Preliminary engagement has focused primarily on information sharing about the Project, next steps in regulatory review, responding to questions and issues raised by Indigenous Nations, gaining a better understanding as to how the Project may impact each Indigenous Nation's interests, and recording concerns expressed. More details regarding engagement are provided in the IPD and Engagement Plan.

7.3 Issues identified by Indigenous Nations to Date

Table 6 provides a high-level overview of some of the key issues that northwest coast Indigenous Nations have raised to date about proposed LNG projects on their territories on the northwest coast of BC.

This list of general issues will be updated throughout the EA and may include new issues, or a refinement of the issues described here.

Table 6 – Summary of General Issues Raised to date

Theme	Issue Raised
Marine and Fresh Water Quality	Impacts to marine water quality from dredging and/or any discharges of treated effluent related to the Project's operations. Impacts to freshwater and the fisheries that use freshwater.
Archaeology	Potential negative effects of LNG export projects on the presence and identification, collection and, where necessary, protection of sensitive archaeological sites and artefacts at a project site.
Air Emissions from the LNG Facility	Potential impact of air emissions, including GHG emissions, from the LNG facilities and potential impacts on vegetation, wildlife, and human health.
Marine Transport and Shipping	Project-associated increases in large vessel shipping, potential interference with Indigenous marine water use and the overall safety of LNG carriers including emergency preparedness and response.
Cumulative Effects	Cumulative effects from current and proposed natural resource development and other associated projects.
Impacts to Fishing	Potential effects from the proposed Project and the vessels that support it on fishing activities and the current way of life on the northwest coast. Specific concerns have been raised about potential effects on Indigenous harvesting of seaweed, eulachon, salmon (e.g., Chinook, coho, pink, sockeye, chum), halibut, cod, herring, and crab.
Human and Social	Potential effects on communities from transient workers during construction.

7.4 Potential Impacts to Indigenous Nations Resulting from Project Activities

Based on publicly available information and information shared by previously identified Indigenous groups, it is anticipated that the Project has the potential to impact Indigenous Nations as a result of changes to the environment that affect:

- Physical and cultural heritage through changes to the Site as a result of clearing and ground disturbance that could alter archaeological or heritage sites or sites of cultural importance.
- Current use of lands and resources for traditional purposes, through a change in access to resources as a result of the removal of resources through Project activities or a change in the ability or desire to access lands and resources due to the presence of Project infrastructure and activities.
- Structure, site or thing that is of historical, archaeological, paleontological or architectural significance through changes to the Site as a result of clearing and ground disturbance.

The Project also has the potential to impact the health, social and economic conditions of Indigenous Nations through changes to access to resources that affect the ability to hunt and forage of traditional foods, changes in the quality of harvested foods, or interference with economic activities such as guiding, tourism, and marine recreation.

7.5 Plan for Future Indigenous Nation Engagement

The Proponents will continue to engage with each of the Indigenous Nations identified in Section 7.1.

8 GOVERNMENT, PUBLIC AND STAKEHOLDER ENGAGEMENT

8.1 Engagement with Provincial, Federal and Local Governments

The Proponent has communicated with several federal, provincial, municipal and regional governments since October 2020 to initiate Project discussions and confirm government requirements. More information regarding this preliminary engagement is available in the IPD.

Government agencies engaged to date (June 2021) are:

- BC Coast Pilots
- BC Environmental Assessment Office
- BC Ministry of Indigenous Relations and Reconciliation
- BC Ministry of Environment and Climate Change Strategy
- BC Ministry of Energy, Mines and Low Carbon Innovation
- BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development
- BC Oil and Gas Commission
- Impact Assessment Agency of Canada
- Natural Resources Canada
- Pacific Pilotage Authority

- Indigenous and Northern Affairs Canada
- Regional District of Kitimat-Stikine

Table 7 summarizes the issues and feedback received to date (June 2021) during preliminary engagement with provincial, federal and local government agencies.

Table 7 – Summary of General Issues Raised by Provincial, Federal, Municipal and Regional Government

Theme	Issue Raised
Project Regulatory Approvals	Project provincial and federal regulatory approval requirements (see Section 6). The Project will provide early review of regulatory filings, as available.
Air Emissions from the LNG Facility	Potential receptor locations as well as any transboundary effects will be identified during the Project assessment. Strategic Assessment on Climate Change will be addressed during the Project assessment.
Marine Transport and Shipping	Large vessels will require the use of a pilot and the new terminal will require a risk assessment. Marine shipping routes will be identified during the Project assessment.
Human and Social	Current and ongoing engagement will focus on both leadership and technical matters.

Government engagement on the Project is ongoing. A Technical Working Group with representation from most federal and provincial agencies with an interest in the Project will be formed. The Project team will continue to engage in conversations with the BC EAO and IAAC to ensure that the appropriate regulators and agencies have been identified and are engaged. The Proponent will also engage with local and regional government representatives and the provincial MLAs and MP for the region.

In keeping with constraints necessitated by the COVID-19 pandemic, communications with these government representatives will be almost entirely electronic.

8.2 Engagement with the Public and Stakeholders

Planning for public and other stakeholder engagement is underway. Planned activities include:

- Release of Project website including regular updates that include an overview of the Project and links to important Project-specific regulatory websites and how to get involved in the approval process.
- An initial email notification will be sent to identified stakeholder organizations and community. The notification will include an offer of a tele-conference meeting.
- Virtual (or in-person, depending on the COVID-19 protocols) open houses, town halls or community meetings may take place during BC EAO and IAAC designated public comment periods.
- Digital and print ads, as well as social media will promote open houses, town halls or community meetings.

- The Project will distribute Project information sheets to MLA and MP constituency offices, municipal and regional government leaders in the event they receive any inquiries from their constituents.
- Local knowledge, issues, concerns and feedback received from the public will be compiled in a Project tracking table and considered for incorporation into the EA process, as appropriate. As required, a response from the Project will be provided.

The Proponent will continue to engage with stakeholders and the public during early engagement and throughout the EA processes in 2021 and thereafter.