KSI LISIMS LNG

Natural Gas Liquefaction and Marine Terminal Project

Initial Project Description (BC EAA 2018, IAA 2019)

Date: July 2, 2021

KSI LISIMS LNG

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ACRONYMS AND ABBREVIATIONS

AK	Alaska
BC	British Columbia
BC EAO	British Columbia Environmental Assessment Office
BC Hydro	British Columbia Hydro and Power Authority
BC OGC	British Columbia Oil and Gas Commission
BCEAA	British Columbia *Environmental Assessment Act*
Bcf/d	billion cubic feet per day
Bcf/yr	billion cubic feet per year
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWH Zone	Coastal Western Hemlock Biogeoclimatic Zone
DPD	Detailed Project Description
EA	environmental assessment
EA-IA	environmental assessment and impact assessment
EAC	Environmental Assessment Certificate
ECCC	Environment and Climate Change Canada
EP	Engagement Plan
FEED	Front-End Engineering and Design
FLNG	floating liquefaction module
FLNRORD	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FNCI	First Nations Climate Initiative
GHG	greenhouse gas
GHGIRCA	BC *Greenhouse Gas Industrial Reporting and Control Act*
GW	gigawatt
ha	hectare
IA	impact assessment
IAA	Federal *Impact Assessment Act*
IAAC	Impact Assessment Agency of Canada
IPD	Initial Project Description
km	kilometre
km^2	square kilometres
LAA	Local Assessment Area
LNG	liquefied natural gas
m	metre
m^3	cubic metres
MaPP	Marine Plan Partnership for the North Pacific Coast
MNBC	Métis Nation of British Columbia
MOU	memorandum of understanding
MP	Member of Parliament

MSAA	Marine Shipping Assessment Area
Mtpa	million tonne(s) per annum
MW	megawatt
NC LRMP	North Coast Land and Resource Management Plan
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
Nisga'a Treaty	Nisga'a Final Agreement (the Nisga'a Treaty)
NLG	Nisga'a Lisims Government
NO_X	nitrogen oxide
PDA	Project Disturbance Area
PM	particulate matter
Pre-FEED	Preliminary Front-End Engineering and Design
PRGT	Prince Rupert Gas Transmission
RAA	Regional Assessment Area
SACC	Strategic Assessment on Climate Change
SARA	Federal *Species at Risk Act*
SOx	sulphur oxide compounds
t	metric tonne (equal to 1,000 kilograms)
TPA	Tonnes per annum
TERMPOL	Technical Review Process of Marine Terminal Systems and Transshipment Sites
UBCM	Union of BC Municipalities
UTM	Universal Transverse Mercator
VC	Valued Component
VOC	volatile organic compounds
WCGT	Westcoast Connector Gas Transmission
WCSB	Western Canadian Sedimentary Basin

EXECUTIVE SUMMARY

Introduction and Overview

The Nisg̲a'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 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 in Portland Canal (Figure 1). The Project site **(Site)** is remote, located approximately 15 kilometres **(kms)** west of the Nisg̲a'a community of Ging̲olx at the mouth of the Nass River.

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

At full build-out, the Project will receive from 1.7 to 2 billion cubic feet per day **(Bcf/d)** (i.e., 56.6 million m^3 per day) of pipeline grade natural gas and produce up to 12 million tonnes per annum **(Mtpa)** of LNG. The Project will process approximately 575 to 695 billion cubic feet per year **(Bcf/yr)** of natural gas during an expected Project life of at least 30 years. The Proponents are designing the Project to be one of the lowest carbon emitting LNG export projects in the world, targeting to be Net Zero within 3 years of operations start-up. This will be achieved once the Project connects to the BC Hydro and Power Authority (**BC Hydro**) renewable power grid, in combination with a monitoring and measurement program, 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.

Project Benefits

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 construction and operation. Many other Indigenous communities in the region and across the interior of BC will benefit from the economic development of the Project and the associated pipeline. In addition, the Project is working to develop opportunities for Indigenous community equity participation in the pipeline.

The environmental benefits of the Project are extensive. Exporting LNG from Canada provides foreign consumers with a reliable, responsibly produced energy source that helps governments to meet climate targets, satisfy energy demand growth and supports the use of renewables by offsetting intermittent renewable energy (e.g., solar, wind, etc.). In Asia, coal and oil currently supply over 70% of primary energy demand. Replacing coal with LNG exported from the Project results in a reduction of global carbon emissions by over 45 million tonnes per year, or 1.3 gigatonnes over a 30-year period, which is equivalent to offsetting nearly two years' worth of total carbon emissions from Canada.

At a provincial level, the Project will generate significant revenue and direct and indirect jobs and businesses opportunities. Combined property, carbon and other non-income tax payments will generate approximately $3 billion over a 30-year period. The direct and indirect economic impact from the Project is estimated to generate an additional $35 billion over the same period. Other important economic considerations, including cumulative corporate taxes, payments to BC Hydro for electric power and similar economic benefits developed by the pipeline are not included in the figures above.

Regulatory and Policy Context

The Project is regulated under the BC *Environmental Assessment Act* (**BC EAA**) and the federal *Impact Assessment Act* (**IAA**). The Project will also conduct an assessment in accordance with Chapter 10 (Environmental Assessment and Protection) of the Nisga'a Treaty, which will be incorporated into the BC environmental assessment (**EA**) and the federal impact assessment (**IA**) process (**EA-IA**).

The overarching goal for the EA-IA is: "One Project, One Assessment", a goal shared by BC, Canada and the Nisga'a Nation. Accordingly, the Project intends to seek substitution of the IAA under the BC EAA pursuant to the Canada-British Columbia Impact Assessment Cooperation Agreement. The regulatory process is expected to conclude with positive decisions from BC, Canada and the Nisga'a Nation in late 2023.

The Proponents share the vision that this Project can integrate with BC's CleanBC plan, post COVID-19 economic recovery plans for BC, Alberta and Canada, the policy goals of the First Nations Climate Initiative and provincial and federal goals to reconcile and recognize the rights of Canada's Indigenous peoples.

Indigenous Nations and Other Communities

The Proponents will assess the potential effects of the Project on the Nisga'a Nation's treaty rights and interests, as set out in the Nisga'a Treaty, including the potential effects on existing and future economic, social and cultural well-being of Nisga'a citizens who may be affected by the Project.

The Proponents will assess the potential effects of the Project on the rights and interests of local Indigenous Nations. Participating Indigenous Nations will be identified as per EA-IA legislation and provincial and federal guidance. The Project will actively engage with Indigenous Nations to identify their issues and concerns and work proactively to address, avoid or mitigate them, as applicable.

Effects of the Project on regional economies, diverse communities, infrastructure such as health care, policing and emergency response, and tourism and recreation will be assessed during the EA-IA process for the Project. The communities of Prince Rupert, Terrace, Port Edward, Stewart, Lax Kw'alaams, Metlakatla and Hyder, Alaska and the Regional District of Kitimat-Stikine and the North Coast Regional District will be engaged in the EA-IA for their perspectives and insights. Concerns will be acknowledged and addressed and avoided and mitigated as much as is practical within the Project's scope.

Conclusion

This Executive Summary highlights key aspects of the Project. The Project, being undertaken by a unique partnership of the Nisga'a Nation, Rockies LNG, and Western LNG, will be developed in a manner consistent with the environmental goals of BC, Canada, the Nisga'a Nation and other stakeholders while respecting Indigenous values and rights. The Project will create significant benefits in Canada and produce global environmental benefits as the world transitions to a low carbon energy economy.

1 INTRODUCTION

The Nisga'a Nation and its 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), are proposing to jointly develop an energy project, the Ksi Lisims LNG - Natural Gas Liquefaction and Marine Terminal Project (the Project). It is proposed to be a floating natural gas liquefaction facility and marine terminal located at Wil Milit on the northwest coast of British Columbia (**BC**) at the northern end of Pearse Island. The Project site (Site) is approximately 15 kilometres (**km**) west of the Nisga'a community of Gingolx (Figure 1). The Project will be located on Category A Lands (District Lots 5431 and 7235) which are owned in fee simple by the Nisga'a Nation and are located within the Nass Area, as defined in the Nisga'a Treaty, and on an adjacent proposed Water Lot located on Pearse and Portland Canals at the northern point of Pearse Island (the proposed Water Lot shown in Figure 2).

The name of the Project, "Ksi Lisims", means "from the Nass" in the Nisga'a language. Wil Milit is one of the prospective sites initially proposed by the Nisga'a Nation in a publicly distributed document entitled: *Nisga'a Lisims Government – New Available LNG Sites on Canada's West Coast* – February 2014.

Since 2014 the Nisga'a Nation has been working to develop liquefied natural gas (**LNG**) and pipeline facilities in and around its treaty territory. This Project is the culmination of that work and is a key element of the Nisga'a Nation's economic and social development strategy. It will provide training, jobs and new business opportunities for the Nisga'a people and other Indigenous Nation communities. Economic development opportunities such as this Project will help ensure the continued growth and vitality of the Nisga'a Nation and other Indigenous Nations.

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 is consistent with the economic development aspirations of the Nisga'a Nation and provincial government-led economic recovery measures while still meeting the sustainable economic development objectives of the Nisga'a Nation, BC and Canada.

The Project will be designed to produce up to 12 million tonne(s) per annum (**Mtpa**) of LNG. It will process approximately 575 to 695 billion cubic feet per year (**Bcf/yr)** of natural gas and temporarily store it between LNG carrier loadings on permanently installed floating liquefaction modules (**FLNGs**) designed with integral storage having an aggregate capacity of approximately 450,000 cubic metres (**m^3**) of LNG. The final determination of the production capacity and storage configuration and quantity of each FLNG will be made during the engineering stage of the Project. At full build-out (i.e., two to three FLNGs), the LNG export facility would receive between 1.7 to 2.0 Bcf/d (i.e., 56.6 million m^3 per day) of pipeline grade natural gas.

The Project will convert Canadian natural gas from the Western Canadian Sedimentary Basin (**WCSB**) of northeastern BC and northwest/Central Alberta into LNG. Natural gas will be transported to the Site via a natural gas transmission pipeline originating in northeastern BC. The feed gas pipeline will be owned and operated by a third party and will be subject to the regulatory requirements of the Nisga'a Lisims Government (**NLG**), BC and Canada.

The Project will select one of two natural gas transmission pipeline projects: TC Energy's Prince Rupert Gas Transmission (**PRGT**) or Enbridge's Westcoast Connector Gas Transmission (**WCGT**) (Appendices 1 and 2, respectively). Both pipeline projects hold valid BC Environmental Assessment Certificates (**EACs**) and approved routes from northeastern BC to BC's northwest coast. In addition to its EAC, PRGT also has existing BC Oil and Gas Commission (**BC OGC**) authorizations for its pipeline.

The Proponents are designing the Project to be one of the lowest carbon emitting LNG export projects in the world, targeting to be Net Zero within 3 years of start-up of operations. This will be achieved by the use of renewable power and other GHG reducing design elements, in combination with a strong monitoring and measurement program, an operating culture focused on low emissions, purchase of carbon offsets and the potential for carbon capture and sequestration. It is anticipated that renewable power will be supplied to the Project via a new inter-connection between a BC Hydro and Power Authority (BC Hydro) substation and their existing transmission system.

The actual power transmission line connection from the BC Hydro sub-station to the Site will be designed developed, owned and operated by a third party not under the care and control of the Proponent. The Project will also include the necessary facilities at the Site to produce its own power using gas-fired generation facilities to generate power during outages and periods of insufficient supply from BC Hydro.

The Project has secured investigative licenses, permits and authorizations from the Nisg̲a'a Nation, BC and Canada to undertake baseline field surveys, including an Investigative Use permit issued by the NLG. It is anticipated that the Project will be subject to a review under both the federal *Impact Assessment Act* (**IAA**) and the BC *Environmental Assessment Act* (**BCEAA**) (Section 6). As such, this Initial Project Description (**IPD**) was prepared in accordance with the Information and Management of Time Limits Regulations under the IAA and the Early Engagement Policy (BC EAO 2019). Tables of Concordance documenting the locations of required information within this IPD for both the BC environmental assessment (**EA**) and the federal impact assessment (**IA**) process (collectively, **EA-IA**) are provided in Appendix 3 and Appendix 4, respectively. An exemption from the BC *Environmental Assessment Act* (2018) is not being sought. Refer to Section 6 for further detail on regulatory parameters.

1.1 Proponent Information

The Proponents for the Project are the Nisg̲a'a Nation and its Project partners, Rockies LNG and Western LNG. These three Proponents have developed and executed a joint development agreement and senior personnel from all three organizations jointly manage and control Project activities through a steering committee. At the appropriate time, the Proponents intend to create partnerships that will own the Project assets and conduct further development of and operations of the Project.

The Nisg̱a'a Nation, as represented by NLG, is a self-governing Indigenous Nation. The Nisg̱a'a Nation is a party to the Nisg̱a'a Treaty, along with Her Majesty the Queen in right of Canada and Her Majesty the Queen in right of British Columbia. The Nisg̱a'a Treaty is a treaty and land claims agreement within the meaning of sections 25 and 35 of the *Constitution Act*, *1982,* effective date May 11, 2000.

Rockies LNG is an Alberta-based limited partnership comprised of seven Calgary-based natural gas producers consisting of: Advantage Energy Ltd.; ARC Resources Ltd.; Birchcliff Energy Ltd; Bonavista Energy Corporation; NuVista Energy Ltd.; Paramount Resources Ltd.; and Peyto Exploration and Development Corporation.

Western LNG is a Houston-based company engaged in the development of North American LNG export facilities with a management team experienced in the development of LNG and related energy infrastructure industries.

Proponent and Contact 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 – 3rd 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@nisgaa.net 250-633-3001
Principal Contact(s) for the Environmental Assessment	Mike Lambert, Director, Environmental and Regulatory Affairs mlambert@rockieslng.com 250-739-8839
URL	www.ksilisimslng.com

The information in this IPD was primarily prepared by the professionals identified in the table below.

Responsible Authors for the Project Description

Project Phase	Project Role	Relevant Experience
Mike Lambert, B. Env.	Director, Environmental and Regulatory Affairs	>30 years of experience in both the public and private sector in environmental and impact assessment.
Sandra Webster, Ph.D., R.P.Bio.	BC EAA and IAA Requirements	15 years of environmental consulting experience focusing on environmental assessment in the oil and gas sector, including work on four LNG import and export terminals in Canada.

1.2 Project Objectives and Benefits

The primary objectives of the Project are to (a) enable the export of rich natural gas deposits of the WCSB to serve the growing demand for natural gas across the globe, (b) create direct and indirect benefits for Indigenous Nations and overall, to citizens of BC and Alberta, and (c) assist Canada, BC, Alberta and Indigenous Nations in meeting objectives to address global climate change due to GHG emissions.

The Project will provide WCSB natural gas producers from both BC and Alberta with access to new growing markets and they will supply the feed gas for the Project. Approximately $45 billion will be invested by these companies to produce the gas needed for the Project over its life. All of this spending will result in tax and royalty revenues to the provinces and the federal government, employment income for Indigenous and non--Indigenous peoples, and an expansion of business opportunities available to companies that provide services to the Project's feed gas suppliers.

A key Project benefit is to enable the Nisga'a Nation to pursue opportunities for economic self -determination and prosperity. In so doing, the Project will contribute to economic reconciliation by recognizing and implementing the Nisga'a Nation's authority over economic development on lands they own. 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 construction and operation. The provision of new or improved connections to the BC Hydro transmission system may improve the reliability of electricity supply to Nisga'a communities in the Nass Valley.

The Project will provide direct and indirect benefits to other Indigenous Nations in the region. When the Project enters the construction phase, the pipeline proponent selected by the Project will also begin construction, providing economic benefit opportunities for Indigenous Nations across the interior of BC. At a provincial level, the Project will generate significant revenue and direct and indirect jobs and businesses opportunities. In addition, the Project is working to develop opportunities for indigenous equity participation in the pipeline.

The Project will create significant revenue for BC. Combined property, carbon and other non-income tax payments will generate approximately $3 billion over a 30-year period. Direct and indirect economic impacts from the Project are estimated to generate an additional $35 billion. Other important economic considerations include cumulative corporate taxes, payments to BC Hydro for electric power and similar economic benefits developed by the pipeline that are not included in the figures above.

The Project will provide foreign countries with opportunities to meet climate change targets. Exporting LNG from Canada adds natural gas supply to the global gas market, enabling governments to phase out coal use and to supply growing energy demand. In Asia, 1,400 gigawatts (**GW**) of coal fired power plants provide the backbone of energy supply and electricity generation, and coal expansions are relied upon to provide capacity to grow economies. For example, the use of coal-fired power continues to increase in China. *"China now has 247 GW of coal power under development (88.1 GW under construction and 158.7 GW proposed for construction"*[1]. These coal-fired power plants could be replaced with natural gas

[1] China Dominates 2020 Coal Plant Development, Global Energy Monitor, CREA Briefing: February 2021

if incremental LNG projects are sanctioned, and economically priced LNG is available. Replacing coal with LNG exported from the Project is estimated to reduce global carbon emissions by over 45 million tonnes per year, or 1.3 gigatonnes over a 30-year period, which is equivalent to offsetting nearly two years' worth of total carbon emissions from Canada.

2 PROJECT OVERVIEW

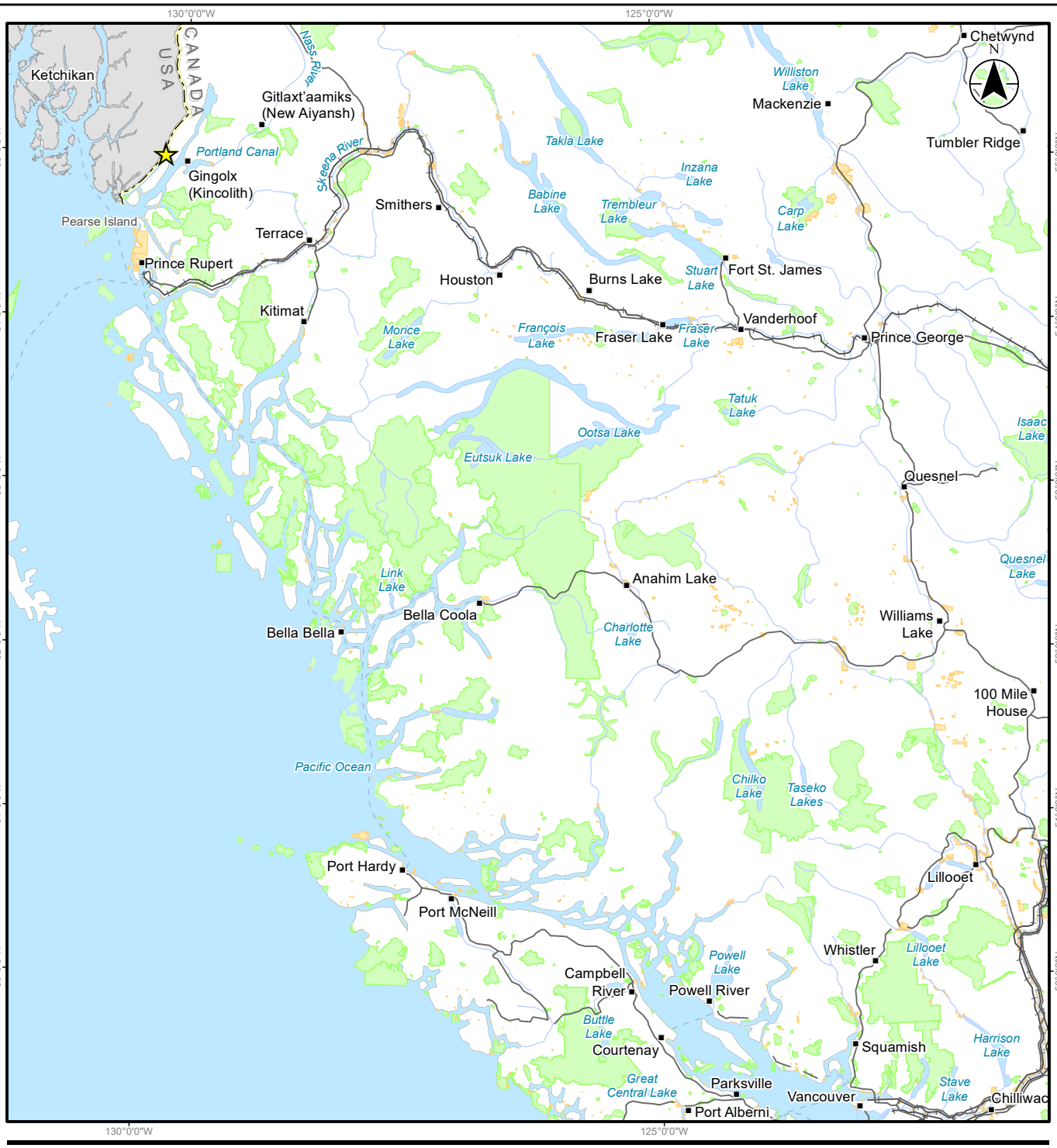
2.1 Location

The Site is the area where Project components and activities are to be located and is located within the Nass Area, as defined in the Nisga'a Treaty, on undeveloped but previously logged land on District Lots 5431 and 7235 on Pearse Island and in the proposed Water Lot (Figure 2). The Project is on Category A Lands, as defined in the Nisga'a Treaty, owned in fee simple by the Nisga'a Nation (Figure 3).

The Universal Transverse Mercator (**UTM**) coordinates of the Site are: 423886 E, 6098716 N. Regionally important population centres include the Nisga'a Villages in the Nass Valley, the City of Prince Rupert, the City of Terrace, Lax Kw'alaams, Metlakatla, BC and Metlakatla, Alaska.

District Lots 5431 and 7235 comprise 164 hectares (**ha**) of land with a gentle topographic profile suitable to develop the Project's onshore components. An application to the BC Ministry of Forests, Lands, Natural Resource Operations, and Rural Development (**FLNRORD**) for a Water Lot lease is anticipated prior to making a final investment decision for the Project.

There are no federal lands within approximately 25 km of the Site. Refer to Section 4.3 for information on proximity of the Site to federal land.



KSI LISIMS LNG

- Populated Place
- Project Location
- Ferry Route
- Highway
- International Boundary
- Railway
- Watercourse

Country
- Canada
- United States of America
- First Nations Reserve
- Provincial Park, Ecological Reserve, Protected Area, or Conservancy Area
- Waterbody

0 25 50 75 100 km
1:4,000,000 (at original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada
3. NTS Map Sheets: 092E, 092F, 092G, 092H, 093E, 092M, 093A, 093I, 093J, 103G, 102H, 103B, 093F, 093G, 093H, 092J, 092K, 092L, 092N, 092O, 092P, 093B, 093C, 093D, 093K, 093L, 093N, 093O, 093P, 102G, 103H, 103I, 102I, 102J, 102O, 102P, 103A, 103J, 103P, 093M, 092I, 103O

Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by SMOSS on 20210427
Requested by SWEBSTER on 20210427
Checked by CSTEINER on 20210427

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

Figure No.
1

Title
Location Figure

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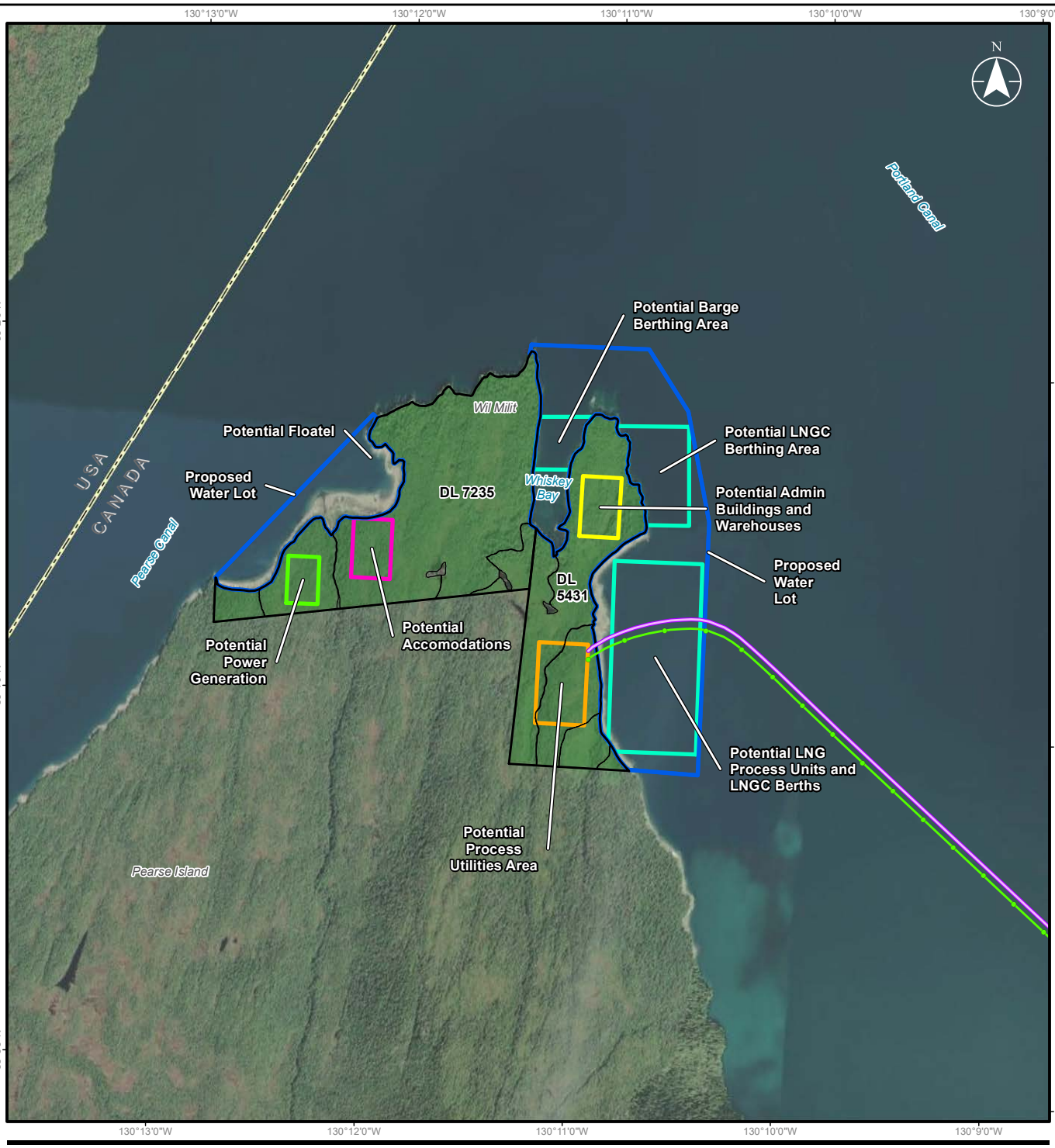


KSI LISIMS LNG

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
- Proposed Water Lot
- International Boundary
- Cadastral (Legal Lot) Boundary
- Nisga'a Nation Category A Land

0 1 km
1:30,000 (at original document size of 8.5x11)

Stantec

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

PLAN PRP45454

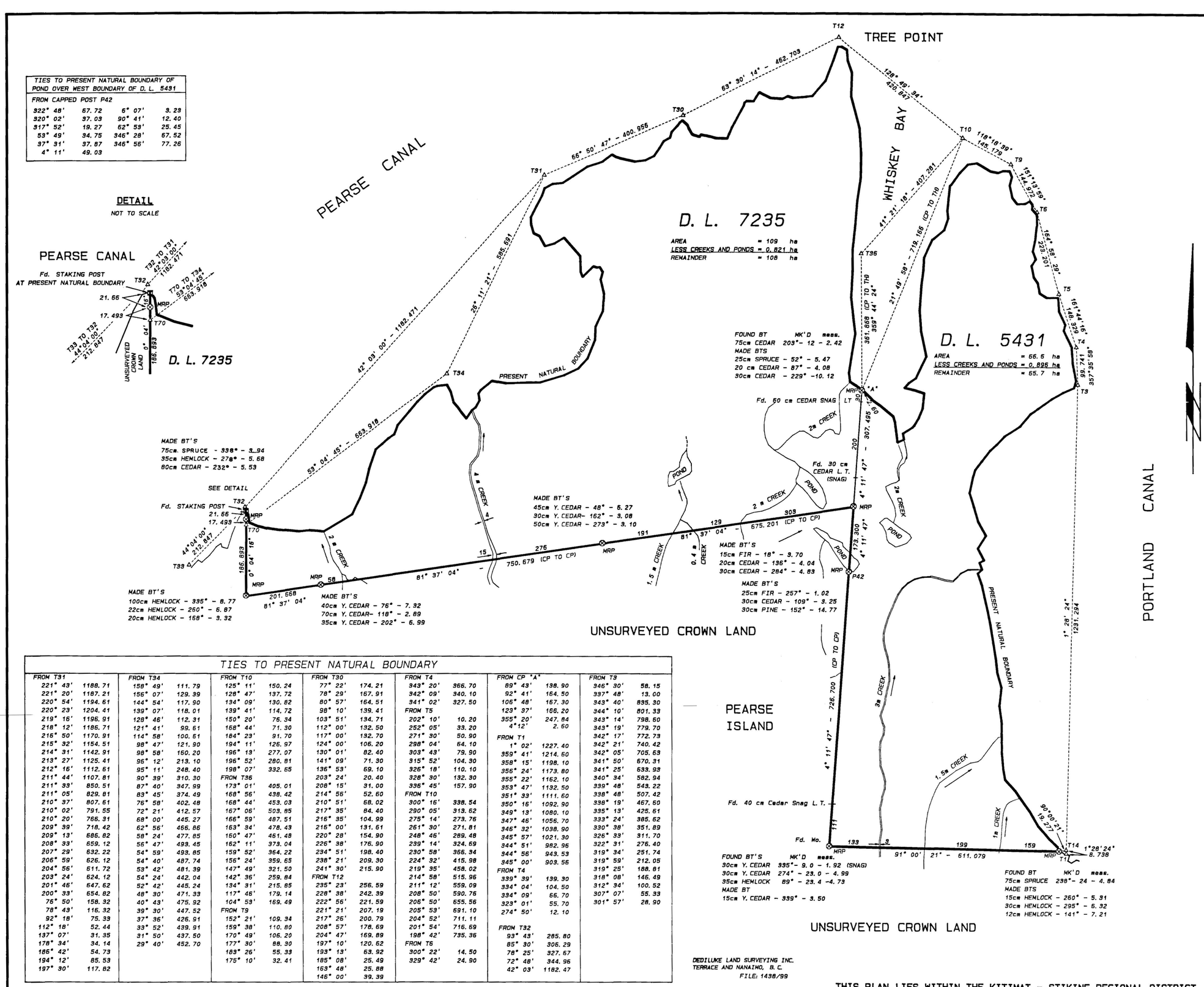
DEPOSITED IN THE LAND TITLE OFFICE
AT PRINCE GEORGE, B. C.
THIS 11 DAY OF May 2000.

Linda J. Kilbride / dg
REGISTRAR
PURSUANT TO SECTION 59,
LAND TITLE ACT.

SURVEY PLAN OF DISTRICT LOTS 5431 AND 7235, CASSIAR DISTRICT.

SCALE 1 : 5000 B. C. G. S. 1030. 010

0 100 200 300 400 500 METRES



DETAIL
NOT TO SCALE

TIES TO PRESENT NATURAL BOUNDARY OF POND OVER WEST BOUNDARY OF D. L. 5431

FROM CAPPED POST P42

322° 48'	67.72	6° 07'	3.23
320° 02'	97.03	90° 41'	12.40
317° 52'	19.27	62° 59'	25.45
59° 49'	34.75	346° 28'	67.52
37° 31'	37.87	346° 56'	77.26
4° 11'	49.03		

TIES TO PRESENT NATURAL BOUNDARY

FROM T91

221° 43'	1188.71
221° 20'	1187.21
220° 54'	1194.61
220° 23'	1204.41
219° 16'	1196.91
218° 12'	1186.71
216° 50'	1170.91
215° 32'	1154.51
214° 31'	1142.91
213° 27'	1125.41
212° 16'	1112.61
211° 44'	1107.81
211° 39'	850.51
211° 05'	829.81
210° 37'	807.61
210° 02'	791.55
210° 20'	766.31
209° 39'	718.42
209° 13'	686.82
208° 33'	659.12
207° 29'	632.22
206° 59'	626.12
204° 56'	611.72
203° 24'	624.12
201° 46'	647.62
200° 33'	654.82
76° 50'	158.32
78° 43'	116.32
92° 18'	75.39
112° 18'	52.44
137° 07'	31.35
178° 34'	34.14
185° 42'	54.73
194° 12'	85.53
197° 30'	117.82

FROM T34

158° 49'	111.79
156° 07'	129.39
144° 54'	117.90
139° 07'	118.01
128° 46'	112.31
121° 41'	99.61
114° 58'	100.61
98° 47'	121.90
98° 58'	160.20
96° 12'	213.10
95° 11'	248.40
90° 39'	310.30
87° 40'	347.99
83° 45'	374.49
76° 58'	402.48
72° 21'	412.57
68° 00'	445.27
62° 56'	466.86
58° 24'	477.85
56° 47'	493.45
54° 59'	493.85
54° 40'	487.74
53° 42'	481.39
54° 24'	442.04
52° 42'	445.24
48° 30'	471.33
40° 43'	475.92
39° 30'	447.52
37° 36'	426.91
33° 52'	439.91
31° 50'	437.50
29° 40'	452.70

FROM T10

125° 11'	150.24
128° 47'	137.72
134° 09'	130.82
139° 41'	114.72
150° 20'	76.34
168° 44'	71.30
184° 23'	91.70
194° 11'	126.97
196° 13'	277.07
196° 52'	280.81
198° 07'	332.65

FROM T36

173° 01'	405.01
168° 56'	438.42
168° 44'	453.03
167° 06'	503.85
166° 59'	487.51
163° 34'	478.43
160° 47'	461.48
162° 11'	373.04
159° 52'	364.22
156° 24'	359.65
147° 49'	321.50
142° 36'	259.84
134° 31'	215.85
117° 46'	179.14
104° 53'	169.49

FROM T9

152° 21'	109.34
159° 38'	110.80
170° 49'	106.20
177° 30'	88.30
189° 26'	55.33
175° 10'	32.41

FROM T30

77° 22'	174.21
78° 29'	167.91
80° 57'	164.51
98° 10'	139.41
103° 51'	134.71
112° 00'	132.50
117° 00'	132.70
124° 00'	106.20
130° 01'	82.40
141° 09'	71.30
136° 53'	69.10
203° 24'	20.40
208° 15'	31.00
214° 56'	52.60
210° 51'	68.02
217° 35'	84.40
216° 35'	104.99
215° 00'	131.61
220° 28'	154.90
226° 38'	176.90
234° 51'	198.40
238° 21'	209.30
241° 30'	215.90

FROM T12

235° 23'	256.59
228° 38'	242.39
222° 56'	221.59
221° 21'	207.19
217° 26'	200.79
208° 57'	178.69
204° 47'	169.89
197° 10'	120.62
193° 13'	63.92
185° 08'	25.49
163° 48'	25.88
146° 00'	39.39

FROM T4

343° 20'	366.70
342° 09'	340.10
341° 02'	327.50

FROM T5

202° 10'	10.20
252° 05'	33.20
271° 30'	50.90
298° 04'	64.10
303° 43'	79.90
315° 52'	104.30
326° 18'	110.10
328° 30'	132.30
336° 45'	157.90

FROM T10

300° 16'	338.54
290° 05'	313.62
275° 14'	279.76
261° 30'	271.81
248° 46'	289.48
239° 14'	324.69
230° 58'	366.34
224° 32'	415.98
219° 35'	458.02
214° 58'	515.96
211° 12'	559.09
208° 50'	590.76
206° 50'	655.56
205° 53'	691.10
204° 52'	711.11
201° 54'	716.69
198° 42'	735.36

FROM T6

300° 22'	14.50
329° 42'	24.90

FROM CP "A"

89° 43'	138.90
92° 41'	164.50
106° 48'	167.30
123° 37'	166.20
355° 20'	247.84
4°12'	2.60

FROM T1

1° 02'	1227.40
359° 41'	1214.60
358° 15'	1198.10
356° 24'	1173.80
355° 22'	1162.10
353° 47'	1132.50
351° 33'	1111.60
350° 16'	1092.90
349° 13'	1080.10
347° 46'	1056.70
346° 32'	1038.90
345° 57'	1021.30
344° 51'	982.96
344° 56'	943.53
345° 00'	903.56

FROM T4

339° 39'	139.30
334° 04'	104.50
334° 09'	66.70
323° 01'	55.70
274° 50'	12.10

FROM T32

93° 43'	285.80
85° 30'	306.29
78° 25'	327.67
72° 48'	344.96
42° 03'	1182.47

FROM T3

346° 30'	58.15
337° 48'	13.00
343° 40'	895.30
344° 10'	801.33
343° 14'	798.60
343° 19'	779.70
342° 17'	772.73
342° 21'	740.42
342° 05'	705.63
341° 50'	670.31
341° 25'	633.93
340° 34'	582.94
339° 48'	543.22
338° 48'	507.42
338° 19'	467.60
335° 13'	425.61
333° 24'	385.62
330° 38'	351.89
326° 39'	311.70
322° 31'	276.40
319° 34'	251.74
319° 59'	212.05
319° 25'	188.81
318° 08'	146.49
312° 34'	100.52
307° 07'	55.33
301° 57'	28.90

DEDILUKE LAND SURVEYING INC.
TERRACE AND NANAIMO, B. C.
FILE: 1438/99

PERTAINING TO D. L. 7235

OFFICIAL PLAN
CONFIRMED UNDER SECTION 72
LAND ACT

SURVEYOR GENERAL
VICTORIA, B. C., March 7, 2000

I HEREBY CERTIFY THAT THIS IS A TRUE COPY OF THE OFFICIAL PLAN OF D. L. 'S 5431 AND 7235, CASSIAR DISTRICT SHOWN HEREON AND ON DEPOSIT WITH THE SURVEYOR GENERAL AND NUMBERED 10T1832.

SURVEYOR GENERAL
VICTORIA, B. C., March 7, 2000.

I HEREBY CERTIFY THAT THIS IS THE OFFICIAL PLAN OF D. L. 5431 CASSIAR DISTRICT.

SURVEYOR GENERAL
VICTORIA, B. C., March 7, 2000.

I, DAVID J. DEDILUKE, A BRITISH COLUMBIA LAND SURVEYOR OF THE CITY OF NANAIMO, IN BRITISH COLUMBIA, CERTIFY THAT I WAS PRESENT AT AND PERSONALLY SUPERINTENDED THE SURVEY REPRESENTED BY THIS PLAN AND THAT THE SURVEY AND PLAN ARE CORRECT. THE SURVEY WAS COMPLETED ON THE 23th DAY OF SEPTEMBER, 1999.

DAVID J. DEDILUKE, BCLS

THIS PLAN LIES WITHIN THE KITIMAT - STIKINE REGIONAL DISTRICT.

2.2 Activities and Components

2.2.1 Introduction

The Project is proposed to be a combination of FLNGs with supporting upland infrastructure and a marine terminal for loading LNG carriers. Each FLNG will contain a number of modules used to produce and store LNG. Project configuration and certain technology selections will be determined during pre-front-end engineering design (**Pre-FEED**) and front-end engineering design (**FEED**) engineering, informed by the Project's engagement with local Indigenous communities and regulatory agencies.

The Project will be provided with renewable power through a connection to the BC Hydro transmission system. During power outages or periods when there is insufficient grid power available, backup power will be supplied by on-site power generation using highly efficient gas-fired power generation facilities.

Other infrastructure at the Project site includes a marine terminal that will provide berths for LNG carriers and a berth/dock to support barges and vessels. Bathymetric information for the proposed Water Lot has been acquired and is being analyzed. That information and its analysis will inform Pre-FEED and whether any dredging will be necessary to support the proposed location of the FLNGs or other marine infrastructure. If dredging is required, this will be included in the EA-IA.

At full build-out, the Project will receive from 1.7 to 2 Bcf/d (i.e., 56.6 million m^3 per day) of pipeline grade 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.

2.2.2 Permanent Components

The Project will include natural gas pre-treatment (e.g., removal of impurities), management of refrigerants (e.g., process by-products propane, ethane, pentane, etc.), condensate management, on-site natural gas and LNG pipelines, electric power lines and supporting infrastructure (e.g., permanent loading berth) for barged materials and equipment. Other supporting infrastructure includes roads, security fencing and lighting, monitoring equipment, accommodations, administration, safety-emergency and operations offices, a workshop, and a warehouse. Permanent potable water supply and waste management systems (e.g., collection, storage, treatment and potential discharge) will be assessed and as necessary, designed in Pre-FEED and FEED with information developed during the Project's engagement with local Indigenous communities and regulators.

Key Project permanent components are proposed to include the following:

- Natural gas receiving facility
- FLNGs (two to three at full build-out)
- Potentially, one or more LNG carrier berths
- Barge berth
- Power line connection to the BC Hydro electrical transmission system provided by a third party
- Gas-fired electric power generation facilities and electricity distribution systems
- Supporting infrastructure and facilities
- Operation of supporting marine traffic

2.2.3 Natural Gas Receiving Facility

The Project will be supplied with pipeline grade natural gas from the WCSB that will be transported to the Site by an approximately 600-km long natural gas transmission pipeline built, operated, and owned by a third party. Feed gas will be delivered to an onshore natural gas receiving station by the feed gas pipeline.

Two pipeline projects whose proposed routes pass near Wil Milit and that could be feed gas transporters for the Project hold EACs that are valid through November 2024: TC Energy's PRGT project and Enbridge's WCGT project. The EAC for both pipelines will require amendment to support an amended marine pipeline route with a delivery point at the Site. Refer to Appendices 1 and 2 respectively for provincial scale route maps of the presently approved routes for both pipelines. No existing linear rights of way are incorporated into the Project. It is anticipated that one of these pipeline projects will enter into a commercial agreement to deliver natural gas transportation services to the Project.

The receiving facility will be located at the Site and will interconnect the Project to the marine segment of the pipeline that is chosen by the Project. It will include custody transfer metering equipment to measure the amount of natural gas received at the facility. In addition, certain impurities must be removed from the natural gas before it can be introduced into the LNG production equipment due to its propensity to freeze and due to the potential to harm aluminum in the LNG production equipment, LNG carrier, and LNG regasification equipment at overseas facilities. These include carbon dioxide (**CO_2**), sulfur, hydrogen sulfide, mercury, and water. Some of the equipment to remove these facilities may be based onshore, or on the FLNGs. The final configuration will be determined during Pre-FEED.

The Proponents are exploring options for capture and sequestration of the CO_2 that is entrained in the natural gas supply to the Project. If pursued, a facility to remove CO_2 would be located upstream of the feed gas pipeline, and the exhaust stream from this facility (and also potentially from the thermal oxidizer) could then be captured and transported to a sequestration facility. If located upstream of the feed gas pipeline, the amount of pre-treatment equipment located at the Site would be reduced. These options will be further refined during pre-FEED. Carbon capture and sequestration is not a Project component.

2.2.4 FLNG and LNG Production

The Project as proposed anticipates that two or three FLNGs will be located at the Site in the proposed Water Lot to produce the planned annual quantity of LNG. Natural gas leaving the receiving facility will be directed to one of the FLNGs, where (if located on the FLNG) the final pre-treatment steps will be performed. The next step in the process is to introduce it into one of the multiple LNG liquefaction trains that will be located on each FLNG. Each train features a refrigerant compressor that is proposed to be driven by an electric motor. Refrigerant leaving the compressor is cooled in a refrigerant cooling system before entering an expansion valve, which reduces its temperature even further. The refrigerant cooling systems are currently being designed so as not to discharge warm water into the marine environment nor to entrain fish or plankton in a seawater intake. After leaving the expansion valve, the refrigerant enters the cold box, which is a complex heat exchanger that is designed to efficiently cool the incoming warm feed gas. After passing through the cold box the refrigerant is returned to the refrigerant compressors.

Refrigerants are typically composed of mixed hydrocarbons. Each LNG process vendor has a unique and proprietary mix of refrigerants, but a typical set of components include methane, ethylene, propane, butane, pentane, and nitrogen. Methane and nitrogen are produced from the incoming gas stream and in a nitrogen generator, located either onboard the FLNG or onshore. The remaining refrigerants would be delivered to the Site by barge in ISO containers and stored in dedicated tanks on the FLNG.

Part way through the cold box the feed gas reaches a temperature at which heavier hydrocarbons can be removed from the feed gas stream. These heavier hydrocarbons are removed from the cold box at this point and directed to a condensate stabilizer to remove any lighter hydrocarbons from the stream. The remaining heavy hydrocarbons, which are similar to natural gas liquids, are called "condensate" and are then directed to a storage tank that will be located on one of the FLNGs. Condensate loading and export will be conducted periodically using conventional liquids carriers (refer to Section 2.4).

At the exit of the cold box, the feed gas pressure is reduced to near atmospheric conditions, at which point the temperature reaches -162°C and the feed gas condenses into LNG. Produced LNG will be temporarily stored in tanks located on the FLNG between LNG carrier loadings – see Section 2.4. The total LNG storage capacity at the Site will be approximately 450,000 m^3, subject to further study during Pre-FEED and FEED. Although the LNG storage tanks will be highly insulated, some heat migration into the LNG will occur, producing vapor, or boil off gas. Each FLNG will include electrically driven boil off gas compressors, which will recompress low pressure boil off gas from the LNG storage tanks and reintroduce it to the high-pressure inlet of the liquefaction process. Each FLNG may also include equipment that will remove nitrogen and helium from the boil off gas.

The FLNGs will include a number of other facilities as well, including safety flares, in-tank LNG transfer pumps, natural gas and LNG transfer piping and interconnection, electric power distribution, fire safety equipment and firewater booster pumps, control rooms, offices, meeting rooms, and emergency egress facilities.

2.2.5 LNG Carrier and Barge Berths

LNG is proposed to be loaded onto LNG carriers at the LNG carrier berths. The Project may contain one or more jetty-style LNG carrier berths in the proposed Water Lot. Alternatively, LNG carriers may berth alongside the FLNGs to load LNG. Proponents also anticipate that condensate loading will occur alongside the FLNGs instead of at separate berths. A dedicated barge berth will also be located at the Site for the offloading of equipment and supplies, and for the embarkation/disembarkation of workers at the Site. Potential berth design will occur in Pre-FEED and FEED.

2.2.6 Power Line Interconnection to BC Hydro

The Project will connect to the BC Hydro transmission system for renewable power supply. Engagement with BC Hydro is underway, including undertaking a System Impact Study to explore technically and economically feasible options for the BC Hydro connection. A new, third-party owned transmission line would connect to either one of two BC Hydro sub-stations, Aiyansh (near New Aiyansh) or Skeena (Terrace) – see "Third Party Transmission Line" below. A substation would be located at the Site and would constitute the power delivery point for the Project.

2.2.7 Project Onsite Power Generation

To ensure continued operation during power outages or if insufficient power supply is available from BC Hydro, the Project will include gas-fired power generation equipment. It has not yet been determined whether the onsite power generation facilities would be on the onshore portions of the Site or on the FLNG modules. This will be determined during Pre-FEED.

2.2.8 Third Party Transmission Line

It is anticipated that the transmission interconnection from the BC Hydro transmission system to the Site will be provided by a third-party not under the care and control of the Proponent and therefore will not be a Project component. The third party will be responsible for the design, construction and operation of the onshore transmission line and sub-sea electricity transmission cable from a BC Hydro substation to the Site.

The third party transmission line is currently the subject of a feasibility engineering study. The actual route and length is under study and not known at this time, however it is potentially longer than 80 km (e.g., based on distances from the Project site to the nearest two BC Hydro sub-stations) and its proposed carrying capacity is anticipated to be less than 345 kV. Therefore, it does not appear (based on available information) to exceed the EA-IA threshold for an EA-IA under BC EAA 2018[2] and IAA 2019[3]; however, it may trigger a "notification" under BC EAA 2018.

2.2.9 Other Permanent Supporting Infrastructure

Other supporting infrastructure includes onsite utilities, roads, security fencing and lighting, monitoring equipment, accommodations, administration, safety-emergency and operations offices, a workshop, and a warehouse.

Permanent potable water supply and waste management systems (e.g., collection, storage, treatment and potential discharge) will be assessed and as necessary, designed in Pre-FEED and FEED with information developed during the Project's engagement with local Indigenous communities and regulators.

[2] BC *Reviewable Projects Regulation*:
Table 7 – 2 Criteria (1) Subject to subsection (2), a new transmission line of 345 kV or higher voltage and of 40 km or more in length, if the land on which the line is built is not alongside and contiguous to an area of land previously developed for a transmission line, transmission pipeline, public highway or railway.
BC EAO Section 10 – Project Notification Policy:
Notification Threshold: A transmission line greater than 230 kV and greater than 40 km in length.

[3] Federal *Physical Activities Regulation*
Electrical Transmission Lines and Pipelines
39 The construction, operation, decommissioning and abandonment of either of the following:

- (a) a new international electrical transmission line with a voltage of 345 kV or more that requires a total of 75 km or more of new right of way;
- (b) a new interprovincial power line designated by an order under section 261 of the *Canadian Energy Regulator Act*.

2.3 Construction

2.3.1 Temporary Facilities

Temporary facilities will be required for Project construction at or near the Site and may consist of the following:

- An initial temporary pioneer dock (e.g., for unloading construction equipment and supplies)
- Storage and lay-down areas (including construction fuel storage)
- Diesel power generation
- Modular construction offices
- Potentially, an on-site concrete batching plant
- Temporary fuel storage areas
- Helipad
- Settling pond (to manage overland runoff water)
- Self-contained temporary construction workforce accommodation with associated electrical power, telecommunications, solid waste, potable water, and wastewater management components.

A floating LNG facility is fundamentally different from a land-based project in that the FLNGs are constructed in foreign shipyards overseas, to BC and Canadian engineering standards, and then towed into position and secured at a suitable depth in the proposed Water Lot at the Site. As the FLNGs will be located in the proposed Water Lot, the necessary onshore supporting infrastructure has a much smaller development “footprint” than is the case for a land-based LNG export facility. The total onshore footprint at Wil Milit is estimated at less than 15 ha. The marine footprint for the Project has yet to be determined but is planned to fall within the proposed Water Lot boundaries. The final footprint on land and in the marine environment will be determined during Pre-FEED and FEED.

Most of the onshore facilities will be constructed on-site, with a small portion being constructed at an off-site location(s).

2.3.2 Construction Workforce

Construction worker access to the Site will likely be by helicopter or float plane originating in Prince Rupert or Terrace or, if transporting a large number of construction or operations workers, by suitable vessels originating from Gingolx or Prince Rupert.

Due to the remoteness of the Wil MIlit, the construction workers may be housed at the Site in a floating hotel (flotel) in the proposed Water Lot or in suitable accommodation on land. A flotel may eventually become a permanent component of the Project, depending on plans developed for operations shift schedules and after considering alternatives for workers to be housed on the FLNGs or at another location onshore at the Site. The decision for where and how to house permanent operations staff will be made in consultation with Indigenous communities and regulators.

The number of onsite construction workers is unknown at this time, but it is anticipated that peak numbers may be up to 200 workers. The origin of where the construction workers will come from is not yet known but efforts will be made to recruit locally to the extent possible. The workforce will require certain specialized trades and expertise who will likely need to be sourced from elsewhere in BC, Canada or internationally. Construction worker details and estimates will be developed in Pre-FEED and FEED.

Temporary construction workers would be housed in temporary construction workforce accommodation at the Site providing self-contained electrical power, communications, potable water supply and waste containment systems. Sewage and grey water would be stored in tanks and then barged away for disposal at a suitable sewage treatment facility. During construction, there will be no onsite effluent discharge into the marine environment.

2.3.3 Construction Timing

Construction at the Site will begin after all applicable regulatory requirements are satisfied and a positive final investment decision (**FID**) is made, which is scheduled to occur early in 2024. Overseas construction of the FLNGs could be scheduled to begin shortly after FID. Construction is expected to take approximately three and a half years and the first FLNG is expected to begin commissioning in late 2027. Project construction is envisioned to occur 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 who will maintain care and control of all construction activities.

2.3.4 Construction Material Transport

Construction materials are anticipated to be transported either by rail or truck to local communities (e.g., Terrace or Prince Rupert) and then by truck to Nisga'a Nation owned storage areas (e.g., Nass Camp, Nisga'a Villages) in the Nass Valley where they would be moved by truck to Gingolx harbour and then by barge to Wil Milit. Materials, equipment and supplies may also be transported to the Project site entirely by barge along marine transportation routes from Prince Rupert.

2.3.5 Construction Activities

Construction activities will include:

- Helipad construction
- Pre-FEED and FEED supporting geotechnical investigations on the Site and in the proposed Water Lot
- Pioneer dock construction
- Temporary construction workforce accommodation set-up
- Tree removal, vegetation clearing, soil removal/salvage and general Site preparation potentially including blasting
- Upland site drainage construction
- Potentially, concrete batch plant development
- Utility right-of-way and road construction

- Barge berth, FLNG and LNG carrier berth construction that may include dredging in the proposed Water Lot
- Prefabricated building construction (control room, Safety-Emergency office, workshops, warehouse, workshop, etc.)
- Power substation and natural gas receiving facilities, along with power and natural gas transfer facilities within the Site
- Erecting site security fencing
- Telecommunications tower construction
- Potentially, installing stormwater management systems
- Post-construction clean-up and on-site grounds reclamation

2.4 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; this will be refined in Pre-FEED and FEED. In addition, the Project will create additional indirect jobs in nearby communities and elsewhere through the supply of goods and services. It is currently envisioned those operations employees will stay at the Project site during their shift in accommodations suitable for that purpose. Water taxi is the proposed means of moving the permanent workforce to and from the mainland to the Site.

Major operations activities include:

- Feed 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

The current plan for operations condensate is to manage and transport it by vessel to potential markets in BC and beyond. There are no plans to transport condensate by rail eastward.

Routine inspections and maintenance of the above components and systems would be completed on an ongoing basis. These would include:

- Maintenance of equipment to ensure safe and reliable operation.
- Inspection of equipment and facilities to ensure mechanical and safety integrity is maintained.
- Site maintenance
- Inspection and maintenance of safety, civil structures, and environmental monitoring devices.

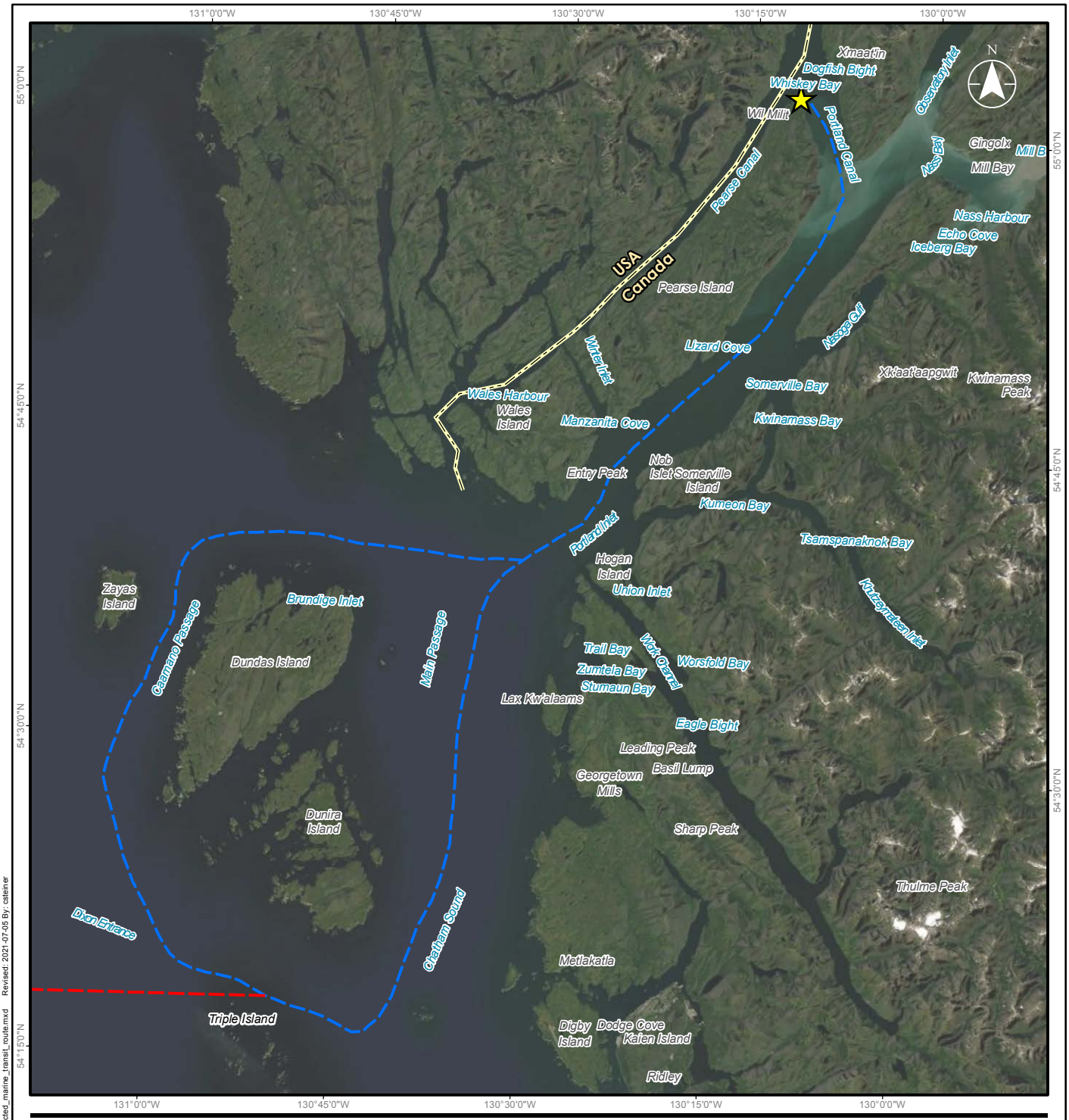
2.5 LNG Shipping

LNG carriers will be operated by third parties and are anticipated to have a capacity of up to 216,000 m^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. LNG carriers will comply with applicable federal and International Maritime Organization requirements and other applicable classification rules, international requirements and guidelines, including:

- International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk
- International Convention on Load Lines
- International Convention for the Safety of Life at Sea
- International Convention for the Prevention of Pollution from Ships
- Society of International Gas Tanker and Terminal Operators
- Oil Companies International Marine Forum guidelines
- American Petroleum Institute guidelines
- Applicable Canadian marine safety navigation requirements as documented in the Technical Review Process of Marine Terminal Systems and Transshipment Sites (**TERMPOL**) studies for similar projects on BC's northwestern coast. A Project-specific TERMPOL exercise is under consideration.

It is anticipated that three or more suitably equipped tugboats will be used to safely assist berthing and unberthing LNG carriers. Tugboat moorage at the Site or nearby at Gingolx harbour will be determined during Project Pre--FEED and FEED, informed by the Project's engagement with local Indigenous communities and regulators.

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 west of, but near to, Triple Island. LNG carriers will be piloted between Triple Island and the Project's marine terminal by BC Coast Pilots to support the safe inbound and outbound transit of LNG carriers, consistent with applicable marine navigation laws and regulations. With the pilot on board, vessels may travel north through Chatham Sound and Main Passage or alternatively through Caamano Passage, and then northeast through Portland Inlet, and Portland Canal (Figure 4). The Project's actual marine routes for LNG carriers will be informed by future engagements with BC Coast Pilots, analyses and engagements with Indigenous communities, government agencies and stakeholders.



Project Location

Expected Marine Transit Route to Triple Island

Expected Marine Transit Route

International Boundary

0 5 10 15 km

1:500,000 (at original document size of 8.5x11)

KSI LISIMS LNG

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: 103I, 103J, 103O, 103P

Stantec

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

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

Figure No.

4

Title

Expected Marine Transit Route

2.6 Decommissioning

The eventual decommissioning of the Project or its rejuvenation (after a minimum of 30 years) can only be generally described at this time. Typically, a decommissioning and abandonment plan would be developed in consultation with the Nisg̲a'a Nation, incorporated at least in part into the land lease and Water Lot sublease from the Nisg̲a'a Nation and engagements with applicable regulatory authorities.

Depending on laws and regulations in effect at that time, decommissioning could include:

- Moving the FLNGs to a Canadian or foreign shipyard for re-furbishing or salvage
- Dismantling/recycling ancillary facility equipment and infrastructure
- Transporting and disposal or recycling of materials
- Reclamation of the anthropogenically altered portion of the onshore and marine areas to restore ecological values and function
- Purging buried sub-sea floor pipelines of residual natural gas and leaving in place
- Discontinuing power transmission from the BC mainland

Upon decommissioning of the Project, the area will be restored as per the applicable agreements with the Nisga'a Nation and as prescribed in operating permits.

2.7 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 will be managed in compliance with the applicable Nisg̲a'a, provincial and federal regulatory requirements and guidelines. An environmental management plan will be developed that will include monitoring to confirm compliance with requirements as identified during the EA-IA and permitting. It is not yet known if there will be unavoidable discharges of sanitary liquid waste at the Site during operations. This will be investigated during Pre-FEED and FEED.

BC's extensive renewable power base provides the Project with the opportunity to achieve very low LNG facility carbon emissions, and when coupled with a reasonable amount of carbon offset credits, to achieve Net Zero carbon emissions. Once sufficient renewable power is available from BC Hydro (anticipated within 3 years of Project Start-up), and coupled with carbon offsets and potentially sequestration, the Project could be one of, if not the only, Net Zero LNG facilities in the world. This has emerged as a competitive strength in the global LNG industry today, as companies increasingly trade single cargoes coupled with carbon offsets to produce Net Zero cargoes. By comparison, this Project will produce Net Zero cargoes for its entire annual output, year after year.

2.7.1 Construction

During construction, it is anticipated that all construction wastes will be managed, stored, and shipped to approved disposal locations. This will be confirmed in Pre-FEED and FEED.

Potential solid wastes generated during construction include:

- Biomass waste (e.g., from land clearing and grubbing)
- Excavated overburden, organic material (e.g., peat) and large boulders
- Construction wastes (wood, scrap metal, concrete, etc.)
- Solid domestic wastes
- Regulated hazardous materials (e.g., used oil, solvents, mercury beds)
- Potentially, dredge material disposal at sea (if dredging cannot be avoided)

Potential liquid wastes generated during construction include:

- Sanitary wastewater (e.g., from the temporary construction workforce accommodation)
- Stormwater (upland stormwater management)
- Water collected on decks of LNG modules

The primary sources of air emissions during construction will be power generation with portable diesel-powered generators and construction equipment such as excavators, backhoe loaders, bulldozers, and trenchers. Vehicle traffic such as pickup trucks, dump trucks, and barges used to transport construction materials to Site will also be a source of air emissions. Potential air contaminants generated during construction include nitrogen oxide (**NO_x**), carbon monoxide (**CO**), sulphur dioxide (**SO_2**), particulate matter (**PM**), and volatile organic compounds **(VOC)** from vehicles, diesel-powered portable electricity generators and construction equipment emissions. GHG emissions of CO_2, methane, and nitrous oxide would also be emitted from power generation, construction equipment, and vehicle traffic.

Used oils and solvents will be managed during construction in compliance with provincial hazardous waste management requirements.

2.7.2 Operations

During operations, NO_x, CO, CO_2, SO_x, PM, VOC, and other GHGs will be released into the atmosphere from:

- Fugitive emissions from FLNG liquefaction and LNG carrier loading systems
- Combustion associated with:
    - Acid gas incinerators (if they are not located upstream of the pipeline to enable carbon capture and sequestration)
    - Direct fired process heaters if any
    - Gas-fired facilities to produce power for the LNG facility
    - Safety flares (used to manage emergency or maintenance activities)
    - LNG carriers and support vessels

Additional wastes generated during operations include:

- Solid
    - Domestic wastes (e.g., from offices, workshops, warehouses)
    - Paper/cardboard waste (from administration and packaging)
    - Wood and scrap metal originating from maintenance activities
- Liquid (with potential for discharge into the marine environment)
    - Treated sanitary wastewater (e.g., sewage and grey water)
    - Treated stormwater from the upland and from FLNG module decks water discharges from steam or condensate blow-down
- Hazardous
    - Mercury removed during the feed gas treatment process (contained in “beds”)
    - Waste catalyst and adsorbents
    - Waste lubricating oils
    - Spent solvents
    - Potentially, waste biological treatment facility sludge
    - Minor miscellaneous wastes including used cartridge filters, batteries, etc.

Emissions during decommissioning are expected to be similar to those associated with construction as both Project phases will rely on similar types of equipment.

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 CO_2e tonnes per annum (**TPA**) (or 0.05 CO_2e t/t LNG). If the Project is required to self-generate 100% of its power, the Project is expected to produce approximately 1,870,000 CO_2e TPA (or 0.156 CO_2e 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. Refer to Section 6.9 for federal and provincial GHG emission reporting requirements.

2.8 Land and Water Use

As previously discussed in Section 2.1, the Site is located on District Lots 5431 and 7235, which Lots comprise approximately 164 ha on Pearse Island, and in a proposed Water Lot located on Pearse and Portland Canals (Figure 2). The Project is on Category A Lands, as defined in the Nisga’a Treaty, owned in fee simple by the Nisga’a Nation. An application to FLNRORD for a Water Lot lease is anticipated prior to making a final investment decision for the Project. The UTM Coordinates of the Site are: 423886 E, 6098716 N.

Potable water will be shipped for use at the Site during construction. After Project operations commence, potable water may continue to be shipped to the Site or come from on-site potable water treatment facilities. Sources of water could come from groundwater wells, freshwater streams with suitable annual available volumes or from desalination units.

Water required for process and make-up water for power generation (if required) may be diverted and stored from available freshwater streams, from groundwater wells or from desalination units (sea water). If water is diverted from freshwater streams it will need to be suitable and available (e.g., quantity and quality) and its use would not negatively effect fish or fish habitat. Water use by the Project will be investigated during Pre-FEED and FEED.

2.9 Schedule

Project phases, including the environmental impact assessment, permitting, construction, operations and decommissioning phases, will be scheduled and completed in coordination and consultation with regulatory authorities, and based on advancement of Project engineering (e.g., Pre-FEED and FEED). The preliminary Project Level 1 Schedule will be completed during Pre-FEED along with completion of the Project's Basis of Design. Table 1 outlines the approximate duration of key Project activities based on the information available at the time of writing. The goal is for LNG export delivery to begin with first cargo in the second half of 2027.

Table 1 – Approximate Project Schedule

Project Phase	Period
Environmental assessment	Q2 2021 to Q1 2024
Engineering design	Q2 2021 to Q4 2022
Permitting and environmental management plans	Q3 2022 to Q1 2024
Construction activities	Q2 2024 to Q3 2027
Operations and maintenance	2027 out to a minimum of 30 years (2057)
Decommissioning, abandonment, and reclamation	Sometime after 2057 when the Project has reached the end of its operational life

At this early stage of Project development, there are no known seasonal activities in the region that are anticipated to affect the Project schedule.

2.10 Design or Siting Options or Constraints

2.10.1 Floating verses Land based design

The alternative to construct the Project utilizing primarily floating gas processing modules as opposed to a land based facility was considered. Floating modules present multiple benefits to the Project as compared to a land based facility and are summarized below:

- Shorter construction time.
- Remote Site location makes a large labour force for on-shore construction less feasible.
- Improved quality control established highly trained workforce, and constructability conditions exist in the shipyards where the floating modules could be built as opposed to constructing the Project onshore at a remote worksite.
- Significantly decreased impact to the onshore location, which is easier to remediate at the end of the Project's life.
- Expected lower comparative construction cost.

Project management does not believe that it would be feasible to change the plan to construct on an onshore facility instead of a floating facility.

2.10.2 Regional Project Location

The Project evaluated whether to site the Project in the Nass area or in another North coast area. Three main considerations were given to assessing potential Project locations:

- Is the potential location near the planned right of way of one of PRGT or WCGT?
- Does the potential location require a lengthy underwater pipeline build to reach the Project site?
- Is there a feasible route for transmission lines to bring electric power to the site?

Potential site locations near to or south of the Dixon entrance were ruled out due to the expected cost of constructing the lengthy underwater portion of each pipeline. The Proponents felt that it would be more feasible to construct a new high voltage transmission line to bring electric power into the Nass Area from BC Hydro sub-stations near New Aiyansh or at Terrace than it would be to construct new transmission lines along the Skeena River from Skeena sub-station to a final project site along the coast south of the Dixon entrance. The Project does not anticipate that it would be feasible to change the site location to one south of the Dixon entrance.

2.10.3 Preferred Site Within the Nass Area

The Project considered multiple potential site locations in the Nass area based on the publicly distributed document entitled: *Nisga'a Lisims Government – New Available LNG Sites on Canada's West Coast* – February 2014 (NLG Presentation). This document shortlisted several potential sites approved by the Nisga'a Nation as suitable for the development of an LNG project. The Site is one of the potential sites proposed in the NLG Presentation. The Project selected it for a number of reasons, including the gentle upland slope along water's edge, the extensive coastline providing numerous options for component siting, its relatively protected position with respect to the prevailing winter winds, and its deep-water foreshore for unlimited vessel access and maneuvering flexibility. No other sites are being considered and the Project does not believe that it would be feasible to change the site location in the Nass area.

2.11 Alternative Means of Carrying Out the Project

Through Project design the Proponents will evaluate alternative means of carrying out the Project that are technically and economically feasible. These alternatives are considered below and include Site selection, marine terminal design, power supply, pipeline options, construction process and management of operations. The assessment of these alternatives will be informed by engagement with local Indigenous communities and regulators.

The Project design will accommodate measures to avoid or mitigate negative impacts of the Project. The Project has the benefit of following behind earlier LNG export facility projects that participated in EA-IA processes in the past decade and one approved in the North Coast region, and the Proponents intend to incorporate applicable mitigations and other learnings developed for those projects.

2.11.1 Site Options

Several sites were evaluated for this Project based on preferred site information assembled by the Nisg̲a'a Nation in 2014 (*Nisg̲a'a Lisims Government – New Available LNG Sites on Canada's West Coast* – February 2014). Since that time, the Nisg̲a'a Nation has been working to develop an LNG export facility. Wil Milit was selected as the preferred site based on a number of risk factors, including constructability, operations, environmental impact and land ownership.

The Project site's onshore and marine footprint will be determined with the Nisg̲a'a Nation during the finalization of the DPD, informed by available engineering design, baseline environmental information and engagement with Indigenous Nations.

2.11.2 Marine Terminal Design

The FLNG berths will be permanently attached to infrastructure that will be constructed on the seabed or cantilevered and attached to the shoreline rock slopes. The objective is to construct the support structures in marine inter-tidal and sub-tidal areas to ensure adequate safe keel clearances for the FLNGs and LNG carriers and to avoid any critical sensitive marine habitats. At this early stage of Project design, it is not yet known whether dredging will be required in the Project's proposed Water Lot. Depths to bedrock and the need for dredging will be informed by bathymetric information in the proposed Water Lot and further investigated during Pre-FEED and FEED.

2.11.3 Electric Power Supply

The Proponents have engaged with BC Hydro and are undertaking a System Impact Study to explore technically and economically feasible options to supply the Project with the necessary renewable power for the facility. In addition, the Project will be capable of using a portion of the incoming feed gas to generate necessary electricity at the Site through the use of gas-fired power generation facilities. Once connected to the BC Hydro transmission system, the self-generation facilities would be used for backup power in the event of insufficient supply and transmission capacity interruptions, and, potentially, for providing redundant generation for increased system reliability for the Nisg̲a'a communities in the Nass Valley.

The Project is currently undertaking engineering feasibility studies to determine economically and technically feasible options to connect to the BC Hydro transmission system. The Project anticipates that the interconnecting transmission line and marine sub-sea cable will be longer than 80 km but less than 345 kV and connect to a BC Hydro sub-station. The length of the new transmission line and whether or not it could follow, at least in part, existing power transmission line rights-of-way is not yet known.

It is envisioned that an unrelated third party will undertake the design, development and operation of this connecting power transmission line. The third party would also undertake acquiring the necessary regulatory authorizations for the new transmission line including the marine sub-sea electrical transmission cable crossing Portland Inlet and-or Portland Canal to the Site.

2.11.4 Pipeline

The Project requires a natural gas transmission pipeline to convey treated natural gas from the sources of natural gas in northeast BC and Alberta to the Site. As stated in section 2, two potential pipeline options exist: PRGT and WCGT. PRGT is approved to cross the interior of BC and then enter the Nass Valley and terminate on the mainland at Nasoga Gulf. From there, the approved seafloor route is southwestward through Nasoga Gulf into Portland Inlet and then southward through Chatham Sound to Prince Rupert. No existing pipeline or other rights-of-way are incorporated in the approved pipeline routes as documented in the EACs for each pipeline.

WCGT has two approved pipeline routes that can connect to the Site:

1. Route one: The pipeline crosses the interior of BC and then enters the Nass Valley with a mainland terminus at Nasoga Gulf. From there, the approved seafloor route is similar to PRGT and proceeds southwestward through Nasoga Gulf into Portland Inlet and then southward through Chatham Sound to Prince Rupert.
2. Route two: The pipeline crosses the interior of BC to Kitsault and then transits southward along the seafloor via Alice Arm into Observatory Inlet, and then into Portland Inlet just east of Portland Canal, and then southward to Chatham Sound and then to Prince Rupert.

The EA documentation for both PRGT and WCGT provides an understanding of the sea floor topography in Nasoga Gulf, Portland Inlet, Observatory Inlet and Alice Arm. Alternative routes for the pipeline to connect to the Site will be examined in Pre-FEED and FEED to determine the optimal route and necessary connection to the Site.

2.12 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 which are (1) enable the export of rich natural gas deposits of the WCSB to serve the growing demand for natural gas across the globe, (2) create direct and indirect benefits for Indigenous Nations and overall, to citizens of BC and Alberta, and (3) assist Canada, BC, Alberta and Indigenous Nations in meeting objectives to address global climate change due to GHG emissions.

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.

3 BIOPHYSICAL SETTING

The following section provides an overview of the biological setting in the vicinity of the Project. Details on the human and social setting are provided in Section 4. An image of the proposed Site is shown in Photo 1.

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

3.1 Atmospheric, Climate, and Physical Environment

3.1.1 Physical Environment

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

The marine waters in the vicinity of the Site are within the Inner Pacific Shelf Ecoregion and North Coast Fjords Ecosection. Water levels throughout the area are strongly tidal (range approximately 7 metres above chart datum). The bathymetry and general metocean conditions in Portland Inlet have been subject to studies that informed EAs for both natural gas transmission pipelines (e.g., PRGT and WCGT) that would transport natural gas from source areas to the land terminus of those pipelines at Nasoga Gulf.

Marine currents within Portland Inlet, Portland and Pearse Canals are highly variable due to a combination of wind and tidal forcing. Wind forcing is highly episodic and particularly important in the fall and winter under the combined influence of frequent Pacific storms and Arctic outflow winds.

Two major river systems discharge into the larger "regional" area: the Skeena River into southern Chatham Sound and the Nass River into northern Chatham Sound via Nass Bay and into Portland Inlet. The Skeena River water enters southern Chatham Sound with a net seaward flow of the Skeena River water on the east side of the sound past Prince Rupert and northward into the eastern side of northern Chatham Sound. During freshet, Nass River water moves out past Wales Island, through Dundas Passage north of Dundas Island and finally into Dixon Entrance with some intrusion into Portland Canal and Observatory Inlet.

The majority (98%) of the 908 km of marine shoreline in the Nass Area is undeveloped, with approximately 3 km (~0.3%) classified as "man-made" (anthropogenic or human-altered). Notable human-altered shorelines occur at Stewart, Anyox, Alice Arm, Kitsault, and Gingolx. However, by regional standards (e.g., Prince Rupert Harbour), the type and scale of foreshore development in the Nass Area is minor.

3.1.2 Climate and Air Quality

The two Environment and Climate Change Canada (**ECCC**) climate normal data collection sites closest to the Project site are at Green Island (at the mouth of Portland Inlet) and Stewart A, in Stewart, BC. A summary of average wind, temperature and precipitation at these sites is presented in Table 2 below.

Table 2 – Summary of Average Wind, Temperature and Precipitation

Parameter	Green Island	Stewart A
Temperature – daily average	Range: 3.2 to 14.8°C	Range: -3.0 to 15.1°C
Precipitation (mm)	Range: 105.3 mm to 353.9 mm	Range: 65.6 mm to 238.0 mm
	Peak months: October to January	Peak months: October to January
	Mean annual: 2474 mm	Mean annual: 1866.8 mm
Maximum hourly wind speed (km/h)	Range: 65 to 120 km/h	Range: 33 to 57 km/h
	Peak: June	Peak: March
Direction of maximum hourly speed	Southeast	South

Given the remoteness of the Site and its distance from industrial operations, air quality is expected to be natural, and unaltered by anthropogenic activity. Primary sources of emissions from the project would come from vessel activity and the thermal electric power facilities. The closest community is Gingolx which is approximately 15 km east of the Site.

3.1.3 Acoustic Environment

The existing acoustic environment is characterized by various sounds from the natural environment including wind, waves and marine and terrestrial wildlife. Due to the remoteness of the Site, anthropogenic sounds are largely limited to marine traffic and occasionally air traffic.

3.2 Marine Communities and Species

The region sustains a diverse marine community within a variety of marine ecosystem types. Marine turtles could occur in the area but are very rare there because the Site is well north of the regular range of this taxonomic group. The distribution and abundance of marine mammals and birds fluctuates greatly in response to changes in food availability, with runs of eulachon and salmon drawing large numbers of marine birds, seals, and sea lions.

No notable concentrations of cetaceans are known to occur in the marine waters near the Site. Substantive studies of cetaceans and their movements in Portland Inlet and Portland Canal and out to Triple Island will be conducted building on existing cetacean information collected for other projects to inform Project planning and assessment.

The marine waters in the proposed Water Lot and the marine waters of the marine shipping routes comprise fish habitat for many species of marine organisms (most of which are classified as "fish" under the federal *Fisheries Act*). Of note are species important to the Nisga'a Nation, other Indigenous Nations, commercial, and recreational fishers such as salmon, eulachon, Dungeness crab, Pacific halibut, numerous rockfish species, and other finfish, invertebrates, and aquatic plants.

Intertidal habitats in the proposed Water Lot include rocky shorelines, sand/gravel beaches vegetated with various forms of marine plants and seaweeds. *Salicornia sp.* (sea asparagus) is known to occur at the Site. Sub-tidal, intertidal, and supra-tidal areas will be mapped and studied in detail during the EA-IA.

3.3 Freshwater Communities and Species

Pacific salmon occur in many of the rivers and streams in the vicinity of the Site. Small streams at the Site are anticipated to have fish present and therefore all streams at the Site will be subject to baseline data collection to determine fish presence or absence over the four seasons. 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 (*Oncorhynchus nerka*), chinook (*Oncorhynchus tshawytscha*), coho (*Oncorhynchus kisutch*), pink (*Oncorhynchus gorbuscha*) and chum (*Oncorhynchus keta*) salmon as well as steelhead and anadromous Dolly Varden and cutthroat trout (*Oncorhynchus clarkii clarkia)*. There is a major migration of eulachon to and from the lower Nass River each spring. Additional species include rainbow trout (Oncorhynchus mykiss*),* mountain whitefish (*Prosopium williamsoni*), Pacific lamprey (*Pntosphenus tridentatus*), northern pikeminnow (Ptychocheilus oregonensis), peamouth chub (*Mylocheilus caurinus*), redside shiner (*Richardsonius balteatu*s), longfin smelt (Spirinchus thaleichthys), sucker (*Catostomus* sp.), and sculpin (*Cottus* sp.) species.

3.4 Terrestrial Communities and Species

The Site is within the Northern Coast Fjords Ecosection. It is within the rugged Coast Mountains of the Hecate Lowland Ecosection and is within 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 (*Tsuga heterophylla*), sometimes with codominant western red cedar (*Thuja plicata*) and amabilis fir (*Abies amabilis*). Sitka spruce (*Picea sitchensis*) 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 (*Alnus rubra*) and other deciduous trees and shrubs.

Foreshore habitats and salmon-bearing streams in the general area of the Site provide important foraging habitat for many species of wildlife, including grizzly bear, black bear, grey wolf, river otter, mink, bald eagle and gulls. As such, the habitat suitability of an area for those species is directly affected by the ability of that sensitive habitat to support salmon. Old forests provide important habitat for birds such as marbled murrelet and northern goshawk. In addition, numerous other species of birds (migratory and non-migratory), mammals and other wildlife are known or suspected to occur in the vicinity of the Site.

3.5 Species with Conservation Status

A number of species that could potentially occur at or near the Site have conservation statuses as identified by the *Species at Risk Act*, Canada (**SARA**), the Committee on the Status of Endangered Wildlife in Canada (**COSEWIC**) and or the BC Conservation Data Centre (Table 3).

Table 3 – Animal Species with a Conservation Status Potentially Occurring At or Near the Site

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Fish				
Coastal cutthroat trout	*Oncorhynchus clarkii clarkii*		NR	Blue
Eulachon Nass/Skeena Stocks	*Thaleichthys pacificus*		SC	Blue
Bocaccio rockfish	*Sebastes paucispinis*		Endangered	NS
Basking shark	*Cetorhinus maximus*	Endangered	Endangered	NS
Bluntnose six gill shark	*Hexanchus griseus*	SC	SC	NS
Tope	*Galeorhinus galeus*	SC	SC	NS
Rougheye rockfish	*Sebastes aleutianus*	SC	SC	NS
Yelloweye rockfish	*Sebastes ruberrimus*	SC	Threatened	NS
Quillback rockfish	*Sebastes maliger*		Threatened	NS
Yellowmouth rockfish	*Sebastes reedi*		Threatened	NS
Dark blotched rockfish	*Sebastes crameri*		SC	NS
Green sturgeon	*Acipenser medirostris*	SC	SC	Blue
Longspine thornyhead	*Sebastolobus altivelis*	SC	SC	NS
Northern abalone	*Haliotis kamtschatkana*	Endangered	Threatened	Red
Amphibians and Reptiles				
Leatherback turtle	*Dermochelys coriacea*	Endangered	Endangered	Red
Green turtle	*Chelonia mydas*		Threatened	Blue
Western toad	*Anaxyrus boreas*	SC	SC	Yellow
Coastal tailed frog	*Ascaphus truei*		SC	Yellow
Birds				
American golden-plover	*Pluvialis dominica*			Blue
Ancient murrelet	*Synthliboramphus antiquus*		SC	Blue
Barn swallow	*Hirundo rustica*	Threatened	Threatened	Blue
Black Scoter	*Melanitta americana*			Blue
Brant	*Branta bernicla*		NR	Blue
California gull	*Larus californicus*		NR	Blue
Canada goose	*Branta canadensis occidentalis*		NR	Red
Cassin's auklet	*Ptychoramphus aleuticus*	SC	SC	Red
Common murre	*Uria aalge*		NR	Red
Common nighthawk	*Chordeiles minor*	Threatened	SC	Yellow
Double-crested cormorant	*Phalacrocorax auritus*		NaR	Blue
Evening Grosbeak	*Coccothraustes vespertinus*	SC	SC	Yellow
Great blue heron *fannini* subspecies	*Ardea herodias fannini*	SC	SC	Blue
Lesser Yellowlegs	*Tringa flavipes*		Threatened	Yellow
Long-tailed duck	*Clangula hyemalis*		NR	Blue
Marbled murrelet[1]	*Brachyramphus marmoratus*	Threatened	Threatened	Blue

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Northern goshawk, *laingi* subspecies	*Accipiter gentilis laingi*	Threatened	Threatened	Red
Northern pygmy-owl, *swarthi* subspecies	*Glaucidium gnoma swarthi*			Blue
Olive-sided flycatcher	*Contopus cooperi*	Threatened	SC	Blue
Peregrine falcon *pealei* subspecies	*Falco peregrinus pealei*	SC	SC	Blue
Pink-footed shearwater	*Puffinus creatopus*	Endangered	Endangered	Blue
Red-necked Phalarope	*Phalaropus lobatus*			Blue
Short-billed Dowitcher	*Limnodromus griseus*			Blue
Surf scoter	*Melanitta perspicillata*		NR	Blue
Tufted puffin	*Fratercula cirrhata*		NR	Blue
Wandering tattler	*Tringa incana*		NR	Blue
Western grebe	*Aechmophorus occidentalis*	SC	SC	Red
Western screech-owl *kennicottii* subspecies	*Megascops kennicottii*	Threatened	Threatened	Blue
Yellow-billed Loon	*Gavia adamsii*		NaR	Blue
Terrestrial mammals				
American Water Shrew	*Sorex palustris*			Blue
Grizzly bear	*Ursus arctos*		SC	Blue
Little brown myotis	*Myotis lucifugus*	Endangered	Endangered	Yellow
Wolverine, *luscus* subspecies	*Gulo gulo luscus*	SC	SC	Blue
Marine mammals				
Sea otter	*Enhydra lutris*	SC	SC	Blue
Northern elephant seal	*Mirounga angustirostris*	NaR	NaR	Red
Steller sea lion	*Eumetopias jubatus*	SC	SC	Blue
Northern fur seal	*Callorhinus ursinus*		Threatened	Red
Killer whale transient population	*Orcinus orca*	Threatened	Threatened	Red
Killer whale northern resident population	*Orcinus orca*	Threatened	Threatened	Red
Harbour porpoise	*Phocoena phocoena*	SC	SC	Blue
Humpback whale	*Megaptera novaeangliae*	SC	SC	Blue
Blue whale	*Balaenoptera musculus*	Endangered	Endangered	Red
Sei whale	*Balaenoptera borealis*	Endangered	Endangered	Red
Fin whale	*Balaenoptera physalus*	Threatened	Threatened	Red
Grey whale	*Eschrichtius robustus*		SC	Blue

Species Common Name	Scientific Name	SARA Status	COSEWIC Status	BC CDC Status
Vascular Plants				
Alaska holly fern	*Polystichum setigerum*			Blue
American glehnia	*Glehnia littoralis ssp. leiocarpa*			Blue
arctic daisy	*Arctanthemum arcticum ssp. arcticum*			Red
eminent bluegrass	*Arctopoa eminens*			Red
Mackenzie's sedge	*Carex mackenziei*			Blue
pygmy waterlily	*Nymphaea tetragona*			Blue
silky beach pea	*Lathyrus littoralis*		Threatened	Red
white-lip rein orchid	*Platanthera ephemerantha*			Blue
Non-Vascular Plants and Lichens				
blue-blue vinyl	*Leptogium cyanescens*			Red
corrugated crackers	*Fuscopannaria ahlneri*			Blue
cryptic paw	*Nephroma occultum*	SC	Threatened	Blue
Dalton's moss	*Daltonia splachnoides*		Endangered	Red
frosted glass-whiskers	*Sclerophora peronella*		DD	Red
languid horsehair	*Bryoria carlottae*			Blue
midlife vinyl	*Leptogium californicum*			Blue
mountain crab-eye	*Acroscyphus sphaerophoroides*	SC	SC	Red
octopus' matchstick	*Pilophorus robustus*			Blue
oldgrowth specklebelly	*Pseudocyphellaria rainierensis*	SC	SC	Blue
pacific pretzel	*Bryocaulon pseudosatoanum*			Blue
peacock vinyl	*Leptogium polycarpum*	SC	SC	Yellow
pebbled paw	*Nephroma isidiosum*			Blue
spiny horsehair	*Bryoria cervinula*			Blue
tundra lemon	*Catolechia wahlenbergii*			Blue
vole felt	*Erioderma sorediatum*			Blue

NOTES:
SC=Special Concern; NaR=Not at Risk; NR=Not Ranked; DD=Data Deficient.

3.6 Biophysical Data and Reports

More than a decade ago the North Coast Land and Resource Management Plan (**NC LRMP**) completed a strategic land and resource plan applicable to the Project. The North Coast Marine Plan was completed in 2015 by the North Coast-Skeena First Nations Stewardship Society and the Province of British Columbia, with contributions from the Nisga'a Nation for the Nass Area. It is a reasonably current source of general marine biophysical information applicable to marine waters potentially affected by the Project.

The EAs and the accompanying technical studies completed for PRGT and WCGT natural gas transmission pipeline projects in 2014 both provide specific biophysical information on Portland Inlet and the surrounding lands and waters and will be used to inform this Project. In addition, NLG has amassed a considerable body of literature concerning the biophysical environment and natural resources of the Nass Area and are integrally involved in fisheries management in the Nass Area. Refer to Table 10, Section 11 (References) and Appendix 5 for a list of applicable biophysical studies.

4 HUMAN AND SOCIAL SETTING

4.1 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 nearby.

The nearest communities to the Site, as measured on Google Earth and in order of proximity, are as follows:

- The Nisga’a Village of Gingolx, BC is approximately 15 km east
- The Nisga'a Village of Laxgalts’ap, BC is approximately 38 km east
- Lax Kw’alaams, BC is approximately 58 km south-southwest
- The Nisga’a Village of Gitwinksihlkw, BC is approximately 63 km east-northeast
- The Nisga’a Capital – Village of Gitlaxt’aamiks, BC is approximately 78 km east-northeast
- Metlakatla, BC and the city of Prince Rupert, BC are both approximately 80 km south
- Metlakatla, 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, Laxgalts’ap, Gitwinksihlkw and Gitlaxt’aamiks) could potentially be affected by the Project. The closest Nisga’a Village to Wil Milit is Gingolx (formerly known as Kincolith). It is connected to the provincial highway system by the Nisga’a Highway (No. 113) to Terrace.

The Village of Gingolx and other Nisga’a villages may become supply and service centres for the Project. It is also envisioned at this stage of Project planning that a ferry service may originate in Gingolx harbour, allowing for the marine transport of people, supplies and materials by barge from Gingolx across Portland Inlet into Portland Canal to a barge berth at the Site.

Photo 2 – Gingolx, BC

The Nisga'a Nation has constitutionally protected treaty rights and interests in the Nass Area, as set out in the Nisga'a Treaty, where the Project is proposed to be located. The potential for large-scale natural resource development projects to potentially impact Nisga'a citizens is well understood by the Nisga'a Nation. The treaty-related considerations and requirements are further detailed in Section 6.1.

The Nisga'a Nation are supportive of incoming transportation of workers, supplies and materials coming to the Nass Valley and using their services (e.g., vehicle fuel, sundries, accommodation, food and catering). Nisga'a citizens aspire to work on the Project, and it is envisioned that they will do so during the EA-IA process and during construction if the Project is approved.

The City of Terrace (e.g., regional airport) and connected by provincial highway to the Nisga'a Nass Valley and the City of Prince Rupert (e.g., connected by provincial highway, regional airport, railway and large-scale international port facilities) are expected to be regional supply and transportation centres for the Project. Materials, supplies and workers will pass through these communities to the Site. It is anticipated that there will be more traffic through Terrace as there is an all-weather provincial highway to the Nass Valley terminating in Gingolx. Gingolx is a short voyage (i.e., approximately 45 minutes in good weather) to the Site.

Lax Kw'alaams (Port Simpson), Metlakatla (Tsimpsean Peninsula), Port Edward and Prince Rupert are also in the general region of the Project. Members of these communities use the marine water ways (e.g., Portland Inlet, Portland Canal, Pearse Canal) near Wil Milit. Community members from farther away communities like the City of Terrace, Kitkatla (Gitxaała), and members of Region 6 Prince Rupert and District Métis Nation of British Columbia (**MNBC**) may also come into these same marine waters in pursuit of recreational, commercial, and Indigenous fisheries. Large marine vessels may also proceed past the Site enroute up Observatory Inlet to Kitsault or up Portland Canal to the communities of Stewart, BC and

Hyder, Alaska (**AK**). Estimates (pers. comm BC Coast Pilots) of large ship vehicle traffic sailing past Wil Milit indicate that approximately 35 vessels per year sail past the Site up Portland Canal.

4.1.1 Indigenous Nations Setting

The 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 First Nations intersect or are in proximity to components of the Project (in order of proximity of each community's primary reserve to the Site):

- Lax Kw'alaams Band
- Metlakatla First Nation
- Kitsumkalum First Nation
- Kitselas First Nation
- Gitxaala Nation
- Haida Nation

Region 6 Prince Rupert and District MNBC also have the potential to be affected by or have an interest in the Project. A summary of the Nisga'a Nation is provided in Section 6.1. Summaries of the remaining Indigenous Groups are provided in the following sections and is summarized from the federal CIRNAC website: Aboriginal People and Communities – First Nation Profiles – May 2021.

4.1.1.1 Lax Kw'alaams Band

Lax Kw'alaams Band is 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 3,983 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 encompasses the lands and waters between tributaries of the Skeena River, the height of land east of the Zymoetz River, and the Kitsumkalum River (Figure 5). It 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, stretching south along Grenville Channel to the north.

4.1.1.2 Metlakatla First Nation

Metlakatla First Nation is based in Metlakatla, on the south half of Tsimpsean 2 reserve near Prince Rupert. Metlakatla First Nation has approximately 1,016 members; 9% of which live on reserve land in Metlakatla. Metlakatla First Nation has 21 reserves, covering approximately 7,742 ha. Their traditional territory extends from the coastal islands in eastern Hecate Strait to Lakelse Lake near Terrace (Figure 5). Portland Canal and Observatory Inlet mark the northern extent of the boundary, and the headwaters of the Ecstall River mark the southern borders. Metlakatla First Nation territory includes the lower portions and the mouth of the Skeena River and its tributaries.

4.1.1.3 Kitsumkalum First Nation

The Kitsumkalum First Nation Band administration is based 5 km west of Terrace in the main community at Kitsumkalum IR1. Kitsumkalum has a population of approximately 800 members, with 30% of Kitsumkalum members living at Kitsumkalum IR1, 30% living in Prince Rupert and Port Edward, and the remainder of the population living in Terrace, other surrounding communities, or elsewhere. Many of the traditional Kitsumkalum villages, such as Casey Point and Barret Rock were destroyed through the development and construction of the rail line from Terrace along the Skeena River to Prince Rupert. Kitsumkalum currently has four reserves totalling 597 ha, three held exclusively and one co-managed with the Kitselas First Nation. Kitsumkalum also holds shared ownership in several other reserves that had been created for the common good of the Tsimshian Nation. Kitsumkalum First Nation 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. Throughout their Territory, Kitsumkalum holds shared as well as exclusive Title and Rights.

4.1.1.4 Kitselas First Nation

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 territory includes the watersheds of the Skeena and Kitimat rivers from Lorne Creek in the east to the Skeena and Kitimat estuaries (Figure 5). In addition to this, 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.

4.1.1.5 Gitxaała Nation

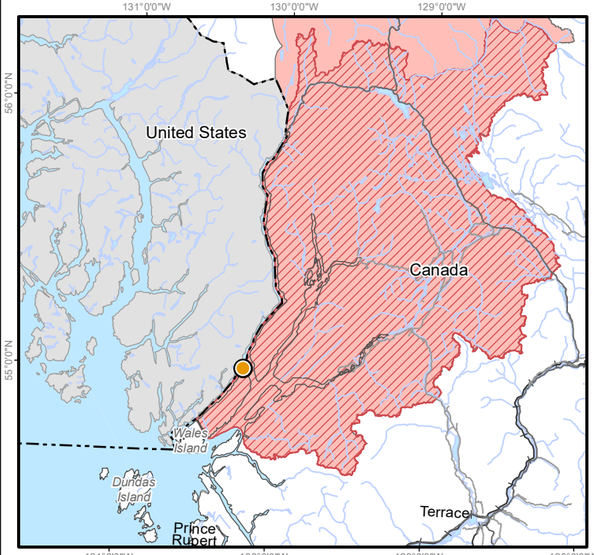
Gitxaała Nation is based in the Village of Kitkatla on Dolphin Island in Kitkatla Channel, located approximately 120 km west of Kitimat and 55 km south of Prince Rupert. The Gitxaała Nation has approximately 2,061 members, 25% of which live on reserve. Gitxaała Nation has 21 reserves covering 1,885 ha; most of the area is captured by the Dolphin Island 1 reserve where the Village of Kitkatla is located. Gitxaała Nation traditional territory covers just over 3,000 ha stretching south to the coastal islands just north of Kitasu Bay (Figure 5). The western edge of its territory extends seaward abutting against the marine territories of the Haida Nation. To the east, the territory extends to the mainland shore of Grenville Channel, where it meets Haisla and Gitga'at territories.

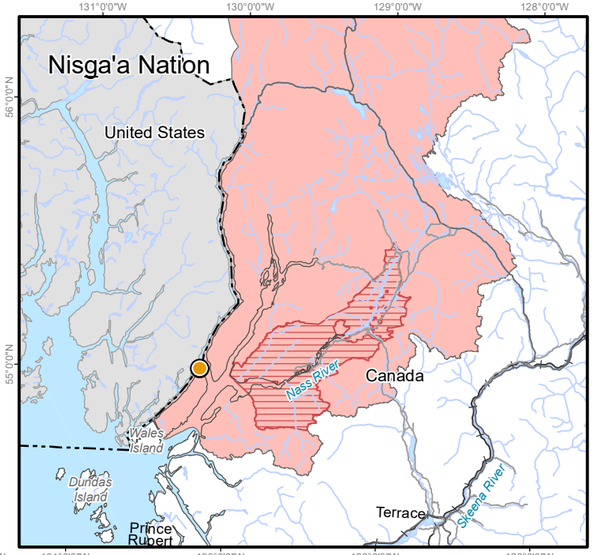
4.1.1.6 Haida Nation

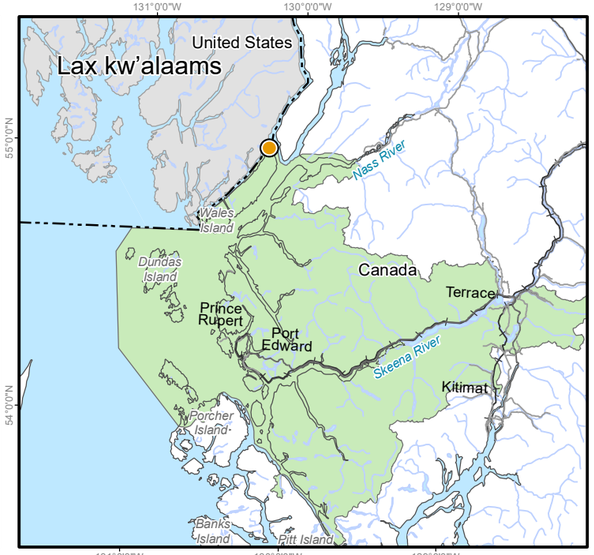
Haida Nation are comprised of two bands: Old Masset Village Council or Haida Village, located 5 km northwest of Masset, and the Skidegate Mission, located on the southeast corner of Graham Island on Haida Gwaii. Haida Gwaii consist of two main islands, the more northerly Graham Island and Moresby Island 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. Haida Nation traditional territory includes all of Haida Gwaii, the surrounding waters of Dixon Entrance and the western half of the Hecate Strait, and the Kaigani Archipelago (Figure 5).

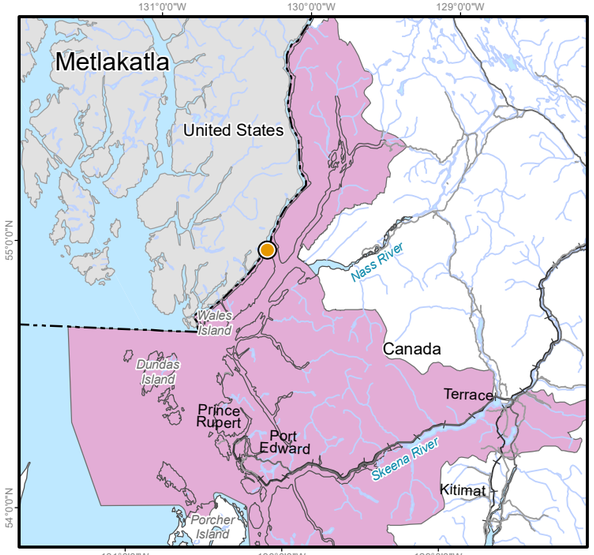
4.1.1.7 Métis

Métis in BC are represented by MNBC which represents thirty-eight Métis Chartered Communities. MNBC is recognized as the official governing organization for Métis in BC, and its aim is to support and develop opportunities for its communities. Region 6 Prince Rupert and District MNBC members may access marine areas in the vicinity of the Project in pursuit of recreational, commercial, and Indigenous fisheries.









KSI LISIMS LNG

Project Location

First Nation

- Gitxaala Nation
- Haida Nation Traditional Territory
- Kitselas First Nation Traditional Territory
- Kitsumkalum Band Council
- Lax Kw'alaams Band
- Metlakatla Band Council
- Nisga'a - Nass Area
- Nisga'a - Nass Wildlife Area
- Nisga'a Lands

- International Boundary
- Railway
- Watercourse
- Waterbody

0 20 40 60 80 km

1:2,500,000 (at original document size of 11x17)

N

Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada, Rockies LNG, Canadian Hydrographic Service
3. NTS Sheets: 093E, 103G, 093L, 103H, 103I, 103J, 103P, 093M, 103O

Disclaimers:
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Stantec

Project Location	Project Number 123221820
Pearse Island	Prepared by CSTEINER on 20210429
British Columbia	Discipline Review by LTRUDELL on 20210429
	GIS Review by SMOSS on 20210429

Client/Project/Report

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

Figure No.

5

Title

Indigenous Territories in Northwest British Columbia

\\CA0183-PRAGF01\Workgroup\1232\projects\123221820\figures\fig_123221820_013_FN_Traditional_Territories.mxd Revised: 2021-07-01 By: stmoss

4.2 Land and Marine Use Planning

The 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 onshore portion of the Project is located on Nisg̲a'a Nation's Category A Lands, which describes land owned by the Nisg̲a'a Nation in fee simple and is located within the Nass Area. The Project proposes to lease a Water Lot adjacent to the Site to accommodate marine infra-structure.

A Land Use Plan for Nisg̲a'a Lands (2002; Nisg̲a'a LUP) sets out important considerations for uses of Nisg̲a'a Lands (as defined therein). The Land Use Plan guides how the Nisg̲a'a Nation governs Nisg̲a'a Lands in accordance with a set of principles:

- Adherence to the principle of the common bowl
- Sustainable use of resources on Nisg̲a'a Lands for the benefit of Nisg̲a'a citizens
- Protection of the environment from ecological degradation
- Equitable access to Nisg̲a'a Lands and Nisg̲a'a resources for Nisg̲a'a citizens

Although the Land Use Plan does not apply to Category A Lands, these principles guide the Nisg̲a'a Nation in land use decisions with respect to all lands owned by the Nisg̲a'a Nation.

The Site is also within the provincial NC LRMP area and designated therein as "interests of the Nisg̲a'a Lisims Government".

The Marine Plan Partnership for the North Pacific Coast (**MaPP**) is an initiative between the Province of BC and 16 First Nations that developed and are implementing marine use plans for BC's North Pacific Coast. The MaPP region is divided into four sub-regions: North Coast, Haida Gwaii, Central Coast, and North Vancouver Island. The marine plan area includes the territories of six participating First Nations: Gitga'at, Gitxaala, Kitsumkalum, Kitselas, Haisla, and Metlakatla First Nation. Although the North Pacific Coast sub-region of MaPP includes the marine waters of the Nass Area, only two spatial areas within the Nass Area are identified by the North Coast Marine Plan (2015): "Stewart" – a portion of the Bear River Estuary and "Kitsault" – at the head of Alice Arm. Both are identified in the Plan as "Areas for future planning consideration" in need of finer-scale planning information, subject to participation by the Nisg̲a'a Nation.

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 Tsimpshian Tribes of Lax Kw'alaams Band
- Metlakatla Draft Marine Use Plan
- Kitsumkalum Marine Use Plan
- Gitxaala Marine Use Plan

4.3 Proximity of the Site to Protected Areas and Federal Lands

The proximity of protected areas, such as parks and Wildlife Habitat Areas, and federal lands from the Site (out to 55 km) are listed in Table 4. The Project disturbance area does not overlap with any lands outside of BC or Canada.

Table 4 – Proximity of Site to Treaty Lands, Protected Areas, and Federal Lands

Protected Areas, 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
Conservancy Area	
Khutzeymateen Inlet, Winter Inlet, Ksi X'Anmaas	20–30
Ksi Xts'at'kw/Stagoo, Kts'Mkta'Ani/Union Lake, Manzanita Cove, Wales Harbour, Khutzeymateen Inlet West	31–40
Larcom Lagoon, Zumtela Bay	41–50
Fisheries and Ocean Canada	
Kincolith CEDP Hatchery	~15

4.4 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 (particularly in decades past). Coastal forest harvesting in the general area has diminished in recent years.

Significant economic, cultural and social value near the Site and marine waters of the region are derived from the harvest of aquatic resources. For example, within the Nass Area, harvest by Nisg̲a'a citizens occurs in the general commercial fisheries, Nisg̲a'a commercial fisheries for salmon, and Nisg̲a'a domestic fisheries for food, social and cultural purposes. While domestic fisheries do not generate income, they do serve, in additional to food and cultural values, an important economic role in that harvests for domestic purposes offset the cost of food that would otherwise have to be purchased.

The marine waters of the region serve as marine navigation routes for commercial, industrial, Indigenous, and recreational users connecting Stewart, Hyder, AK, Kitsault, Gingolx, and Laxgalts'ap to communities and ports to the south, as well as to international destinations. For centuries, the Nass River was the primary means of connecting Gingolx to Nisga'a Villages upriver. The completion of Highway 113 connecting the Nass Valley to Terrace changed that approximately 20 years ago.

The only historical industrial and commercial transportation into and out of the Portland Canal area has been via commercial vessels going past the Site to Stewart or Hyder, AK or to supply historic fishing lodges, camps, marine log transport (e.g., barged logs from commercial forest harvesting) and potentially whaling stations of years past. Recreational, commercial and Indigenous fishing vessels also transit this maritime region.

The Project's baseline environmental assessment studies are anticipated to lead to modest increased vessel traffic in and out of Portland Canal from southern ports (e.g., Prince Rupert) and across Portland Inlet to and from the Nisga'a community of Gingolx. If the Project is approved for construction, increases in medium to large vessel traffic into the Portland Canal and Portland Inlet area will occur. Project operations will result in the movement of LNG carriers, tugs, barges, and other vessel traffic through the area.

4.4.1 Past and Present Land Use

The Site is a former reserve (IR. No. 43) and can be considered undeveloped. It 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. The Site's District Lots, legal description and Parcel Identifier Numbers are listed in Table 5.

Table 5 – Wil Milit Legal Land Descriptions (Category A Nisga'a Lands)

District Lot	General Land Description	Parcel Identification Number	Legal Description	Area (ha)
DL 7235	Western Lot – on Pearse Canal	024-768-685	District Lot 7235, Cassiar District Plan PRP45454	108
DL 5431	Eastern Lot – on Portland Canal	024-768-693	District Lot 5431, Cassiar District Plan PRP45454	56

4.4.2 Past and Present Surface or Groundwater Use

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

4.4.3 Past and Present Marine Use

4.4.3.1 Tourism and Recreation

Maritime-based commercial tourism (e.g., whale watching, pocket cruises, kayak adventures, fishing lodges on western sides of Pearse and Wales Islands, etc.) 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.

4.4.3.2 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 Nisg̱a'a Nation, regional Indigenous Nations and non-Indigenous groups is an economic staple in the local regional economy. Indigenous Nations conduct commercial, recreational and Indigenous fisheries in Portland Inlet, Portland Canal, Pearse Canal and Nasoga Gulf.

Indigenous Nations and non-Indigenous fishers will be engaged by the Project with respect to their use of Portland Inlet, Portland Canal, Pearse Canal and Nasoga Gulf for their commercial, recreational and/or Indigenous fisheries.

5 PROJECT INTERACTIONS WITH THE ENVIRONMENT AND POTENTIAL EFFECTS

5.1 Potential Project Interactions

A description of potential interactions between the Project and the biophysical (ecological) and human (economic, community wellbeing, heritage, health) environments follows in Table 6 and Table 7. The methodology and rationale used to examine the Project's potential interactions and adverse effects will be presented in the BC EAO Process Order and IAAC Notice of Commencement, as applicable. As such, the interaction ratings presented here are considered interim and will be discussed in more detail in the DPD.

Table 6 – Potential Interactions between Project Activities and Ecological Values

Stage and Activity	Ecological Values			
	Atmospheric Environment	Freshwater Communities & Species	Terrestrial Communities & Species	Marine Communities & Species
I. Construction				
Temporary construction workforce accommodation	Y	N	P	Y
Transport of workers, equipment, and materials to the Site	Y	P	Y	Y
Upland Site clearance activities	Y	Y	Y	N
Construction of land-based civil works, LNG land-based facilities and utilities	Y	Y	Y	N
Construction of marine terminal	Y	N	Y	Y
Permanent installation of FLNGs	Y	N	Y	Y
Construction of on-site all-weather roads	Y	Y	Y	N
Rehabilitation or stabilization of temporary-use areas	Y	Y	Y	P
Decommissioning of temporary facilities	Y	Y	Y	Y
II. Operation				
On-site workforce accommodation for operations	Y	P	Y	P
Facility start-up and commissioning	Y	N	Y	Y
Natural gas liquefaction & storage	Y	N	N	Y
Offloading of LNG-to-LNG carriers	Y	N	N	Y
Mooring of LNG carriers for LNG transfer	Y	N	N	Y
LNG vessels in shipping lanes	Y	N	N	Y
Power generation, aggregation, and distribution	Y	P	Y	Y
Site administration and safety facilities and supporting infrastructure for water supply, wastewater treatment and waste management	Y	P	Y	Y
III. Decommissioning and Reclamation				
Dismantling of infrastructure	y	P	Y	Y
Remediation and Reclamation	P	P	Y	Y

NOTES:
Interactions are Rated on an Interim Basis as: Y (likely), P (possible), N (unlikely).

Table 7 – Potential Interactions between Project Activities and Social Values

Stage and Activity	Social Values					
	Employment and Economy	Land Use (off site)	Marine Use (fishing)	Infrastructure and Services	Heritage	Human Health
I. Construction						
Temporary construction workforce accommodation	Y	N	Y	Y	P	Y
Transport of workers, equipment, and materials to the Site	Y	N	Y	Y	P	P
Upland Site clearance activities	Y	N	N	P	Y	P
Construction of land-based civil works, LNG land-based facilities and utilities	Y	P	N	P	Y	P
Construction of marine terminal	Y	N	Y	Y	P	P
Permanent installation of FLNGs	Y	N	Y	Y	N	N
Construction of on-site all-weather roads	Y	N	N	Y	Y	N
Rehabilitation or stabilization of temporary-use areas	Y	N	Y	Y	N	P
Decommissioning of temporary facilities	Y	P	P	P	N	N
II. Operations						
On-site workforce accommodation for operations	Y	Y	N	Y	Y	Y
Facility start-up and commissioning	N	N	N	Y	N	P
Natural gas liquefaction & storage	N	N	N	Y	N	N
Offloading of LNG	N	N	N	Y	N	N
Mooring of LNG carriers for LNG transfer	N	N	N	Y	N	N
LNG vessels in shipping lanes	P	N	Y	P	N	P
Power generation, aggregation, and distribution	N	P	P	P	N	P
Site administration and safety facilities and supporting infrastructure for water supply, wastewater treatment and waste management	Y	Y	Y	Y	Y	Y
III. Decommissioning						
Dismantling of infrastructure	Y	P	P	P	P	Y
Remediation and Reclamation	Y	P	P	P	P	Y

NOTES:
Interactions are Rated on an Interim Basis as: Y (likely), P (possible), N (unlikely).

5.2 Assessment Area Definitions

Three assessment areas are envisioned for the Project EA-IA. These are:

1. The Project Disturbance Area (**PDA**) will include the LNG facility onshore area (the facility footprint at Wil Milit) where all permanent and temporary physical Project components are to be located on the Site as well as all marine facilities within a defined safety zone.
2. The Local Assessment Area (**LAA**) includes the PDA (both land and marine components) at Wil Milit and extends to include an area within which impacts from the Site (facility) are anticipated to occur outside the PDA (e.g., light and noise emissions). The LAA will vary by Valued Component (**VC**).
3. The Regional Assessment Area (**RAA**) is an extension of the LAA and includes the area where Project effects to VCs from the Project are anticipated to occur beyond the LAA (e.g., community wellbeing) and may vary in size by VC.

Other assessment areas being considered include a Marine Shipping Assessment Area (**MSAA**) that would include an area from Triple Island to the Project's marine terminal, and a Construction Shipping Corridor that would capture activities not captured within the MSAA (e.g., to better captures potential activities between Gingolx and the Project site). If not captured as stand-alone assessment areas these areas would be captured within VC specific LAAs and RAAs.

5.3 Baseline Studies

A Baseline Study Plan has been developed by the Proponents, with opportunities for Indigenous Nations to comment on the plan's development. Along with further engagement as described in the EP, the baseline study results should help better define issues raised to date and, after the IPD has been submitted, the DPD and the Project's draft Application Information Requirements. The Baseline Study Plan reflect studies undertaken for similar energy projects on BC's northwest coast. Baseline study work has commenced and is ongoing.

A summary of primarily biophysical baseline studies to be undertaken are listed below in Table 8. Other studies addressing social, economic, community well-being, etc. are part of the baseline study plan but will not commence until after the DPD is under development as these study parameters will be informed by engagements with Indigenous Nations, regulatory authorities, regional and municipal governments, stakeholders and the public

Table 8 – Baseline Studies

Baseline Study	Study Area	Informs DPD and Application
Rare Plants	Local – Upland Site	Sensitive Upland sites – Project avoidance of sensitive sites
Wetlands	Local – Upland Site	Areas of wetland – Project avoidance of sensitive sites
Terrestrial Ecosystem Mapping	Local – Upland Site	Site ecosystems – Project avoidance of sensitive sites
Terrestrial Invertebrates	Local – Upland Site	Species presence – SARA species
Amphibians	Local – Upland Site	Species presence – SARA species
Bats	Local – Upland Site	Species presence – SARA species
Breeding Songbirds	Local – Upland Site	Species presence – SARA species
Diurnal Raptors	Local – Upland Site	Species presence – SARA species
Nocturnal Raptors	Local – Upland Site	Species presence – SARA species
Ungulates-Carnivores	Local – Upland Site	Species presence – SARA species
Freshwater Water Quality	Local – Upland Site	Baseline water quality in upland watercourses
Freshwater Fish and Habitat	Local – Upland Site	Species presence and habitat values, riparian area mapping
Marbled Murrelet	Local – Upland Site	Species presence – SARA species
Marine Birds	Local & Regional including marine route to Triple island	Species presence in LAA and RAA
Marine Mammals	Local & Regional including marine route to Triple Island	Species presence in LAA and RAA
Marine Water Quality	Site – Water Lot	Baseline water quality in Water Lot
Intertidal	Site – Water Lot	Species presence and habitat values
Subtidal	Site – Water Lot	Species presence and habitat values
Underwater Acoustics	Portland Canal, Portland Inlet	Baseline underwater noise and cetacean presence
Metocean	Site – Water Lot, Portland Canal, Portland Inlet	Baseline upland and marine weather, winds, tides, waves and currents in Water Lot to inform marine engineering
Archaeology	Local – Upland Site	Archaeological values on the upland and nearshore environments
Marine Use	Site – Water Lot, Portland Canal, Portland Inlet and marine route to Triple island	Baseline marine vessel traffic near LAA and within RAA
Site Bathymetry	Site – Water Lot	Depths to seabed in Water Lot, inform need for dredging

5.4 Potential Direct, Indirect, and Cumulative Effects

The Project's EA-IA will present an examination of direct, indirect (i.e., via pathway), and cumulative effects. The Cumulative Effects Assessment will examine residual environmental and socio-economic effects arising from the Project, together with the residual effects from past, existing, and reasonably foreseeable projects and activities in the Project area(s). These include marine port developments in Stewart, BC and others to be identified during the EA-IA process. Potential trans-boundary (i.e., BC-AK) effects will be examined (e.g., marine shipping, air quality, and GHG emissions).

The methodology and rationale used to examine the Project's potential direct, indirect and cumulative effects will be presented in the draft Process Order and then confirmed by the BC Environmental Assessment Office (**BC EAO**) in the final Process Order and in the federal Notice of Commencement, and Tailored Impact Assessment Guidelines if applicable.

The following sections provide a preliminary overview of potential effects of the Project on environmental, social, economic, heritage and health conditions. 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.

Despite the Project being located on private fee simple land, the remote possibility exists for some of the environmental effects to extend to federal land (see Table 4 for information on proximity of the Site to federal lands). The EA-IA will assess potential effects on federal lands and characterize such effects. 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.

For a preliminary assessment of potential effects on Indigenous Nations refer to Section 7.4.

5.4.1 Potential Environmental Effects

All Project phases have the potential to result in changes to the biological environment. Direct impacts at the Site may include:

- Vegetation clearing and removal may result adversely affect wetland function and the abundance of plant species and ecological communities of interest.
- Site clearing will result in the loss or alteration of wildlife habitat which could affect wildlife movement patterns and mortality risk.
- Emissions during Project construction and operations could affect air quality.
- Activities associated with Project construction and operations could result in increased mortality risk or sensory disturbance that could result in changes in behaviour.
- Construction of Project components near or on freshwater or marine environments could result in effects on fish and fish habitat.

Given the proximity of the Project to federal lands it is not expected that federal lands will be affected by the Project with the possible exception of more far-reaching effects, such as air emissions. Refer to Section 4.1 for information on proximity of the Site to federal lands. The distance of the marine transportation routes from federal lands and Protected areas will be provided during DPD development.

With respect to potential environmental effects that may be a result of increased marine transportation along the marine transportation route to Triple Island, there is potential for marine accidents and malfunctions to damage the marine environment and those environmental valued components of marine fish, marine mammals, marine plants and marine birds and the use of marine resources by Indigenous Nations and other users.

Further, it is anticipated that the Project will utilize the Nisga'a highway connection (Highway No. 113) from Terrace into the Nass Valley to transport supplies, materials and people to Gingolx. There is potential for environmental damage from an increased frequency of motor vehicle accidents (e.g., diesel fuel spill into creeks, accident-caused wildfires, etc.).

To manage or avoid potential adverse impacts on the environment, best practices, assessment exercises, and analyses will be incorporated into Project design and associated mitigation measures. Examples of mitigation measures include:

- Project electrification – the proponents are committed to working with BC Hydro to identify options to reduce GHG emission through the use of renewable power.
- Project location is taking into consideration the location of wetlands and other sensitive features in an effort to reduce potential impacts.
- Efforts are being made to reduce the Project footprint, including the selection of FLNG processing modules to reduce effects on the terrestrial environment.
- Project marine safety and emergency measures plans.
- TERMPOL exercises to best define marine safety measures.
- Berthing and un-berthing simulations of LNG carriers supported by tugboats at the designed marine terminal.
- Working with BC Coast Pilots marine terminal design assessments.
- Highway safety management plans.

Mitigation measures will be revised and expanded on based on information learned through the EA-IA process and Project engineering. Mitigation measures will be incorporated into management plans to facilitate tracking and implementation during Project construction and operation phases.

Despite the remoteness of the Project there is still the potential for the Project to contribute to cumulative 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.

5.4.2 Potential Social and Economic Effects

Construction, operation and decommissioning of the Project has the potential to result in adverse or positive effects on social and economic conditions. Activities and associated effects may include:

- Shipping activity and construction of floating infrastructure have the potential affect marine use and navigable waters.
- Project construction activities may place pressure on local and regional infrastructure and services. Population changes associated with the Project may increase the demand for housing and accommodation.
- Construction and operation of the Project has the potential to affect employment, cost of living and economic trends.
- Increased highway traffic from the Terrace area to the Nass Valley may lead to an increased risk and frequency of motor vehicle accidents on Highway No. 113 leading to increased pressures on regional emergency services.

Mitigation measures will be identified to address adverse effects and to enhance positive effects. These mitigation measures may include the development of key management plans such as a marine activities plan, an emergency response plan and a social management plan. Project-specific engagement plans (**EP**s) will be developed to support the EA-IA and ongoing engagement during Project construction and operation.

The Project has the potential to result in cumulative effects on social and economic conditions through effects on conditions such as employment, cost of living, housing, demands on infrastructure and services and marine use.

5.4.3 Potential Heritage Effects

Ground disturbance activities and tree clearing associated with the Project have the potential to result in adverse effects on heritage as a result of the alteration, disturbance, or destruction of archaeological or heritage resources. These potential effects would be managed by completing an archaeological impact assessment in advance of Project construction and the development of mitigation measures and management plans, such as the implementation of measures to avoid or reduce potential impacts on documented sites if present and develop of change find procedures.

5.4.4 Potential Health Effects

Human health can be affected by the inhalation of air emissions from combustion sources and PM and increases in noise levels. Human health may also be affected by changes to the quality and quantity of traditional foods and drinking water. Food and water can be altered as a result of direct effects (e.g., effluent discharges) or indirect effects (e.g., air particulate depositions that affect soil and water quality). Human health could also be affected as a result of a change in access to traditional foods such as berries, fish, and seafood.

Potential effects of the Project on human health will be evaluated by identifying pathways of potential effects. If viable pathways are identified, these pathways will be investigated and assessed. If a pathway is unlikely to affect human health, a rationale will be provided explaining why the pathway has not been included in the assessment.

The Project has the potential to contribute to cumulative effects on health due to contributions of emissions to the air shed and effects on the quality and quantity of traditional foods. Given the remoteness of the Project the potential for cumulative effects are anticipated to be relatively small and will be managed through the implementation of mitigation measures, best practices and management plans.

5.4.5 Potential effect of Project-Related Changes on Indigenous Peoples

The Project is on Nisga'a Category A Treaty lands and on land identified by the Nisga'a Nation as suitable for an LNG Export facility. The Nisga'a Treaty identifies the Nass Wildlife Area which provides specific rights for Nisga'a to fish and harvest wildlife and plants. Nisga'a rights are defined in the Nisga'a Treaty and the Project will need to undertake a comprehensive assessment of potential effects on the Nisga'a Nation's treaty rights.

Paragraph 8(e) of Chapter 10 of the Nisga'a Final Agreement requires an assessment of 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 as set out in the Nisga'a Treaty and, where appropriate, make recommendations to prevent or mitigate those effects. Nisga'a interests, as identified in Paragraph 8(e) and associated VCs are shown in Table 9. Paragraph 8(f) of Chapter 10 of the Nisga'a Final Agreement requires an assessment of 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.

The potential biophysical, health, social or economic effects to other Indigenous Nations using the marine waters of Portland Canal will be identified and discussed with other Indigenous Nations as part of the DPD Process.

Table 9 – Chapter 10, Paragraph 8(e) and 8(f) and Associated Valued Components

Nisg̱a'a interests as related to residents of Nisga'a Lands, Nisga'a Lands or Nisg̱a'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, Cutthroattrout 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

Nisg̲a'a interests as related to residents of Nisga'a Lands, Nisga'a Lands or Nisg̲a'a rights	Valued Component
Paragraph 8(e)	
Lands	Visual Quality (from viewpoints on the Nisg̲a'a Memorial Lava Bed Park, Nisga'a Lands, Nisga'a fee simple properties, and the Nisg̲a'a Highway)
	Air quality, aesthetic quality, quality and quantity of potable water and access for Nisg̲a'a Lands and Nisga'a fee simple properties
	Other land related interests in the Nisg̲a'a Treaty (Nisg̲a'a Memorial Lava Bed Park (and other provincially protected areas within the Nass Area); commercial 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
	Nisg̲a'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 Nisg̲a'a businesses
	Natural resource activities: economic effects
	Future Nisga'a Nation economic opportunities and economic development
	NLG 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
	Nisg̲a'a language

NOTES:
[a] Migration and population change is considered as an intermediate or pathway effect that in turn has potential implications for other VC's. 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.

5.5 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 on fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act*, aquatic species, as defined in subsection 2(1) of SARA, and migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Act*, 1994. The following describes potential changes as they pertain to these components of the environment:

Fish and Fish Habitat – 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 under the Project's upland and marine disturbance area from the construction and operation of the Project.
- Potential mortality or physical injury of fish (including marine mammals) 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.

Aquatic Species – 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 from underwater construction noise generated during construction of the marine terminal infrastructure.
- Shading or clearing of intertidal or subtidal vegetation as a result of the construction of the marine terminal infrastructure.
- Mortality or physical injury as a result of physical impact due to construction activities (e.g., by machinery or covering by sediment.)

Migratory Birds – the Project has the potential to affect migratory birds as define by the *Migratory Bird Convention Act*, 1994, as a result of:

- 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 Project.
- Increased risk of mortality due to the construction and operation of the Project.

6 LEGISLATIVE AND REGULATORY CONTEXT

6.1 Nisg̲a'a Treaty

As recognized in the *Preamble* to the Nisg̲a'a Treaty, the "Nisg̲a'a Nation has lived in the Nass Area since time immemorial".

As set out in the Nisga'a Treaty, the Nisga'a Nation owns, and controls parcels of land within the Nass Area including: Nisg̲a'a Lands and Nisg̲a'a Fee Simple Lands (each as defined in the Nisg̲a'a Treaty) (Figure 6).

As set out in the Nisg̲a'a Treaty, the Nisg̲a'a Nation owns and controls Nisg̲a'a Lands, which includes approximately 2,000 square km at the lower end of the Nass River, including all surface and subsurface resources and over which NLG has legislative jurisdiction over certain matters. Nisg̲a'a Lands include approximately 97 km of marine and estuary shoreline at the mouth of the Nass River.

The Nisg̲a'a Nation also owns and controls Nisg̲a'a Fee Simple Lands (which include Category A Lands and Category B Lands, each as defined in the Nisg̲a'a Treaty), which include approximately 27.5 square kilometres (**km^2**) of additional fee simple lands outside of Nisg̲a'a Lands. The Site is located within Category A Lands. The Category A Lands include marine and/or estuary shoreline. There are no Category B Lands abutting the marine waters of the Nass Area. The Nisg̲a'a Nation owns the surface and subsurface resources of Category A Lands and the surface resources of Category B Lands.

The Nisg̲a'a Nation has constitutionally protected treaty interests and rights in the Nass Area and the Nass Wildlife Area (as defined in the Nisg̲a'a Treaty), including fisheries management and harvesting rights in approximately 26,000 km^2 and wildlife management and harvesting rights in approximately 16,000 km^2.

Chapter 8 of the Nisg̲a'a Treaty addresses Nisg̲a'a citizens' entitlements to fish and aquatic plants in the Nass Area. NLG has the authority to make laws in respect of the sale of salmon that are harvested under the Nisg̲a'a Harvest Agreement. In addition, Chapter 8 describes fisheries management arrangements between the Nisg̲a'a Nation, BC and Canada. Nisg̲a'a citizen rights to participate in the general commercial fishery were not modified by the Nisg̲a'a Treaty. Nisg̲a'a allocations for Dungeness crab, tanner crabs, king crabs, halibut, prawns, shrimp, herring and aquatic plants used for roe-on-kelp may be negotiated with BC and Canada at a future date.

Chapter 9 of the Nisg̲a'a Treaty addresses Nisg̲a'a citizens' entitlements to wildlife and migratory birds in the Nass Wildlife Area and Nass Area, respectively, subject only to measures that are necessary for conservation and legislation enacted for the purposes of public health and safety. Nisg̲a'a wildlife allocations are set out for Designated Species only (i.e., moose, mountain goat, Grizzly bear) as defined proportions of the total allowable harvest.

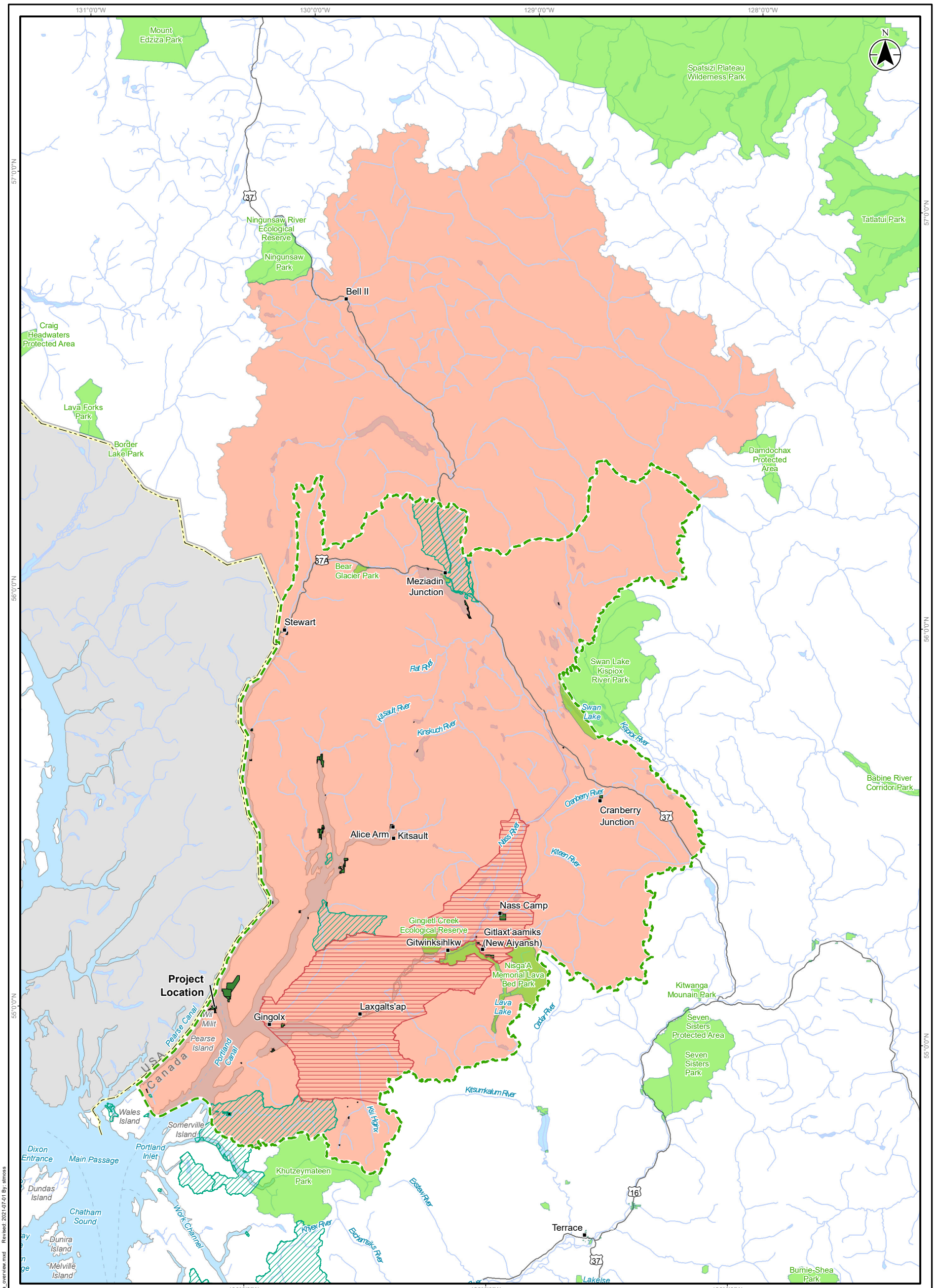
The EA-IA of the Project will need to meet the requirements of the assessment required pursuant to Chapter 10 of the Nisg̲a'a Treaty. Paragraphs 8(e) and 8(f) of Chapter 10 of the Nisg̲a'a Treaty require that the EA-IA of the Project assesses:

- Whether the Project can reasonably be expected to have adverse environmental effects on residents of Nisg̲a'a Lands, Nisg̲a'a Lands or Nisg̲a'a interests set out in the Nisg̲a'a Treaty and, where appropriate, make recommendations to prevent or mitigate those effects.
- The effects of the Project on the existing and future economic, social, and cultural well-being of Nisg̲a'a citizens who may be affected by the Project.

Relatively recent socio-economic data pertaining to potential effects on the Nisga'a Nation have been collected during previous EAs (e.g., PRGT, WCGT, KSM Mine) and are available to aid in assessing the effects of the Project in accordance with paragraph 8(f) of Chapter 10.

The Project will undertake a comprehensive assessment of the Project on Nisg̲a'a treaty rights, including potential socio-economic impacts to the Nisg̲a'a people that include sensitive or vulnerable economic, social, heritage, or health values that may be affected by the Project, in accordance with paragraphs 8(e) and 8(f) of Chapter 10 of the Nisg̲a'a Treaty.

The Chapter 10 assessment will be completed as part of and must be included in the EA-IA of the Project.



Nass Area
Nass Wildlife Area
Nisga'a Lands
Nisga'a Nation Category A Land
Populated Place
Ferry Route
Highway
International Boundary
Watercourse
Conservancy Area

Country

Canada
United States
Park
Waterbody

0 5 10 15 20 km

1:1,000,000 (at original document size of 11x17)

KSI LISIMS LNG

Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada, Stantec, Rockies LNG
3. NTS Map Sheets:094E, 093L, 103I, 103J, 103P, 093M, 103O, 104A, 104B, 104G, 104H, 094D

Stantec

Project Location: Pearse Island, BC
Project Number 123221820
Prepared by TQUILICHINI/SMOSS on 20210607
Requested by SWEBSTER on 20210603
Checked by CSPYKER on 20210607

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

Figure No.
6

Title
Nass Area Overview

6.2 Provincial Environmental Assessment

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

- ***Electricity Projects –*** The Project will incorporate thermal electric 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 m^3, exceeding the threshold of 136,000 m^3.
- ***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 thermal electric 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 m^3, exceeding the threshold of 136,000 m^3.
- ***New Marine Terminal –*** LNG carriers arriving at the Project's marine terminal would exceed the threshold of 25,000 dry weight tonnes.

6.4 Strategic Environmental Impact Assessments and Biophysical Data

The Project is on Nisga'a Category A Treaty lands and within the Nass Wildlife area as defined by the Nisga'a Treaty. The Nisga'a Nation has been conducting numerous fish and wildlife studies over this general area for the past 20 years. A summary of NLG biophysical reports and data collected over the past 5 years is shown in Table 10. A bibliography of Nisga'a Fisheries: Nass Technical and Project Reports is included in Appendix 5. The latter set of reports inform knowledge of the fish and wildlife resources in the Nass Wildlife Area.

The federal *Strategic Assessment of Climate Change* – July 2020 is applicable to the Project. Refer to Section 6.9.

Table 10 – NLG Biophysical Reports and Data – Past 5 Years

Species / VC	Topic/Title	Years of Study	Frequency	Report, Data, Both	Public, Confidential	Note
Salmon	Coastal chum (and pink) escapement	2016-2020	Annual	Both	Public	2017 report 2015-2018 report 2019 report 2020 DRAFT report
	Coastal pink escapement	2020	One year	Both	Public	2020 DRAFT report
	Lower Nass and coastal Chinook escapement	2020	One year	Data	Public	
	Coastal coho escapement	2016-2020	Annual	Both data only in 2020)	Public	2016 report 2017 report 2018 report 2019 report
	Salmon Catch monitoring	2016-2020	Annual	Report	Public	2020 report
	Sport catch monitoring	2016-2017	Annual	Data	Public	2016 report
Marine food resources	Consumption survey	2018	One year	Both	NLG – Confidential	2021 DRAFT report;
	Non-salmon Catch Monitoring		Annual	Both	NLG – Confidential	Inform EA
Eulachon	Fishery monitoring	2016-2020	Annual	Data	Public	There is a multi-year 2012 Report
	Larval biomass	2016-2020	Annual	Data	Public	Inform EA
Halibut	Nass Area distribution and abundance	2017, 2018, 2020	Three years	Data	NLG – Confidential	
Crab	Nass Area distribution and abundance	2017-2019	Three years	Both	NLG – Confidential	
Shrimp and Prawns	Nass Area distribution and abundance	2017-2019	Three years	Both	NLG – Confidential	
Intertidal Bivalves	Biotoxin monitoring	2016-2020	Annual	Data	Public	There are older reports and data available

Species / VC	Topic/Title	Years of Study	Frequency	Report, Data, Both	Public, Confidential	Note
Grizzly Bear	Habitats in Southwest Nass Area	2017	One year	Both	Public	2017 report
Northern Goshawk	Study on Nisga'a Lands	2017	One year	Both	Public	2017 Report
Birds	Study on Nisga'a Lands	2018	One year	Both	Public	2018 Report

6.5 Substitution

The Project is anticipating that the 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*.

The Nisga'a Nation supports a goal of "one project, one assessment". The Nisga'a Treaty Chapter 10, paragraph 8(a) describes a common goal of the Nisga'a Nation, Canada and British Columbia to "coordinate to the extent possible the environmental assessment requirements placed by the Parties upon a project proponent".

The IAAC "substitution" decision will come after the BC EAO's "Readiness Decision" on whether the Project should proceed to an EA under the BC EAA 2018 and the IAAC's decision on whether an IA is required for a *designated project* under the IAA.

6.6 Regulatory Approvals and Timeline

Federal and provincial permits, approvals or authorizations will be required in support of LNG export from Canada. If the Project is approved, additional permits, authorizations and approvals from these regulators will be required for marine and upland construction and operations. The Project will also be subject to the terms and conditions of the lease for the Site.

The BC OGC is the regulatory authority that will authorize commissioning and operations of an LNG export facility.

The Project has assembled an initial version of a comprehensive Project permitting plan to address all the permits, authorizations, and approvals necessary for the Project based on known information. It is envisioned that the plan will be routinely updated based on more mature Project engineering and engagements with regulatory authorities.

A preliminary list of anticipated EA-IA decisions, permits, authorizations and approvals for the three major Project phases is included in Table 11. An estimated timeline for the regulatory process is presented in Figure 7.

Table 11 – Anticipated Permits by Project Phase

PHASE I. Permits potentially required in the Pre-EA-IA and to the EA-IA decision period	PHASE II. Permits potentially required to commence after positive EA-IA decisions	PHASE III. Construction Permits potentially required (Post FID + 2~4 years)
Site specific upland clearing, upland and marine geotechnical drilling, animal and fish sampling – collection, archaeological surveys and artefact identification collection	**Site preparation and ground improvement, Site roads bridges- culverts, tree clearing, initial marine works (e.g., barge dock-wharf, temporary construction workforce accommodation)**	**Construction of upland permanent facilities, offsite utilities, lateral feed gas pipeline, marine terminal works**
• NLG natural resource authorization – Investigative use permit • FLNRORD Archaeology Branch – Archeological assessment • DFO – *Fisheries Act* – Licences to Fish and Collect Fish – marine and freshwater • FLNRORD – *Wildlife Act* Authorizations – Permit to sample for fish and amphibians • BC EAO – EA Certificate • IAAC – Impact Decision Statement	• BC OGC – LNG Export Facility Permit • FLNRORD – Water Lot lease at Wil Milit • BC OGC – *Water Sustainability Act* Section 11 Approval Changes in and About a Stream • NHA approval for the temporary construction workforce accommodation • FLNRORD – Private Timber Mark • FLNRORD and NLG – Burning Permit • FLNRORD – Water or groundwater use licence - *Water Sustainability Act* – potential only • BC OGC and BC MoECC Waste Discharge Authorizations (for temporary works if necessary) • DFO *Fisheries Act* Authorization and Habitat Compensation Plan Approval • TC NPP – Notice of Works • BC MoECC – Concrete Batch Plant [Potential] • ECCC – Disposal at Sea permit [potential]	• TC NPP – Order and/or Approval • NHA – Waterworks Construction Permit – permanent [Potential] • FLNORD – Water or groundwater use licence - *Water Sustainability Act* – [potential] • NHA – Waterworks Operation Permit – permanent [Potential] • BC MoECC – Municipal Wastewater Registration [Potential] • BC OGC – Leave to Construct • TSBC – Equipment Safety Plan Approval • TC NAV CAN Obstruction Permits • BC OGC – Air and Water Waste Discharge Authorization(s) **Post FID after~ 4 years:** • FLNG federal inspections and classifications • BC OGC – Leave to Operate

PHASE I. Permits potentially required in the Pre-EA-IA and to the EA-IA decision period	PHASE II. Permits potentially required to commence after positive EA-IA decisions	PHASE III. Construction Permits potentially required (Post FID + 2~4 years)

ABBREVIATIONS:
NLG – Nisga'a Lisims Government
BC EAO – BC Environmental Assessment Office
ECCC – Environment and Climate Change Canada
IAAC – Impact Assessment Agency of Canada
BC MoECC – BC Ministry of Environment and Climate Change
BC OGC – BC Oil and Gas Commission
BC FLNRORD – BC Ministry of Forests, Lands and Natural Resource Operations (and Rural Development)
TSBC – Technical Safety BC
DFO – Fisheries and Oceans Canada
TC – Transport Canada
TC NAV CAN – Transport Canada's Navigation Canada
TC NPP – Navigation Protection Program
NHA – Northern Health Authority

Figure 7 – Environmental Assessment Schedule

Regulatory Phase	Activity	2021				2022				2023				2024	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	Early Engagement														
Early Engagement	Initial Project Description & Engagement Plan														
	File Detailed Project Description														
EA Readiness	Notice of Decision														
Engineering Studies	Pre-FEED														
	FEED														
Process Planning	Process Order														
Application Development	EA-IA Application Development and Submission														
	EA-IA Application Review and Revision														
	Revised EA-IA Accepted (July)														
Recommendation	Assessment Report														
Decision	BC EAA EAC and IAA Decision Statement														
Permitting	Key Permits: BC OGC, DFO, TC														
FID															

6.7 Treaties and Provincial Agreements with Indigenous Nations

6.7.1 Nisga'a Treaty

Please refer to Section 6.1. The Project is located within the Nisga'a Nation's Category A Lands pursuant to the Nisga'a Treaty, which lands are owned in fee simple by the Nisga'a Nation. As set out above, the Project is also located within the Nass Area and Nass Wildlife Area, where the Nisga'a Nation has constitutionally protected treaty rights and interests, as set out in the Nisga'a Treaty. The EA-IA must assess the impacts of the Project on the Nisga'a Nation's treaty rights and interests in accordance with Chapter 10 of the Nisga'a Treaty.

6.7.2 Provincial Agreements with Other North Coast Indigenous Nations

The following agreements are between BC and each of the Indigenous Nations listed and may be pertinent to the Project. Information is from https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/first-nations-negotiations.

6.7.2.1 Reconciliation Agreements

- Reconciliation Protocol between the Wuikinuxv Nation, Metlakatla First Nation, Kitasoo Indian Band, Heiltsuk Nation, Gitga'at First Nation, Nuxalk Nation, Haisla Nation and BC.
- Kunst'aa Guu – Kunst'aayah Reconciliation Agreement between the Haida Nation and BC.
- Kitselas First Nation (2017)

6.7.2.2 Memoranda of Understanding

- Memorandum of Understanding (**MOU**) between the Province and the Union of BC Municipalities (**UBCM**) on Engagement with UBCM and local governments on Treaty Agreements, Non-treaty Agreements and Indigenous Initiatives.

6.7.2.3 Natural Gas Benefit Agreements

- Kitselas Natural Gas Pipeline Benefits Agreement (PRGT, ECGT) – 2014
- Lax Kw'alaams Natural Gas Pipeline Benefits Agreement (PRGT) – 2017
- Metlakatla First Nation Natural Gas Pipeline Benefits Agreement (PRGT) – 2016
- Metlakatla First Nation Natural Gas Pipeline Benefits Agreement (WCGT) – 2016

6.7.2.4 Other Liquefied Natural Gas Related Agreements

- Gitga'at LNG Benefits Agreement – 2017
- Gitxaala LNG Benefits Agreement – 2019
- Gitxaala LNG Coastal Fund Agreement – 2019
- Kitselas First Nation LNG Benefits Agreement – 2017
- Kitselas First Nation LNG Coastal Fund Agreement – 2017
- Kitsumkalum LNG Benefits Agreement – 2019

- Kitsumkalum LNG Coastal Fund Agreement – 2019
- Lax Kw'alaams LNG Benefits Agreement – 2017
- Lax Kw'alaams LNG Coastal Fund Benefits Agreement – 2016
- Metlakatla LNG Coastal Fund Benefits Agreement – 2016
- Metlakatla Pacific North West LNG Benefits Agreement – 2016
    - Amendment Agreement (1) – 2016
    - Amendment Agreement (2) – 2017
- Agreement on Environmental Monitoring of the Pacific Northwest LNG Project (Lax Kw'alaams & Metlakatla) – 2017
- Coastal First Nations Great Bear Initiatives Society LNG Benefits Agreement – Amended – 2017
- Coastal First Nations Great Bear Initiatives Society Letter of Understanding on Environmental Quality and LNG Developments on the North Coast, and Skills Training & Employment Coastal First Nations Great Bear Initiatives Society LNG Benefits Agreement (Wuikinuxv, Heiltsuk, Kitasoo/Xaixais, Gitga'at, and Metlakatla) – 2016.

6.7.2.5 Atmospheric Benefit Sharing Agreements

- Metlakatla First Nation – 2015
- Kitselas First Nation – 2018
- Haida Nation – 2019

6.8 Applicable International Agreements between BC and Alaska

The Site is within 2 km of the BC – Alaska border. The Project plans to engage with Alaska and any relevant agency of the United States government as advised by the BC EAO and IAAC to inform the DPD. A MOU and Cooperation Agreement 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* 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.

6.9 Compliance with BC and Federal Government GHG Management Policies

The following paragraph is from section *2.4 Cleaner Industry – page 38* from the *CleanBC plan*.

Towards a low-carbon industrial strategy

As part of CleanBC, the Province has signed a Memorandum of Understanding with the Business Council of British Columbia, setting out a framework for a joint approach to unlocking B.C.'s full economic potential. Together, we will develop a low-carbon industrial strategy that builds on our competitive advantages and leverages further advancements to position and market B.C. companies to the world. The strategy will focus on:

- *Positioning B.C. as a destination for new investment and industry looking to meet the growing global demand for low-carbon products, services, and pollution-reducing technologies*
- *Enhancing British Columbia's competitive advantages while reducing our own GHG emissions intensity and helping avoid carbon leakage*
- *Advancing innovation that is focused on lowering emissions and reducing climate pollution*
- *Supporting economic opportunities for Indigenous peoples and communities, and*
- *Enhancing and marketing a clean B.C. brand internationally.*

In addition, on *page 46* of the *CleanBC Plan*, LNG emissions are addressed as follows:

ADDRESSING EMISSIONS FROM LIQUIFIED NATURAL GAS (LNG) DEVELOPMENT

One of the conditions for LNG development in B.C. is that it fits within the Province's climate commitments. While LNG Canada is working to make its Kitimat facility the world's cleanest in terms of greenhouse gas (GHG) emissions intensity, the project could add up to 3.45 megatonnes of carbon emissions to the province's total.

Recognizing that natural gas can be a transitional fuel on the path to less carbon-intensive options, the CleanBC program for industry will encourage the use of the greenest technology available in the sector to reduce emissions and encourage economic and job growth. More reductions from LNG's climate impact will be achieved through investments in electrification of upstream oil and gas production so extraction and processing are powered by electricity, instead of burning fossil fuels.

GHG emissions from energy projects are an important concern for Canada and specifically, Environment and Climate Change Canada.

The **Strategic Assessment of Climate Change** requires:

- GHG and climate change information that project proponents need to submit at each phase of a federal IA.
- Proponents of projects with a lifetime beyond 2050 to provide a credible plan that describes how the Project will achieve Net Zero emissions by 2050.

- Review and comment on the climate change information provided by proponents by the Impact Assessment Agency of Canada (**IAAC**) or lifecycle regulators, with support from expert federal authorities.

Canada has also recently published **Progress Toward's Canada's Greenhouse Gas Emissions Reduction Target**. On page 5 it states: *Canada is committed to implementing its strengthened climate plan to ensure Canada not only meets, but exceeds its 2030 emissions reduction goal, and beginning work so that Canada can achieve net-zero emissions by 2050.* Bill 12 *Canadian Net-Zero Emissions Accountability Act* was passed into law on June 30, 2021. The *Act* will formalize Canada's target to achieve net-zero emissions by the year 2050 and establish a series of interim emissions reduction targets at 5-year milestones towards the goal. This *Act* was approved by the Senate on June 30, 2021. The next significant checkpoint will be in about six months when a plan for how Canada will meet its 2030 target is due. That plan must include a 2026 emissions reduction objective.

GHG emissions from industry are federally and provincially monitored in Canada. At a federal level, GHG emissions are reported via the GHG Reporting Program under section 46 of the *Canadian Environmental Protection Act*, 1999. GHG emissions within BC are reported under GHGIRCA. Both laws require industrial facilities to report their annual GHG emissions if they emit more than 10,000 tonnes of CO_2e per year. Those annual reports are then included in the provincial and national GHG inventories.

Currently, BC's GHG inventory does not include a specific category for LNG facilities; however, such oil and gas emissions can be considered under the industry category. Provincial inventory emissions indicate 33% are from the fossil fuel and heavy industry section, 37% are from the transportation sector and 12% are from the building sector, based on the latest data available (2018) (Government of BC, 2020).

GHG reduction targets within BC have been legislated since 2007 under the *Greenhouse Gas Reduction Targets Act* (re-titled the *Greenhouse Gas Accountability Act*). GHG targets are set as 40%, 60% and 80% below the 2007 GHG emission levels by 2030, 2040 and 2050, respectively. There is also an interim target of 16% by 2025. Further, the *Act* required the Minister to set sectoral targets by March 2021; the Minister established targets for transportation, industry, oil and gas, and buildings and communities. For the industry sector, the target range is 38-43% of 2007 levels by 2030.

6.10 Federal Funding and Federal Lands

The Project is not anticipated to require the use of federal funding, federal lands or reserves for the purpose of carrying out the Project.

6.11 Environmental – Impact Assessment Timing

The preliminary schedule for the environmental/impact assessment and permitting phase is shown in Figure 7.

7 INDIGENOUS NATION ENGAGEMENT

The Project recognizes the importance of early and meaningful engagement with Indigenous Nations and strives to establish and maintain mutually respectful relationships with Indigenous Nations engaged with the Project. First and foremost, the Project includes a partnership with the Nisga'a Nation. The NLG has openly supported the Project and has taken a lead role in informing Nisga'a citizens about the Project. The Project values the concerns and feedback provided by regional Indigenous Nations and recognizes that shared information will contribute to development of the DPD and development of the EA-IA, and ultimately development of a more successful Project, by helping in the identification of such items as sensitive habitats and areas of cultural importance that should be avoided, seasonal events such as species migration patterns, and environmental conditions such as weather systems and currents that should be considered.

This section provides a summary of engagement activities completed to date and key issues identified through this engagement. For additional detail see the accompanying EP for the Project.

7.1 Engagement with Indigenous Nations

The Project is being developed in partnership with the Nisg̲a'a Nation. The Site is located within lands that are owned and controlled by the Nisg̲a'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.

To date, engagement has been undertaken with the leadership of the Indigenous Nations included in Table 12 (listed in order of proximity to the Site).

Table 12 – Indigenous Nations and Points of Contact

Indigenous Nation	Contact
Nisga'a Lisims Government	President, CEO
Lax Kw'alaams Band	Mayor
Metlakatla First Nation	Chief Councilor
Kitsumkalum First Nation	Chief Councilor
Kitselas First Nation	Chief Councilor
Gitxaala First Nation	Chief Councilor
Haida Nation	President

In addition to the Nisga'a, Indigenous Nations that have expressed an interest in the Project include the Lax Kw'alaams, Metlakatla, Kitsumkalum, Kitselas and Gitxaala. The Haida Nation and Region 6 Prince Rupert and District MNBC may also have an interest in the Project.

Some Indigenous Nations assert Aboriginal rights near the Site and in the marine areas of Nasoga Gulf, Portland Inlet and Portland Canal. The Kitselas that the marine waters of Portland Inlet and Portland canal are within Kitselas First Nation's Marine Harvest Area. The Haida assert Aboriginal rights to marine waters in Hecate Straits and Dixon Entrance. Maps of the Traditional Territories of each of the Indigenous Nations listed are shown in Figure 5.

7.2 Indigenous Nation Engagement Activities to Date

The Proponents have engaged with the Indigenous Nations identified in 7.1 in advance of submitting the final IPD and the EP. The approach to the preliminary engagement with these Indigenous Nations is provided in detail in the EP.

The Nisga'a Nation, as a partner in the Project and supported by its Project partners, will lead all engagement efforts with Nisga'a Villages, Nisga'a urban locals and Nisga'a citizens. The Nisga'a Nation will collaborate closely with BC and Canada to ensure that all requirements of the Nisga'a Treaty in respect of the development, permitting, construction, operation and decommissioning of the Project are met.

Table 13 summarizes the preliminary engagement activities undertaken to date with Non-Nisga'a Indigenous Nations. 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. A detailed record of Non-Nisga'a Indigenous Nation engagements to July 2, 2021 is included here and duplicated in the accompanying EP.

Table 13 – Preliminary Engagement Undertaken by the Proponents with Non-Nisga'a Indigenous Nations (listed alphabetically)

Indigenous Nation	Summary of Preliminary Engagement Activities
Gitxaała Nation	March 23, 2021 – Written correspondence: President NLG to the elected leadership of Kitsumkalum, Gitxaała, Kitselas and Haida introducing the Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project highlighting the shared interest in marine waters stewardship. March 31, 2021 – Written correspondence: Project's Director of Environmental and Regulatory Affairs to technical contacts for Gitxaała Nation. The letter once again introduces the Project and its location, including Project ownership group. The letter appends a short Fact Sheet and the letters from Nisga'a leadership to Indigenous Nations. The letter requests collaboration in arranging a date for an initial virtual meeting to discuss optimal ways the Project can engage with Gitxaała Nation. April 15, 2021 – Ksi Lisims LNG Project Introductory Meeting. Gitxaała Nation confirmed interest in establishing Project agreements. Proponents confirmed they will follow up with Gitxaała Nation to establish Project agreements. Meeting notes available. April 22, 2021 – Email Correspondence: Senior Environmental and Regulatory Advisor to EA Coordinator, Gitxaała Nation. Gitxaała Nation received electronic access to draft investigative permit applications and the draft Baseline Study Plan proposed for the Project. Proponents also proposed to follow up with Gitxaała Nation to establish early engagement and other Project agreements. April 27, 2021 – Email correspondence: Director External Relations sent a draft Early Engagement Capacity Funding Agreement to Gitxaala contacts. May 5, 2021 – Email correspondence: Director External Relations followed-up with Gitxaala contacts on status of draft Early Engagement Capacity Funding Agreement. Draft meeting notes from April 15 meeting were shared as well as the Project's introductory presentation. May 6, 2021 – Email correspondence: Senior Environmental and Regulatory Advisor to Gitxaała Nation. Proponent shared link to FTP site to facilitate Gitxaała Nation access and review of the Projects Baseline Study Plan and associated Federal and Provincial investigative permit applications. May 31, 2021 – Email correspondence from EA Coordinator, Gitxaała Nation to Director External Relations with suggested revisions to the draft Early Engagement Capacity Funding Agreement. May 31, 2021 – Phone conversation between Sr. Negotiator & Strategic Advisor and EA Coordinator, Gitxaała Nation to discuss suggested revisions. June 1, 2021 – Email correspondence between Sr. Negotiator & Strategic Advisor to EA Coordinator, Gitxaała Nation with revised Early Engagement Funding Agreement for signature. June 1, 2021 – Email correspondence with Director Environmental and Regulatory Affairs to Gitxaała Nation. Proponents advised that the draft IPD would be shared for early review and comment no later than June 7, 2021. Review comments requested for June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8–24. June 7, 2021 – Email correspondence: Director Environmental and Regulatory Affairs to technical contacts providing access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. June 10, 2021 – Email correspondence from EA Coordinator, Gitxaala Nation to Sr. Negotiator & Strategic Advisor providing a signed copy of the Early Engagement Funding Agreement. The Sr. Negotiator & Strategic Advisor subsequently sent to the EA Coordinator, Gitxaala Nation, a fully executed copy of the Early Engagement Funding Agreement for their files. June 12, 2021 – Email Correspondence from the Director of External Relations to the Gitxaala Nation following up on the June 7 email and offering a time to meet virtually to review the IPD and EP. June 25, 2021 – Email correspondence with Director External Relations requesting review and comments of draft IPD and EP and an invitation to a virtual meeting to discuss both documents on June 30. June 30, 2021 – Gitxaala met with Project to discuss IPD and EP. Several edits made to final IPD and EP based on verbal feedback.
Haida Nation	March 23, 2021 – Written correspondence from the Nisga'a Lisims Government to the elected leadership of Kitsumkalum, Gitxaała, Kitselas and Haida introducing the Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project highlighting the shared interest in marine waters stewardship. March 31, 2021 – Email Correspondence/ Letter: Director Environmental and Regulatory Affairs, Ksi Lisims LNG Project, to Vice-President, Council of the Haida Nation. Proponents contacted Haida Nation to arrange a Ksi Lisims Introductory Meeting. June 1, 2021 – Email correspondence: Director Environmental and Regulatory Affairs, Ksi Lisims LNG Project, to Haida Nation. Proponents advised that the draft IPD would be shared for early review and comment no later than June 7, 2021. June 7, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to Haida Nation providing access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8 – 24. June 12, 2021 – Email correspondence from the Director External Relations to the Haida Nation following up on the June 7 email and offering a time to meet virtually to review the IPD and EP. June 24, 2021 – Email correspondence from the Director External Relations to the Haida Nation requesting a virtual meeting to discuss draft IPD and EP and potential engagement funding for the next steps in the EA-IA process.

Indigenous Nation	Summary of Preliminary Engagement Activities
Kitselas First Nation	March 23, 2021 – Written correspondence: Nisga'a Lisims Government to the elected leadership of Kitsumkalum First Nation, Gitxaała Nation, Kitselas First Nation, and Haida Nation introducing the Ksi Lisims LNG Project highlighting the shared interest in marine waters stewardship. March 31, 2021 – Written correspondence: Director Environmental and Regulatory Affairs to technical contacts for Kitselas First Nation. The letter once again introduces the Project and its location, including Project ownership group. The letter appends a short Fact Sheet and the letters from Nisga'a leadership to Indigenous Nations. The letter requests collaboration in arranging a date for an initial virtual meeting to discuss optimal ways the Project can engage with Kitselas First Nation. April 19, 2021 – Ksi Lisims LNG Project Introductory Meeting. Meeting notes available. • Kitselas First Nation confirmed they have a preferred process for engagement in major projects that is meant to uphold their rights and values. Proponents to follow up with Kitselas First Nation to establish early engagement and other Project agreements. • Kitselas First Nation are open to initiating early engagement and Project agreements with the Proponents as a precursor for subsequent negotiations surrounding Project agreements for Kitselas participation in the regulatory process. • Kitselas First Nation requested a letter from the Proponents identifying that the Project intends to enter into Project agreements with Kitselas as part of Project development. Kitselas First Nation also requested a copy of the Ksi Lisims LNG Project Introductory Meeting presentation slides. Proponents confirmed they will follow up with Kitselas First Nation to establish Project agreements and provide the requested materials. Meeting notes available. April 21, 2021 – Email Correspondence: Director Environmental and Regulatory Affairs to Treaty and Engagement Advisor, Land and Resources Department, Kitselas First Nation. The Proponents provided Kitselas First Nation with a copy of the Ksi Lisims LNG Project Introductory Meeting presentation slides, and meeting minutes for their review, edit and comment. April 22, 2021 – Email Correspondence: Senior Environmental and Regulatory Advisor to Project Assessment Officer, Land and Resources Department, Kitselas First Nation. Kitselas First Nation received a list of Baseline Field Surveys proposed for the Project. Proponents to follow up with Kitselas First Nation to establish early engagement and other Project agreements. April 23, 2021 – Email Correspondence: PAO, Land and Resources Department, Kitselas First Nation to Senior Environmental and Regulatory Advisor. Kitselas First Nation acknowledged receipt of the list of proposed draft Baseline Field Survey investigative permit applications and indicated their desire to finalize the early engagement agreement and engage on the baseline field study plans. April 27, 2021 – Email correspondence: Sr. Negotiator & Strategic Advisor, Indigenous Engagement sent a draft Early Engagement Capacity Funding Agreement to Kitselas contacts. May 6, 2021 – Technical Meeting with Kitselas contacts and Director External Relations to discuss Project agreements with Kitselas First Nation. Two follow-up Technical Meetings proposed for May 26, 2021 to discuss Baseline Studies and Permit applications, and June 9, 2021 to discuss the IPD/EP. May 12, 2021 – Kitselas First Nation signed an Early Engagement Capacity Funding Agreement with the Proponent, effective May 12, 2021. May 26, 2021 – Meeting with Kitselas contacts to discuss comments by Kitselas First Nation on the draft Ksi Lisims Baseline Study Plan. June 1, 2021 – Email correspondence from Director, Environmental and Regulatory Affairs to technical contacts at Kitselas First Nation confirming plan to share draft IPD and EP with Kitselas Nation by June 7. June 7, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to technical contacts providing electronic access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8–24. June 9, 2021 – Email correspondence from the Senior Environmental and Regulatory Advisor to Kitselas contacts with a Stantec-Project response to Kitselas comments with respect to Baseline Study Plan. June 12, 2021 – Email correspondence from the Director, External Relations to the Kitselas following up on the June 7 email and offering a time to meet virtually to review the IPD and EP. June 14, 2021 – Email correspondence from Kitselas contacts confirming download the draft IPD and EP for their review, with a commitment to have the documents reviewed before the scheduled June 22, 2021 meeting. June 22, 2021 – Virtual meeting to discuss IPD and EP with Kitselas contacts. June 23, 2021 – Kitselas provide written comments on IPD and EP to Ksi Lisims LNG. Proponent agrees to several edits to the documents. Several edits made to draft IPD and EP.

Indigenous Nation	Summary of Preliminary Engagement Activities
Kitsumkalum First Nation	March 23, 2021 – Written correspondence from the Nisga'a Lisims Government to the elected leadership of Kitsumkalum, Gitxaała, Kitselas and Haida introducing the Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project highlighting the shared interest in marine waters stewardship. March 31, 2021 – Written correspondence: Director Environmental and Regulatory Affairs to technical contacts for Kitsumkalum First Nation. The letter once again introduces the Project and its location, including Project ownership group. The letter appends a short Fact Sheet and the letters from Nisga'a leadership to Indigenous Nations. The letter requests collaboration in arranging a date for an initial virtual meeting to discuss optimal ways the Project can engage with Kitsumkalum First Nation. April 12, 2021 – Ksi Lisims LNG Project Introductory Meeting. Kitsumkalum technical contacts were offered an opportunity to review the Ksi Lisims Baseline Study Plan.; Kitsumkalum technical contacts to undertake review. Meeting notes available. April 22, 2021 – Email Correspondence: Senior Environmental and Regulatory Advisor to Kitsumkalum technical contacts. The latter confirmed they had received a list of draft Baseline Field Survey investigative permit applications proposed for the Project and the Baseline Study plan. Proponents to follow up with Kitsumkalum technical contacts to establish early engagement and other Project agreements. April 27, 2021 – Email correspondence: Director, External Relations sent a draft Early Engagement Capacity Funding Agreement to Kitsumkalum contacts. May 6, 2021 – Email correspondence: Senior Environmental and Regulatory Advisor to Kitsumkalum Referrals technical contacts. Proponents shared a link to electronic access to Projects Baseline Study Plan and associated Federal and Provincial draft investigative permit applications facilitate Kitsumkalum First Nation review. May 10, 2021 – Email correspondence: Director External Relations followed-up with Kitsumkalum contacts on the draft Early Engagement Capacity Funding Agreement. May 17, 2021 – Email correspondence from Kitsumkalum contacts confirming their review of the draft Early Engagement Capacity Funding Agreement had been delayed due to computer system issues. June 1, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to technical contacts at Kitsumkalum First Nation confirming plan to share draft IPD and EP with Kitsumkalum Nation by June 7. Review comments requested for June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8 – 24. June 7, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to technical contacts providing electronic access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8–24. June 12, 2021 – Email correspondence from the Director External Relations to the Kitsumkalum contacts following up on the June 7 email and offering a time to meet virtually to review the IPD and EP. June 16, 2021 – Email correspondence from Kitsumkalum confirming engagement contacts. June 22, 2021 – Director Environmental and Regulatory Affairs contacted Kitsumkalum referrals contact with respect to the deployment of an underwater microphone off the west coast of Somerville Island in Portland Inlet. The instrument was deployed – but at the request of the Kitsumkalum Chief Councilor (due to potential conflict wish fishing gear) was removed on June 23, 2021 and not re-deployed. NLG leadership to reach out to Chief Councilor to explore alternatives for re-deployment of the hydrophone in Portland Inlet. June 23, 2021 – Email correspondence from Director External Relations to Kitsumkalum contacts with respect to review and comment on the draft IPD and EP, schedule a virtual meeting to discuss the drafts and to discuss engagement funding moving forward in the EA-IA process. June 25, 2021 – Email correspondence with Director External Relations and Kitsumkalum confirming virtual meeting timing to discuss IPD and EP on July 5. June 30, 2021 – Kitsumkalum provide two specific comments on draft IPD and EP; depiction of Kitsumkalum territory in Figure 6 and the brief description of the Kitsumkalum in Section 4.1.1.3. Edits made as requested. July 1, 2021 – Kitsumkalum provided a letter summarizing their comments on the draft IPD and EP. Edits made to IPD and EP.

Indigenous Nation	Summary of Preliminary Engagement Activities
Lax Kw'alaams Band	March 10, 2021 – Oral announcement of the Ksi Lisims LNG Project from a designated representative of NLG at the First Nations Climate Initiative (**FNCI**) Technical Group meeting to the FNCI technical representatives of Lax Kw'alaams, Metlakatla and Haisla. March 11, 2021 – Email correspondence with letter from the Nisga'a Lisims Government to the elected leadership of Lax Kw'alaams Band and Metlakatla First Nation introducing the Ksi Lisims LNG Project. The letter offered an opportunity for senior leadership of Nisga'a Nation, Lax Kw'alaams Band and Metlakatla First Nation to meet. March 17, 2021 – Email correspondence with letter from Lax Kw'alaams Band and Metlakatla First Nation to NLG in relation to the Project, copied to other members of the Proponent ownership group. March 31, 2021 – Written correspondence from Director Environmental and Regulatory Affairs to technical contacts Lax Kw'alaams Band. The letter once again introduces the Project and its location, including Project's ownership group. The letter appends a short Fact Sheet and the letters from Nisga'a leadership to Indigenous Nations. The letter requests collaboration in arranging a date for an initial virtual meeting to discuss optimal ways the Project can engage with Lax Kw'alaams Band. April 1, 2021 – Email exchange between Proponent and Lax Kw'alaams Band contact confirming receipt of Director Environmental and Regulatory Affairs Technical letter. April 5, 2021 – Email Correspondence from Lax Kw'alaams legal counsel to Director Environmental and Regulatory Affairs confirming preferred contact and that the Proponent write Lax Kw'alaams Band providing a rationale as to why a meeting is requested. April 9, 2021 – Email Correspondence: NLG to Lax Kw'alaams Band and Metlakatla First Nation in response to March 17, 2021 letter from both Nations. April 13, 2021 – Email Correspondence: from Director Environmental and Regulatory Affairs to Lax Kw'alaams legal counsel reiterating request to meet and to virtually present Project. April 21, 2021 – Email Correspondence: from Lax Kw'alaams legal counsel to the Director External Relations agreeing to meet May 3 to present their position on the Ksi Lisims Natural Gas Liquefaction and Marine Terminal LNG Project. April 23, 2021 – Email correspondence: Director Environmental and Regulatory Affairs to Lax Kw'alaams legal counsel. Proponents welcomed a meeting with Lax Kw'alaams and proposed to hold the Ksi Lisims LNG Project Introductory Meeting during the first week of May 2021. April 29, 2021 – Follow-up email correspondence: from the Director External Relations to Lax Kw'alaams legal counsel offering to meet May 3 to listen to Lax Kw'alaams position on the Project and to present the Project and Project team and to listen to how Lax Kw'alaams wish to be engaged on the Project. April 30, 2021 – Follow-up email from Lax Kw'alaams confirming a Project Introduction meeting on May 3, 2021. May 3, 2021 – Project introduction meeting with Lax Kw'alaams Band. Meeting notes available. Proponent offered to share draft early engagement and other Project agreements for Lax Kw'alaams Band consideration. Proponent offered to share a copy of the Ksi Lisims LNG Project Introductory Meeting presentation slides and draft meeting notes for Lax Kw'alaams Band review. May 4, 2021 – Email correspondence: Director External Relations sent draft meeting notes and a draft Early Engagement Capacity Funding Agreement to Lax Kw'alaams legal counsel. May 6, 2021 – Email correspondence: Director Environmental and Regulatory Affairs to Lax Kw'alaams legal counsel. Proponents shared electronic access to documents to facilitate Lax Kw'alaams Band access and review of the Projects Baseline Study Plan and associated draft Federal and Provincial investigative permit applications. May 18, 2021 – Email correspondence: Lax Kw'alaams legal counsel to Director External Relations confirming their position on the Project and that they had no interest in a follow up meeting. June 1, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to Lax Kw'alaams technical contacts providing access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8–24. June 12, 2021 – Email correspondence from the Director External Relations to the Lax Kw'alaams recognizing the senior project leadership meeting on June 16 with Mayor and offering following up on the June 7 email and offering a time to meet virtually to review the IPD and EP. June 15, 2021 – Email correspondence with Lax Kw'alaams Director Lands and Resources and Director Environmental and Regulatory Affairs confirming receipt of draft IPD and EP and Baseline Study Plan. June 16, 2021 – Meeting between senior Executives of the three Ksi Lisims LNG Project Partners and Lax Kw'alaams and Metlakatla leadership – Introductions and Project Discussions June 24, 2021 – Email correspondence from the Director External Relations to Lax Kw'alaams contact requesting comments on draft IPD and EP

Indigenous Nation	Summary of Preliminary Engagement Activities
Metlakatla First Nation	March 10, 2021 – Oral announcement of the Ksi Lisims LNG Project from a designated representative of the Nisga'a Lisims Government at the First Nations Climate Initiative (**FNCI**) Technical Group meeting to the FNCI technical representatives of Lax Kw'alaams, Metlakatla and Haisla. March 11, 2021 – Written correspondence from the Nisga'a Lisims Government to the elected leadership of Lax Kw'alaams and Metlakatla introducing the Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project. The letter offered an opportunity for senior leadership of Nisga'a, Lax Kw'alaams and Metlakatla to meet. March 17, 2021 – Email correspondence with letter from Lax Kw'alaams Band and Metlakatla First Nation to NLG in relation to the Project, copied to other members of the Proponent ownership group. March 31, 2021 – Written correspondence from Director Environmental and Regulatory Affairs to technical contacts for Metlakatla First Nation. The letter once again introduces the Project and its location. The letter appends a short Fact Sheet and the letters from Nisga'a leadership to Indigenous Nations. The letter requests collaboration in arranging a date for an initial virtual meeting to discuss optimal ways the Project can engage with Metlakatla First Nation. April 7, 2021 – Email correspondence: Metlakatla First Nation to Proponents requesting that the Project request a meeting with different Metlakatla technical contacts. April 9, 2021 – Email Correspondence: NLG to Lax Kw'alaams Band and Metlakatla First Nation in response to March 17, 2021 letter from both Nations. April 16, 2021 – Email Correspondence: Director Environmental and Regulatory Affairs to Metlakatla Stewardship and Treaty Staff. Metlakatla FNCI Technical Group contact requested that the letter provided on March 31, 2021, be redirected to Metlakatla Stewardship and Treaty Staff; Ksi Lisims LNG contacted Metlakatla Stewardship and Treaty Staff to arrange a Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project Introductory Meeting. April 19, 2021 – Email correspondence: Metlakatla First Nation to Director Environmental and Regulatory Affairs confirming Metlakatla participants and the date and time for a meeting on April 30, 2021. April 30, 2021 – Ksi Lisims LNG Project Introductory Meeting. Meeting notes available. • Metlakatla First Nation requested to be involved in the archaeological investigations conducted for the Project (i.e., Metlakatla Representatives/Field Technicians participate in the archaeological impact assessment); requested long lead time for review of the *Heritage Conservation Act* Heritage Inspection Permit application. • Metlakatla First Nation requested a copy of the Ksi Lisims LNG Project Introductory Meeting presentation slides, draft meeting notes for review, and shapefiles of the Project site and potential upland and marine Project footprint. These materials will be shared with Metlakatla Governing Council in a briefing prepared by Metlakatla Stewardship and Treaty Staff. Metlakatla First Nation Governing Council may request that the Proponent host a follow up Ksi Lisims LNG Project Introductory Meeting with them. Ksi Lisims LNG confirmed they will follow up with Metlakatla First Nation to provide the requested materials. • Metlakatla First Nation confirmed interest in establishing early engagement and other Project agreements. Ksi Lisims LNG confirmed they will follow up with Metlakatla First Nation to establish early engagement and other Project agreements. • Metlakatla First Nation requested that Project agreement discussions go through the Metlakatla Development Corporation. April 30, 2021 – Email correspondence: Director External Relations sent draft meeting notes and a draft Early Engagement Capacity Funding Agreement to Metlakatla contacts. May 6, 2021 – Email correspondence: Senior Environmental and Regulatory Advisor to Metlakatla Stewardship and Treaty Staff. Proponents shared electronic access to facilitate Metlakatla First Nation access and review of the Projects Baseline Study Plan and associated draft Federal and Provincial investigative permit applications. May 10, 2021 – Email correspondence: Director External Relations to Metlakatla Stewardship and Treaty Staff. Proponents request to meet with Metlakatla First Nation to discuss draft Project agreements during the week of May 17th, 24th or the week of June 7. May 11, 2021 – Email correspondence: Metlakatla Stewardship and Treaty Staff to Director External Relations. Metlakatla First Nation require until June to review the draft Early Engagement Capacity Funding agreement as the Ksi Lisims project would not be on their Council agenda until the June meeting at the earliest. May 11, 2021 – Email correspondence: Metlakatla Stewardship and Treaty Staff to Senior Environmental and Regulatory Advisor. Metlakatla First Nation acknowledged receipt of the draft investigative permit applications and requesting a copy of the Project's Baseline Study Plan. May 11, 2021 – Email correspondence: Senior Environmental and Regulatory Advisor to Metlakatla Stewardship and Treaty Staff directing them to electronic access (e.g., an FTP site) to access the Projects Baseline Study Plan for review of proposed methodology, timing, and spatial data. June 1, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to Metlakatla confirming plan to share draft IPD and EP with Metlakatla First Nation by June 7th. Review comments requested for June 25, 2021. Included offer of a virtual meeting to present the draft IPD and EP between June 8–24. June 7, 2021 – Email correspondence from Director Environmental and Regulatory Affairs to technical contacts providing access to early engagement drafts of both IPD and EP and asking for comments by June 25, 2021. Included offer of a virtual meeting to present the IPD and EP between June 8–24. June 12, 2021 – Email correspondence from the Director External Relations to the Metlakatla technical contacts following up on the June 7 email and offering a time to meet virtually to review the draft IPD and EP. June 16, 2021 – Meeting between senior Executives of the three Ksi Lisims LNG Project Partners and Metlakatla and Lax Kw'alaams leadership – Introductions and Project Discussions. June 24, 2021 – Email correspondence from the Director External Relations to Metlakatla contacts requesting a virtual meeting to discuss draft IPD and EP and capacity funding for further EA engagement.
Métis Nation British Columbia	May 14, 2021 – Written correspondence from the Director External Relations to President of Northwest BC Métis Association introducing the Ksi Lisims LNG Project. The letter offered an opportunity for a meeting and project introduction presentation.

7.3 General and Specific Issues identified by Indigenous Nations

7.3.1 General Issues

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

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

Issue 1—Marine and Fresh Water Quality

Impacts to marine water quality from dredging, disposal at sea and/or any discharges of treated effluent or cooling water related to the Project's operations.

Impacts to freshwater and the fisheries that use freshwater.

Issue 2—Archaeology

Potential negative effects of LNG projects on the presence and identification, collection and, where necessary, protection of sensitive archaeological sites and artefacts at a project site.

Issue 3—Air Emissions from the LNG Facility

Potential impact of air emissions from the LNG facilities and potential impacts on vegetation, wildlife, and human health.

Issue 4—Marine Transport and Shipping

Project-associated increases in large vessel shipping, potential interference with Indigenous Nation marine water use and the overall safety of LNG carriers.

Issue 5—Cumulative Effects

Cumulative effects from current and proposed natural resource development and other associated projects.

Issue 6—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.

7.3.2 Specific Issues

Table 14 summarizes the key issues that have been raised to date by Non-Nisga'a Indigenous Nations.

Table 14 – Summary of Key Issues Raised by Non-Nisga'a Indigenous Nations

Issues Raised	Project Response
Gitxaała Nation	
April 15, 2021 – Ksi Lisims LNG Project Introductory Meeting. Concerns raised included: marine shipping, upstream GHG emissions, the transmission line, use of carbon offsets and cumulative effects. Asked if these topics would be scoped into the EA. Concern about the Big Bay Pacific herring population and whether the species will be considered as an important marine resource value by the Project.	Proponents confirmed that marine shipping, upstream GHG emissions, carbon offsets and cumulative effects will be scoped into the EA. Proponents is in discussion with regulatory agencies regarding the specifics of the transmission line and its inclusion in the EA. Will be addressed during development of the DPD
June 30, 2021 – Gitxaala met with the Proponent and provided verbal comments on draft IPD and EP with written comments to follow.	Gitxaala highlighted the following in the virtual June 30 meeting: • Personal detail in the Indigenous Nation key issues summary [Proponent noted comments attributed to specific individuals by name has been edited out of last version of IPD and EP]. • References to Gitxaala as a Tsimshian Nation [Proponent understands and will remove any remaining Tsimshian reference from both IPD and EP]. • GHG effects – Net Zero – full accounting of GHGs [Proponent will address GHG in in more detail during DPD development]. • Lack of reference in IPD to Federal GHG management policies [Proponent will add further detail in 6.9 of IPD. • Reference to Gitxaala interests in the Nass River estuary (i.e., Red Bluff) – Gitxaala indicate they may provide in future]. • Gitxaala would like to better understand marine shipping assessment area and any cumulative effects [Proponent has amended text related to this issue in final IPD with respect to shipping from Prince Rupert – edit made in 5.2] . • Gitxaala would like to better understand the Project's potential dredging plans [Proponent has recently obtained bathymetry and will be addressing dredging and potential DAS in DPD process]. • Gitxaala request a minimum of four weeks for document review [Proponent acknowledges this request] • Gitxaala indicated written comments may be coming on IPD and EP after submission to BC EAO and IAAC.
Haida Nation	
Proponents have not received a response to date from Haida Nation; however, in its May 30, 2016 Press Release, regarding LNG and Oil megaprojects, the Haida Nation raised several issues which are summarized below.	see below
Accidents and Malfunctions: "The possibility of having a ship wreck along the coast and discharging 1250 cubic metres of heavy fuel into the waters of Gwaii Haanas is not something we want to see. Addressing current issues with shipping and the projected increase is a top priority for us," said kil tlaats 'gaa. "The Simushir incident[4] in late 2014 was as close as we want to get to having to deal with a spill, and at the time, the federal government's ability to respond was very limited."	Marine shipping will be a component of the EA-IA and will include evaluation of shipping routes. and their proximity to sensitive areas such as Gwaii Haanas National Park Reserve, National Marine Conservation Area and Haida Heritage Site. The Proponent is aware of the current 14-month trial Voluntary Protection Zone trial on west coast of Haida Gwaii, as well as the Haida Gwaii Marine Plan, and will consider these in any analysis of marine shipping routes. and will consider this in any analysis of marine shipping routes.
Assessment of cumulative effects of proposed project shipping.	Marine shipping aspects of the EA-IA will assess the cumulative effects of increased shipping associated with the proposed project and existing / baseline levels.

[4] Early in the morning on October 17, 2014, the Russian cargo vessel, Simushir, lost power about 20.5 nautical miles (nm) off the duu guusd •daawuuxusdawest coast of Haida Gwaii while a major storm was progressing. The vessel was carrying mining supplies and had 472 tonnes of bunker fuel and 59 tonnes of diesel aboard. At its closest point, the Simushir came 5.6 nm (10.4 km) from shore, and preparations began for a potential oil spill. The Canadian Coast Guard vessel Gordon Reid attempted to tow the vessel, breaking three tow lines. Fortunately, the weather subsided to avoid disaster. The rescue tug Barbara Foss arrived at the scene more than 24 hours later and the Simushir was towed to Kxeen Prince Rupert.

Issues Raised	Project Response
Accidents and Malfunctions: Existing capabilities for emergency response are limited.	The EA-IA will include an Accidents or Malfunctions section (as per the requirements of paragraph 22(1)(a)(i) of the *Impact Assessment Act*) that will consider the potential effects of accidents or malfunctions, such as spills of hazardous materials, on VCs most likely to be affected. The assessment will describe measures to reduce the likelihood of specified accident or malfunction scenarios occurring as well as response plans. The proponent is aware of initiatives currently being undertaken by the Council of the Haida Nation and other governments with regard to existing shipping and vessel traffic in Haida Gwaii waters. These initiatives include Marine Environmental Emergency Response Planning, Training, and identification of places of refuge (Haida 2021). As part of project development, the Proponent will meet with the Haida, other relevant provincial, federal and indigenous government agencies to discuss existing emergency response capabilities and additional resources required to support the proposed project.
Kitselas First Nation	
April 19, 2021 – Ksi Lisims LNG Project Introductory Meeting. Concerned about workers travelling through Terrace to complete the Ksi Lisims LNG Baseline Studies due to rising Covid-19 cases in the region; interested in Proponents safe work practices and policies to reduce the risk of COVID-19 transmission.	Proponent verbally provided how baseline studies field crews would be transiting through the Terrace area to the Nass Valley.
May 26, 2021, Meeting to review and discuss comments to the draft Ksi Lisims Baseline Study Plan. Comments included questions regarding wetland surveys, freshwater streams and fish, transboundary effects, eel grass beds, spatial scope of marine facilities and suggestion to use aerial survey for marine mammals. Kitselas have an environmental services company that could support Project assessment work.	Stantec environmental assessment discipline leads responded to Kitselas' technical comments on the Baseline Study Plan. Potential for transboundary effects have not yet been determined
June 23, 2021 – Kitselas provided comments on draft IPD and EP: In summary, Kitselas commented on or requested more clarification on: pipeline partner, environmental benefits, GHG targets, connection to the BC Hydro grid and-or IPPs, how condensate is to be managed, shipping route assessments area definition, housing of the temporary construction workforce, RAA for shipping, potential environmental effects, potential socio-economic effects from shipping, accidents and malfunctions and mitigation and management plans.	Ksi Lisims LNG developed a Kitselas IPD and EP comment tracking table responding to each point made in the June 23 Kitselas submission. This table has been provided to the BC EAO and IAAC in a separate submission to facilitate their review of the IPD and EP. Several Kitselas comments will be more fully addressed in the next phase, developing the DPD and AIR. Several edits were made to draft IPD: • Marine shipping route assessment area – edit made to 5.2. • Condensate management is addressed in 2.2.4 and 2.4. • Kitselas Marine Harvest Area – edit made in 4.1.1.4. • The Kitselas Reconciliation Agreement of 2017 is noted in 4.5.2.1. • Marine shipping assessment area - 5.2 edited • Potential environmental effects – edit made to 5.4.1. • Potential Socio-economic effects – edit made to 5.4.2. Several edits were made to the EP: • Project proximity – edit made to 2.2. • Engagement principles – edit made to 3.1. • Tracking feedback – edit made to 3.3. • Reconciliation Agreements – edit made to 4.5.2.1.
Kitsumkalum First Nation	
April 12, 2021 – Ksi Lisims LNG Project Introductory Meeting. Concerned about LNG carriers transiting in Chatham Sound (Triple Island area) and potential impacts on marine resources used by Kitsumkalum First Nation. Asked if shipping routes (north and south routes around Dundas Island) would be part of the EA.	Marine shipping will be part of the EA. Aspects of marine shipping will be more fully addressed in the DPD.
April 12, 2021 – Ksi Lisims LNG Project Introductory Meeting. Concerned about LNG vessel oil capacities and fuel used by LNG carriers and concerned about impacts to marine resources if an LNG carrier ran aground and there was a spill into the marine environment.	Emergency preparedness and spill response will be part of the EA-IA and more fully be addressed during development in the DPD.

Issues Raised	Project Response
May 26, 2021 – email correspondence, Kitsumkalum First Nation requested Ksi Lisims Baseline Study Plan.	Shared Ksi Lisims Baseline Study Plan (May 26) and confirmed investigative permits at Wil Milit Site had been issued. Earlier attempts to share this information were unsuccessful due to IT issues at Kitsumkalum offices.
June 30, 2021 – Kitsumkalum requested two edits to the draft IPD.	Kitsumkalum requested an edit to their territory map and their Kitsumkalum Nation description in Section 4.1.1.3. Proponent has made the edits as requested to Figure 6 (now Figure 5) and for 4.1.1.3.
	New 4.1.1.3 inserted as requested.
	Ksi Lisims LNG developed a Kitsumkalum IPD and EP comment tracking table responding to each point made in the July 1 Kitsumkalum submission. This table will be provided to the BC EAO and IAAC in a separate submission to facilitate their review of the IPD and EP.
July 1, 2021 – Kitsumkalum provided comments on the IPD and EP - General.	In general, and applicable to both the IPD and EP: • Seeking clarity on the 'transmission interconnection' from BC Hydro grid to the Project site scope (and assessment of potential effects). [Project: More detail will be available on this issue in the coming months and during development of the DPD]. • Understanding of coordination, if any, between EAO/IAAC (as a likely substituted EAprocess) and the EA process under Chapter 10 of the Nisga'a Nation treaty. [Project: The upcoming EA-IA process will evolve as the Nisga'a, BC EAO and IAAC collaborate and work together to define the upcoming EA-IA scope in the DPD]. • Discussion of opportunity to shift the shipping route for the Project to north of Dundas Islandto reduce risks (accidents and malfunctions) in Chatham Sound.[Project: Has met with BC Coast Pilots and PPA to introduce the Project. Further engagements with them will help define safe marine transportation routes from the Triple Island area to the Project's marine terminal. Kitsumkalum will be engaged in these engagements along with others as more information becomes available in the development of the DPD and the EA-IA]. • Discussion of opportunities associated with Project shipping to mitigation / reduce effectsincluding, but not limited to, Green Marine certification and conducting a project specificTERMPOL review and implementing recommendations from that review etc.). [Project: Is committed to conducting a TERMPOL exercise and will discuss the Green Marine suggestion with Kitsumkalum as part of deliberations on the DPD]. • Understanding discussions and progression with 3rd party pipeline operators that will supply the feed of natural gas for the Project.[Project: Pipeline commercial discussions are under way and the Project will inform Kitsumkalum when deliberations are no longer confidential]. • Clarity on the First Nation Climate Initiative and the linkage to the Project. [Project: A workshop on FNCI and its applicability to the Project could be scheduled in the coming months as compliance with the draft June 2020 FNCI Principles is fundamental to the Project]. • Clarity on the construction temporary workforce accommodation and transportation of workers. [Project: Details on the construction workforce will evolve during Pre-FEED and the development of the DPD].
From Kitsumkalum letter of July 1, 2021 - IPD.	*Specific to the IPD* • Understanding of baseline studies associated with terminal siting (i.e., wind, weather, stormevents, wave/swell height, currents) as Kitsumkalum fishers report the potential for severe weather conditions around Wil Milit. Assessing / understanding the risk for potential accidents and malfunctions given those conditions. [Project: Will share results and analysis of metocean parameters with Kitsumkalum and – with insights from Kitsumkalum and others – factor that information into the assessment of accidents and malfunctions related to shipping]. • The City of Terrace is the service hub for the Nass Valley. [Project: City of Terrace and its importance to the project has been expanded upon in the IPD including being described as a potential supply centre and listed as a community of importance in Section 4. Edit to 4.1]. • Section 8.2, Accidents and Malfunctions, requires understanding of the use of Highway 113 associated with the Project and the potential for accidents and malfunctions with road transportation. [Project: Edit to add a new section 9.1.7 to address potential accidents on Highway 113]. • Table 4. Proximity of the Project related shipping route to Protected and federal lands should beconsidered.[Project: Will consider and discuss the inclusion of a new Table showing distances from the marine shipping route to federal and protected lands with BC EAO, IAAC, Nisga'a and Kitsumkalum in the DPD]. • Table 8, there are no baseline studies associated with the assessment of socio-economic andcommunity well-being effects suggested. Why? [Project: The Baseline Study Plan lists these other studies – however the start of these studies will occur after IPD and EP is submitted and accepted. The scope of the socio-economic and community well-being studies will be refined with Kitsumkalum and others during engagement on the DPD]. • Table 8, there are several baseline studies (receptors) which do not include consideration of the effects (the study area) associated with shipping traffic / route to/from Triple Island (e.g.,marine use, underwater acoustics, marine mammals, marine birds etc.) [Project: The intent is to assess potential effects to marine birds, marine fish and mammals and marine use. Table 8 has been amended to include marine route to Triple Island]. • The Marine Shipping Assessment Area buffer may require widening given certaineffects/pathways/receptors (e.g., for marine mammals).[Project: Willing to discuss Marine Shipping Assessment Area boundaries with Kitsumkalum, IAAC, Nisga'a and BC EAO and revise as part of DPD process]. • Discussion of Table 7 and potential interactions between Project activities and Social Values would be appreciated prior to the development of the dAIR.[Project: Commits to engaging Kitsumkalum in dAIR development].

Issues Raised	Project Response
	• Section 5.4.1, the list of potential environmental. [Project – New text added to 5.4.1 to elaborate on potential environmental effects]. • Unclear why Section 5.4.2 is not included in Section 4, Human and Social Setting. [Project: Willing to discuss 5.4.2 socio-economic, environmental and community well-being scope with greater definition for inclusion in DPD. Added Kitsumkalum IR 1 to list of communities in Section 4.1]. • Table 11, under Kitsumkalum First Nation it likely should add that Kitsumkalum was delayed in responding to referrals during the period of May 4th to June 21st, 2021, due to an organizational level malware attack. [Project: Edit made to Table 11].
From Kitsumkalum letter of July 1, 2021 - EP.	*Specific to the EP* • Section 4.3 Methods, Activities, and Frequency, [Project: Will address during negotiation of EA-IA capacity agreements]. • Understanding if Rockies LNG is viewing engagement of Nations on 'different' levels, as early engagement activities was listed / grouped separately (i.e., G2G early engagement was with Lax Kw'alaams and Metlakatla together, and then grouped with Gitxaala, Kitsumkalum, Kitselas and Haida together). [Project: No - Indigenous Nations have been engaged the same way with respect to engagement on IPD and EP - edit made to 4.2.2].
Lax Kw'alaams Band	
March 17, 2021 – Letter Correspondence, Mayor Lax Kw'alaams Band and Chief Councillor Metlakatla First Nation to NLG and other members of the Project Proponents Partnership. Concerns about Project impacts to Coast Tsimshian waters (overlapping with the marine shipping route) and Pearse Island. From Lax Kw'alaams Band perspective the Project is within their Coast Tsimshian traditional territory and subject to their Aboriginal rights and title.	April 9, 2021 – Letter correspondence from President NLG to Mayor Lax Kw'alaams Band and Chief Councillor Metlakatla First Nation confirming that the Site is on Category A lands held in fee simple by the Nisga'a Nation pursuant to the Nisga'a Treaty and is a former Nisga'a reserve.
May 3, 2021 – Ksi Lisims LNG Project Introductory Meeting. Mayor restated that Lax Kw'alaams Band assert rights and title on the land and waters of the Project area. Mayor also expressed concern that Lax Kw'alaams Band was not approached earlier as a partner in the project.	Proponents acknowledged an understanding of the territory claimed by Lax Kw'alaams Band and confirmed that it will be engaging Lax Kw'alaams Band on that basis.
May 3, 2021 - Alternative Means of Carrying Out the Project: Counsel for Lax Kw'alaams Band asked if there were any technical problems with the Nasoga Gulf Site and why the move to Wil Milit.	Although there are no known technical issues that cannot be overcome at Nasoga Gulf, it is not owned by the Nisga'a Nation. The Wil Milit site is owned in fee simple by the NLG. Site evaluation studies were conducted on the feasibility of 4 candidate sites and Wil Milit had the highest ranking with respect to mitigating Project risks.
June 16, 2021 – Meeting between Project Senior Executives and Mayor Lax Kw'alaams and Chief Councilor Metlakatla.	Introductions between Project leadership and leadership of Lax Kw'alaams and Metlakatla – discussion of the Project.
Metlakatla First Nation	
March 17, 2021 – Letter Correspondence, Mayor Lax Kw'alaams Band and Chief Councillor Metlakatla First Nation to NLG and other members of the Project Proponents Partnership. Concerns about Project impacts to Coast Tsimshian waters (overlapping with the marine shipping route) and Pearse Island; from Metlakatla First Nation perspective the Project is within their Coast Tsimshian traditional territory and subject to their Aboriginal rights and title.	April 9, 2021 – Letter correspondence from President Clayton to Mayor Lax Kw'alaams Band and Chief Councillor Metlakatla First Nation confirming that the Site is on Category A lands held in fee simple by the Nisga'a Nation pursuant to the Nisga'a Treaty and is a former Nisga'a reserve.
June 16, 2021 – Meeting between Project Senior Executives and Chief Councillor Metlakatla and Mayor Lax Kw'alaams.	Introductions between Project leadership and leadership of Metlakatla and Lax Kw'alaams – discussion of the Project.

Issues Raised	Project Response
Métis Nation of British Columbia	
No return engagement with MNBC to date. In a letter dated October 18, 2019, from the Director of Natural Resources of the Métis Nation of British Columbia to the Canadian Environmental Assessment Agency regarding another LNG Project, the MNBC expressed opposition to substituting the provincial environmental assessment process for the Project under BC's *Environmental Assessment Act* for the Federal EA process under the *Canadian Environmental Assessment Act*, 2012. The stated reasons for this objection were due to the MNBC assessment that: 1. The construction and operation of the other LNG Project would negatively impact Métis Harvesters who rely on the direct and surrounding area for sustenance, social and ceremonial purposes; 2. BC's Environmental Assessment Office undertaking procedural aspects of Aboriginal consultation on behalf of the Crown would lead to inadequate consultation due to the Province's failure to recognize the S.35 rights of Métis in British Columbia; and, 3. The Project will be developed in a marine environment and affect marine resources that are primarily under federal jurisdiction.	The letter from MNBC was not related to the proposed Ksi Lisims LNG Project; however, similar concerns could be raised when the Project requests that the BC EAO request substitution of the IAAC Impact Assessment process. The Proponent presents this information in the spirit of transparency and acknowledges that these concerns will need to be addressed in any decision related to a substitution request for this Project. The Proponent will endeavor to engage MNBC to see if they will have similar concerns on this Project.

7.4 Preliminary Assessment of Potential Impacts to Indigenous Nations Resulting from Project Activities and Alignment with Indigenous Nation Interests

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.

Mitigation measures and appropriate management plans will be developed based on comments received from Indigenous Nations through the EA-IA process.

As noted in Section 1, the Nisga'a Nation has been actively pursuing the development of an LNG export facility in the Nass Area since 2014. The Nisga'a Nation outlined this goal in a publicly distributed document entitled: *Nisga'a Lisims Government – New Available LNG Sites on Canada's West Coast* – February 2014.

The Project may have potential impacts on the Nisga'a Nation's treaty rights and interests as set out in the Nisga'a Treaty. As detailed in section 6.1, the Project recognizes that the Nisga'a Treaty and the constitutionally protected rights and interests set out in the Nisga'a Treaty must be respected. The assessment of impacts on the Nisga'a Nation's treaty rights will be assessed in accordance with the requirements of Chapter 10 of the Nisga'a Treaty as part of the EA-IA for the Project.

Finally, the Site is located with Category A Lands, which are lands owned in fee simple by the Nisga'a Nation. As such, as owners of that land and partners in the Project, the Nisga'a Nation will need to approve the Project.

7.5 IPD Alignment with Other Indigenous Nation Interests

The Nisga'a Nation partnered with the Lax Kw'alaams Band, Metlakatla First Nation and the Haisla Nation to develop policies that address global climate change while facilitating sustainable economic development, including responsible LNG export facility developments on BC's Northwest coast. FNCI Nations believe that coordinated policy development and public and private sector investment are needed to build electrical generation and transmission infrastructure in northern BC, to restore damaged ecosystems to be carbon sinks, and to support Net Zero natural gas export projects on the North Coast. In March 2021, Lax Kw'alaams withdrew from FNCI.

The other Indigenous Nations specifically, Kitsumkalum, Kitselas, Gitxaala and Haida have not yet engaged with Project on the draft FNCI draft policy framework although the Project anticipates fulsome discussions on Net-Zero GHG and potentially other FNCI policies with those Indigenous Nations who raise those issues during the development of the DPD.

The Project complies with the following FNCI policies (FNCI June 2020):

- FNCI First Nations will provide leadership on achieving the policies and objectives in a manner that is consistent with BC's and Canada's commitments on climate change, First Nations poverty alleviation, and natural gas infrastructure development and ownership that will benefit their communities, BC and Canada.
- All new LNG and other gas product development projects are to achieve "Net Zero" GHG on the basis of approved plans, approvals and within time frames that align with limiting global warming to 1.5–2.0 C.
- Establish cost competitive LNG and other natural gas products in the international marketplace.
- Work with governments to enable Public and Private sector investment in renewable energy generation and transmission infrastructure.
- Promote nature-based solutions to reduce GHG emissions from new and existing developments.
- Promote technological innovation along the LNG supply chain that can be exported to the rest of the world to burn cleaner gas and reduce CO_2e emissions.
- Establish protocols for domestic carbon offsets and enable these offsets to count against carbon tax liabilities and the "Net Zero" objectives provided that proponents have an approved plan to achieve "Net Zero" as soon as possible while maintaining project viability.
- Promote "Net Zero" LNG and other natural gas product development as a transition step that finances construction of the infrastructure that will electrify the low carbon economy of the future while supporting First Nations economic self-determination and restoration of traditional territories.
- Proactively position First Nations who are interested in taking an equity position in project infrastructure, including through loan guarantees and direct grants from Canada, BC and Alberta.

The Ksi Lisims LNG Natural Gas Liquefaction and Marine Terminal Project is an example of the kind of project that FNCI described in its "Draft Scenario Outlining Potential for Net Zero LNG" for the stated purpose of achieving local and global climate change targets that make poverty a thing of the past in First Nations communities and builds the infrastructure and innovation for a low carbon economy by 2050.

Further details on FNCI will be appended to the DPD and can be found at www.FNCIonline.com.

7.6 Summary of Planned Engagement Activities with Indigenous Nations

The NLG will coordinate all Project engagement activities related to the Project with Nisga'a citizens. Nisga'a Nation representatives were involved in developing this IPD and directly involved with the implementation of it with Nisga'a citizens.

The Proponents will coordinate with the BC EAO and the IAAC to ensure that Non-Nisga'a Indigenous Nations are receiving the most up-to-date information with respect to the EA-IA processes under the BCEAA 2018 and the IAA 2019. The Proponents are committed to engaging with potentially affected Indigenous Nations regarding established or asserted Aboriginal rights, title and other interests (including current use for traditional purposes) that may be affected by the Project. The Proponents understands that identifying and recommending measures to address potential adverse effects to Indigenous Nation interests from the Project, or from its cumulative interaction with other past, present or reasonably foreseeable projects, will be an important element of the EA-IA and the fulfillment of the Crown's common law duty to consult and accommodate.

The following sets out a brief list of specific engagement with Non-Nisga'a Indigenous Nations that are currently planned:

- Regularly scheduled Project updates, conference calls and meetings with Indigenous Nation administrative staff, consultants, elders and other members of Indigenous Nations.
- Conducting community meetings, open houses and workshops as requested.
- Facilitating opportunities to participate in collecting baseline information, as well as review and input into the information.

Future Indigenous Nation engagement is provided in more detail in the accompanying EP for the Project.

8 GOVERNMENT, PUBLIC AND STAKEHOLDER ENGAGEMENT

8.1 Summary of Engagement with Federal, Provincial, Municipal and Regional Governments

The Proponents have conducted various engagement activities with federal, provincial, municipal and regional governments beginning in Q4 of 2020 and continuing into 2021 prior to submitting the IPD and the EP with the BC EAO and the IPD and IPD Project Summary to the IAAC.

The Project has met with the BC EAO and the IAAC several times to initiate Project discussions and confirm government entities for engagement as reflected in Table 15, and to plan for the EA-IA processes.

Table 15 – Preliminary Engagement Undertaken by the Proponents with Federal, Provincial, Regional and Municipal Governments

Federal, Provincial Municipal and Regional Government	Preliminary Engagement – Dates and Brief Description
BC EAO	October 28, 2020 and Oct 29, 2020 – Early discussions on tentative EA timelines and the new EA process. Meeting notes available. November 23, 2020 – Further discussions on early engagement, the new EA process, timelines, anticipated issues, etc. Meeting notes available. March 10, 2021 – Phone conversation with ADM of BC EAO as the Project was announced to external FNCI parties on this date. March 31, 2021 – Full virtual briefing with BC EAO team. April 30, 2021 – Project Introduction meeting with ADM and supporting BC EAO team. Discussion of Indigenous Nation Early Engagement efforts, Métis Engagement, and IPD/EP review timing. Joint meeting with BC EAO and IAAC proposed; to be scheduled after BC EAO review of IPD/EP. Meeting notes available. May 18, 2021 – Email correspondence regarding land title and fee simple ownership Wil Milit. May 20, 2021 – Email correspondence – BC EAO response to the Project engagement questions. May 21, 2021 – Email correspondence regarding funding of Indigenous Nation participation and post IPD submission acceptance engagement. May 31, 2021 – Phone call with BC EAO to discuss progress on IPD review and discuss if IPD authors table needs to be expanded upon, provide notice to Indigenous Nations regarding IPD review, confirm proposed filing date for IPD and EP, engagement with Alaska and the Haida. June 3, 2021 – Email exchange with BC EAO with respect to the use of an Executive Summary in an IPD including a discussion on the IAAC requirement for an "Initial Project Description Project Summary" to be provided in both official languages. June 4, 2021 – Email correspondence to BC EAO and IAAC with suggested agenda for June 8, 2021 meeting. June 8, 2021 – Review of draft IPD and EP at joint meeting with IAAC. June 11, 2021 – Review of BC EAO comments on draft IPD and EP and process to addressing BC EAO comments to IPD and EP. June 24, 2021 – Discussion of draft IPD and EP and process workplan and steps forward jointly with IAAC**.**

Federal, Provincial Municipal and Regional Government	Preliminary Engagement – Dates and Brief Description
IAAC	November 12, 2020 – Discussion about the new IAAC IA process, early issue identification, GHG assessment, etc. Meeting notes available. March 10, 2021 – Phone conversation with IAAC Pacific Region team as the Project was announced to external parties on this date. May 13, 2021 – Project introduction meeting May 31, 2021 – Phone call with IAAC to discuss progress on IPD review, should IPD authors be expanded upon, provide notice to Indigenous Nations re IPD review and confirm proposed filing date for IPD and EP June 4, 2021 – Email correspondence to BC EAO and IAAC with suggested agenda for June 8, 2021 meeting June 4, 2021 – Confirmation email from IAAC confirming Agenda for June 8 meeting. June 8, 2021 – Review of draft IPD jointly with BC EAO. June 11, 2021 – Review of IAAC comments on IPD and process to addressing IAAC comments to IPD. June 24, 2021 – Discussion of draft IPD and process workplan and steps forward - jointly with BC EAO.
BC MARR	February 24, 2021 – Telephone conversation with Minister.
BC MECC	April 13, 2021 Climate Action Secretariat – LNG Benchmarking and GHG.
DMs of MARR, MECC and MEMPR	February 26, 2021 – Project Update.
BC ADM MEMPR	March 2, 2021 – Project update.
Federal Ministries – IANA, NRCan	March 3, 2021 – Project update – Meeting notes available.
Pacific Pilotage Authority	May 12, 2021 – Project introduction meeting – Meeting notes available.
BC Oil and Gas Commission	May 27, 2021 – Project introduction meeting.
Skeena MLA	May 21, 2021 – Project introduction meeting.
FLNRORD	May 27, 2021 – Project introduction meeting. May 31, 2021 – Arch permit review process on Nisga'a lands.
MLA for Skeena	May 28, 2021 – Project introduction meeting and discussion of engagement with Indigenous Nations.
Regional District of Kitimat-Stikine (**RDKS**)	May 28, 2021 – Project introduction presentation to Board of RDKS at their May 28th Board Meeting.
City of Terrace	June 29, 2021 – Project introduction meeting
City of Prince Rupert	June 7, 2021 – Letter reaching out to offer a Project introductory virtual meeting.
North Coast Regional District	June 7, 2021 – Letter reaching out to offer a Project introductory virtual meeting.

8.1.1 Summary of Key Interests and Issues Identified by Federal, Provincial, Municipal and Regional Governments

Table 16 summarizes the feedback received, if any, from the federal, provincial, municipal and regional governments through preliminary engagement on the IPD and EP and outlines how feedback was incorporated into the IPD and/or EP or, if it has not been incorporated in the IPD and/or EP, how it will be addressed.

Where the Proponents will not address an issue raised, the Proponents have provided a clear rationale as to why.

Table 16 – Key Issues and Comments from Federal, Provincial, Municipal and Regional Governments

Engaged Party	Issues Raised	Project Response
BC Coast Pilots	A risk assessment is required for any new marine terminal and a Terms of Reference was provided. Confirmed pilots are required on all large vessels and would be placed on vessel approximately 8 km west of Triple Island, boarded with helicopter support.	Proponent understanding, informed IPD. To be further addressed in DPD.
BC EAO (Oct 28/29, 2020)	Regulatory Process: Early review of IDP and EP is advised, and substitution request was discussed.	Nov 23, 2020 follow up meeting with BC EAO to review draft IPD.
BC EAO (Oct 28/29, 2020)	Strong suggestion to build relationships with Indigenous Nations and introduce the Project directly to them.	Tables 12 and 13 detail engagement to date.
BC EAO (Oct 28/29, 2020)	FNC – advised that Proponents Senior leadership should meet with the Deputy Ministers and perhaps Ministers of EMPR and ECCC, post 2020 election.	Meeting with BC DMs MIRR, MEMPR and MECC March 2021
BC EAO (Oct 28/29, 2020)	Electrification – electric drives appear to be a requirement for LNG projects in BC if GHG targets are to be met. BC EAO advised Project to look another LNG PD for how they addressed the provision of electricity to their LNG project. Discussion of using an IPP as a potential energy source for the Project.	Confirmed review of that PD and committed to make amendments to the draft IPD if necessary.
BC EAO (Oct 28/29, 2020)	Alaska: Mention of the BC-Alaska EA agreement and Alaskan settlements or any “human receptors” with the potential LOA for the Project on the Alaskan side of the border.	Proponents noted they were not aware of any settlements, but further confirmation likely required.
BC EAO (Oct 28/29, 2020)	Pipeline: discussion on pipeline options, and regulatory requirements for different options.	Proponent understanding, informed IPD.

Engaged Party	Issues Raised	Project Response
IAAC (Nov 12, 2020)	Substitution: The IAAC need to consult other government agencies, Indigenous Nations, stakeholders and the public on any request for substitution. As Project is close to Canada/U.S. border, transboundary effects will need to be considered.	Proponent understanding, informed IPD.
IAAC (Nov 12, 2020)	The IAAC believe the marine shipping issue will need to be addressed in any impact-environmental assessment for the Project.	Proponents confirmed marine shipping route will be included in the Project assessment.
IAAC (Nov 12, 2020)	Strategic Assessment on Climate Change (**SACC**) is applicable to the project. Direct Project GHG emissions, potentially Upstream GHG emissions and Canada's "Net-zero" GHG emission by 2050 policy will need to be addressed in the assessment.	Proponent understanding, Informed IPD development.
IAAC (Nov 12, 2020)	Future engagement: IAAC to set a Project Director as a point of contact for the Ksi Lisims LNG Project. IAAC could attend a joint meeting with BC EAO to review the draft IPD. Project should engage ECCC Minister and other Ministers.	Proponents to engage ECCC Minister on the Project in the near future.
IAAC (Nov 16 2020)	Provided some direction on what is needed for an IPD in relation to GHG emissions and climate change information – SACC as guide.	Proponent understanding, Informed IPD development.
BC EAO (Nov 26, 2020)	Indigenous Nations can self-identify and lead portions of the EA under section 19, recommended the Project work with Nations to develop Nation specific studies. Engagement with Indigenous Nations is important prior to filing the IDP and EP. BC EAO will confirm Nations to be engaged in the future after submission. BC EAO does not require consultation with Métis, but federal government does. Consultations and engagement with Alaskan Indigenous peoples have not been required within the BC process to date, but State government have been involved in EA working groups.	Proponents understands that engagement needs to focus on both leadership and technical matters and levels. Timing of engagement was discussed. Proponents believe that the FNCI initiative has provided a substantive opportunity for the discussion about LNG Projects on the Northwest Coast, including any projects and the necessary infrastructure (e.g., power) to support them. The Indigenous Nations the Proponent has tried to engage are listed inTable 2.
BC EAO (Nov 26, 2020)	Early Engagement Phase and in particular the proponent's time to develop the DPD is an opportunity for the proponents to "de-risk" the EA.	Proponent understanding, informed IPD development.

Engaged Party	Issues Raised	Project Response
BC EAO (Nov 26, 2020)	BC EAO strives to reach consensus with Indigenous Nations, but acknowledges that conflict may occur with overlapping asserted Territories	Proponent understanding, informed IPD development
Federal Ministries – IANA, NRCan (March 3, 2021)	Early engagement meeting to inform; staff advised that Minister's offices would appreciate a briefing on the Project.	Project advocacy.
BC EAO (April 30, 2021)	Recommendation to include Métis (Métis Nations British Columbia) engagement in the IPD and EP.	Informed IPD development.
BC EAO (April 30, 2021)	Suggested arranging a similar meeting with IAAC within the next two weeks.	Meeting held.
PPA (May 12, 2021)	Project introduction.	Project introduction, PPA role.
IAAC (May 13, 2021)	Discussed requirement to engage MNBC and electricity supply for the Project and requested a follow up meeting to further discuss scope of project. Confirmed review of draft IPD and EP and follow up meeting with IAAC after review is complete.	Draft IPD and EP to be provided and follow up meeting scheduled for early June.
BC EAO (May 18, 2021)	Proponents provided land title confirmation of Wil Milit as Category A – fee simple land of the Nisga'a and option to lease to Rockies LNG.	Proponent provided an NLG Nass Area Overview map to BC EAO
BC OGC, (May 12, 2021)	Project Intro Meeting. Question regarding engagement with Alaska Indigenous Nations. Suggestion to present to Premier's Chief of Staff and MEM and Low Carbon Innovation.	Proponent to schedule meeting with Premier's Chief of Staff and MEM and Low Carbon Innovation after IPD submission. Proponent provided copy of presentation.
BC EAO (May 21, 2021)	Response to Proponent's questions regarding funding of Indigenous Nations participation at different phases of the environmental process and the Proponent's engagement responsibilities post certificate.	Proponent understanding, informed IPD development.
Skeena MLA (May 21, 2021)	Discussion between MLA and Western LNG. Question was raised as to who had jurisdiction of the seabed under a floating LNG barge.	Proponents followed up on May 21 confirming that the government of BC has jurisdiction over the foreshore.
FLNRORD (May 27, 2021)	Project introduction to Ministry – Deputy Minister and ADM.	Slide deck provided.
Skeena MLA (May 28, 2021)	Project Introduction Presentation and discussion regarding Indigenous nations electing to undertake their own assessment of impacts under the BC *Environmental Assessment Act*.	Proponents provided a link to the draft Application Information Requirements for another LNG project identifying the intent by Lax Kw'alaams and Metlakatla to undertake their own effects assessment.

Engaged Party	Issues Raised	Project Response
BC EAO and IAAC (May 31, 2021)	Response in general to Proponent's verbal questions re: IPD-EP review of May 14 draft, early notice of review of both docs with Indigenous nations, timing of final filing, engagement with Haida and potentially with Alaska, agenda for June 8 joint meeting.	Proponents to share a draft of IPD and EP with Indigenous Nations June 7 and share a suggested Agenda for June 8 meeting.
BC EAO and IAAC (June 8, 2021)	Review and discussion of draft of IPD and EP.	Review comments provided by BC EAO and IAAC. Edit IPD and EP.
EAO and IAAC (June 11, 2021)	Review and discussion of draft approach to addressing comments on IPD and EP.	Proponent prepared table on how comments will be addressed. New or edited IPD and EP text.
BC EAO and IAAC (June 24, 2021)	Discussion of EA-IA process workplan, timing of IPD and EP submission, next steps in process.	Proponent finalizing IPD, IPD Summary in English and French and the EP.

8.1.2 Summary of Planned Federal, Provincial, Municipal, and Regional Government Engagement Activities

The following section sets outline the proposed engagement methods, activities, and frequency with governments during the preliminary and early engagement. The Early Engagement phase and Planning phase began with federal and provincial government agencies in first quarter of 2021. Engagement with targeted municipal and regional government will began in second quarter of 2021.

Following acceptance of the IPD the BC EAO and IAAC will advise on the selection of federal and provincial government members of the Technical Advisory Committee (**TAC**). Most federal and provincial agencies with an interest are represented on the TAC. Some of the provincial and federal representatives may also receive an invitation to any BC EAO-led or IAAC-led in-person engagement activities to provide them with an opportunity to learn more about the Project, ask questions, observe community/public interest, and to provide feedback on the Project.

As a first step the BC EAO and IAAC will be engaged at a senior level and asked to coordinate Project involvement from other provincial and/or federal agencies. 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 Proponents will engage with the contacts identified by the applicable federal, provincial, municipal and regional government agency or department, and any other representatives of those governments, as identified by the agency. The Proponents will also engage with municipal and regional government representatives and the provincial Members of the Legislative Assemble (**MLA**s) and Members of Parliament (**MP**) for the region.

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

8.2 Summary of Planned Engagement with the Public and Stakeholders

The following sets out a list of specific engagement with stakeholders and the public that are currently planned upon acceptance by the BC EAO and IAAC of the IPD and EP:

- A Project website will be published containing Project and contact information. The page will contain a high-level overview of the Project, instruction on how to get involved in the EA-IA process, a link to the BC EAO's website and IAAC's website where the public and stakeholder groups can access the IPD and EP (BC EAO) or the IPD Project Summary in both official languages (IAAC) and provide comments during the comment period. The web page will be updated as the Project reaches new milestones and to support the EA-IA process.
- An initial email notification will be sent to the organizations and communities noted in the EP. 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 after the IPD is accepted or during other public periods set out in the BCEAA 2018 and the IAAC 2019. The Proponents will attend these sessions to provide information about the Project and respond to questions from the public.
- Digital and print ads, as well as social media will promote open houses, town halls or community meetings and direct the interested public to an online registration page on the Project's website. The Proponents will make reasonable efforts to reach the public through appropriate community events to connect with those who may be unable to attend these sessions.
- The Proponents will offer to meet with the organizations identified in the EP to provide information and accept feedback about the Project, throughout early engagement, prior to the filing of the DPD, as appropriate.
- Shortly after the BC EAO and IAAC accept the IPD and EP, the Proponents will distribute Project information sheets to MLA and MP constituency offices in the event they receive any inquiries from their constituents.
- Throughout all engagements on the Project, educational materials such as Project website hosted videos will be shared on social media and on the Project websites to help the public understand LNG, LNG export facilities and learn more about the Project.
- Local knowledge and feedback received from the public through the comment period at any BC EAO-led virtual engagement activities, at community events and through the Project email address will be compiled in a Project tracking table, as well as through the BC EAO and IAAC websites during the comment period. This information will be considered and may be incorporated into the EA-IA process as appropriate.
- Throughout engagement, the Proponents will log all communications with the public for review and any feedback received outside of the BC EAO and IAAC's public comment period.
- The DPD will list each distinct issue raised by these groups and the Proponent's response. If an issue raised by the public has not been addressed, the Proponents will provide a rationale.

- Any feedback received directly from stakeholders by the Proponents will be tracked and, where possible, verified with the appropriate stakeholder to ensure that their concerns or issues were correctly recorded.
- Input and feedback from virtual town halls, open houses or community meetings or other input received outside of these sessions will be recorded by the Proponents in an issue tracking table. The Proponents will respond to each issue, and where it has not, it will provide a rationale.

The Proponents will continue to engage with stakeholders and the public during early engagement and throughout the EA-IA processes in 2021.

9 PUBLIC AND ENVIRONMENTAL SAFETY

9.1 Safety Philosophies

Safety will figure prominently throughout the Project. Each FLNG will incorporate fire prevention and protection measures including, but not limited to emergency response plans, scheduled safety drills, safe operating policies and procedures, evacuation infrastructure and associated safety equipment such as detection alarms, fire water pumps, hydrants, fire-extinguishing apparatus and possibly high expansion foam systems.

An instrument system is incorporated into the FLNGs to manage the safety, shutdown and gas depressurization processes for the Site. The system will include separate components for each FLNG and will include a combination of manual and automatic shutdown processes.

Each FLNG may (or the flare may be onshore) be equipped with a flare for the safe disposal of gas during emergency situations, LNG facility upsets or in preparation for maintenance activities.

While the FEED process is underway, “exclusion zones” will be developed for extra safety around the Project’s marine terminal.

Additional Project safety considerations include:

- Protection of workers through the design and application of health, safety and security plans for the construction of the upland and marine infrastructure necessary to support the Project.
- Protection of workers aboard FLNGs through the design and incorporation of appropriate worker safety systems.
- Quantitative risk assessments, hazard identification, hazard and operability studies and other safety studies that inform the EAC application for an LNG facility permit adjudicated by the BC OGC. That permit addresses “safety” to worker’s and people living within the zone of influence of an LNG facility.
- Human health assessments where communities are near LNG facilities.
- Emergency response plans, equipment and trained personnel for LNG facility construction and operations in the event there are accidents and malfunctions at the Site.

- In the event that country food harvesting will continue in marine areas within the zone of influence of the marine infrastructure, baseline sampling of the country foods (e.g., crabs, shellfish, etc.) would be undertaken and an ongoing monitoring plan implemented when the LNG facility is operating.

9.2 Accidents and Malfunctions

The Project anticipates accident and malfunction scenarios as described below. The Project's EP outlines how the Project will engage with Indigenous Nations, governments and the public to assist these parties with understanding the potential accidents and malfunctions that could be related to an LNG Export facility.

For any of the scenarios outlined below, and in the event of an actual emergency, the Project would rapidly activate emergency response procedures with the objectives of:

- Protecting and saving people
- Protecting the environment
- Maintaining the long-term operability of assets and reputation, in that order

9.2.1 Emergency Flaring and LNG Facility Shutdown

Emergency flaring involves routing the natural gas stream to one or more flare stacks and is used to prevent the accumulation of gases that could pose a hazard to humans or the environment. This could occur as a result of a fire, loss of containment, gas leak, pressure safety valve release or emergency shutdown. As a result, all FLNGs would be shut down and feed gas would be redirected to the flare stack for an engineered specified time. The location of flare stacks, whether on the FLNGs or on the land, will be determined in Pre-FEED. The likelihood of this worst-case scenario is very low and unlikely to occur during the lifetime of the Project.

9.2.2 Explosion and Fire

Major accidents at LNG export facilities are historically very rare. LNG is not explosive except in poorly ventilated, confined conditions when natural gas vapours are present within the range of flammability and exposed to an ignition source. The worst-case scenario is a vapour cloud explosion or fire that would result in human deaths outside the facility. The risk of this scenario is very low but will be modelled and estimated in Project risk assessment processes.

9.2.3 Fuel or Hazardous Material Spill

Hazardous materials such as motor fuel, hydraulic fluid, spent solvents, hydrocarbon-contaminated wastewater and mercury would be used or generated on-site. A fuel or hazardous material spill would likely be contained within the Project area, but a large spill could result in environmental effects on the surrounding area.

In the unlikely event that a fuel spill was not retained within the facility, or in the event of a release of fuel or oily bilge water directly from a vessel, effects on marine organisms living on the water surface and in the water column from liquid hydrocarbon product would likely be localized.

9.2.4 LNG Spill

LNG could be spilled from leaks in the FLNGs, during transfer to an LNG carrier along the loading line or at the loading arm that connects to the berthed vessels. A worst-case scenario event is the full rupture of the supply loading line at the marine terminal. This type of an event is very unlikely, and it has been estimated by other proposed LNG export facility projects that the probability of recurrence is 7.6 times in 10 million years.

9.2.5 Marine Vessel Grounding, Collision or Allision

Two main scenarios related to the shipping of LNG in BC coastal waters are considered: (1) grounding or vessel allision with the marine terminal; and (2) collision of an LNG carrier with another vessel.

Allision of an LNG carrier with the marine terminal is a very low risk worst-case scenario because vessels near the terminal would be moving very slowly and would be under the control of tugs and experienced BC Coast Pilots. In the event of a side-on impact with the dock structure, it is unlikely that the allision would have sufficient energy to result in a failure of the LNG carrier containment tanks. An allision between a non-Project vessel and the berth structures or marine terminal berths' loading platform could possibly result in the rupture of the LNG pipeline.

The worst-case vessel collision scenario would involve the side-on hit of an LNG carrier by another large vessel of sufficient mass (e.g., bulk carrier) anywhere along the shipping route. All large vessels are piloted by BC Coast Pilots with experience navigating vessels to and from the proposed Site.

9.2.6 Aircraft Collision with the Flare Stack

An aircraft could collide with the flare stack. The height of the flare stack will be determined in FEED.

Aircraft in the area operate from Prince Rupert or the Terrace airports. Aircraft approaching or departing the Site from Portland Canal may fly over the facility. Aircraft and seaplanes using airspace in the vicinity of the Site would be able to avoid the "lit" identified flare stack in Visual Flight Rule conditions as they would with any other obstacle. The likelihood of an aircraft collision with the facility infrastructure is estimated to be very low.

Potential effects of an aircraft collision with facility infrastructure would be the same as those identified for the other accidents and malfunctions described above (e.g., fire, explosion, spill) depending on the severity and nature of the damage.

9.2.7 Motor Vehicle Collisions on Highway 113

The major road transportation route from the City of Terrace to the mainland community of Gingolx is Highway 113. It is anticipated that Terrace may be a significant supply centre for the Project and that workers, supplies and equipment could be transported on that highway, increasing traffic and potentially leading to motor vehicle accidents at a frequency much higher than what occurs at present. An assessment of potential increases in motor vehicle traffic on Highway 113 will be discussed with government agencies, Kitsumkalum, Kitselas and other interested parties to determine the potential for accidents and what mitigations may be needed.

9.2.8 Potential Accident and Malfunction Mitigation Measures

Project engineering will incorporate design measures to reduce the risk of the above accidents and malfunctions from occurring. The Project will identify, assess and where appropriate incorporate a suite of accident and spill prevention design measures, such as:

- Engineering controls
- Emergency detection and shut-down systems
- Spill containment barriers
- Fire prevention and protection measures
- Use of marine vessel pilots and tugs
- Collision prevention and navigation safety aids
- Cargo containment systems on LNG carriers

If an accident or malfunction does occur, response capabilities and contingency plans detailed in an Emergency Response Plan are anticipated to greatly reduce the likelihood of serious injury to people and the environment.

10 EFFECTS OF THE ENVIRONMENT ON THE PROJECT

The Project is situated on lands that may be subjected to sea level rise caused by climate change and to potential tsunamis as the general region is in a known earthquake prone region of BC. Potential sea level rise will be factored into detailed Project engineering and a Tsunami Risk Assessment is required for the Project by the BC OGC as part of the LNG Export Facility permit application.

Winter storms coming out of the north funnel air down Portland and Observatory Inlets into Portland Canal and southward into Chatham Sound. These weather-related events can cause extreme sea conditions for local boat traffic and Trans-Pacific Ocean-going vessels.

The geotechnical stability (e.g., as might be affected by geo-marine clay deposits) of the Site will be documented during geotechnical investigations that will occur during the early stages of Project design.

As a result of its location, the Site is not exposed to any hazards posed directly by snow avalanches or montane debris flows. The lands of northern Pearse Island are forested, and the tree stands there are comparatively sparse with smaller trees. Thus, while the risks that forest-fire hazards might pose to the Project are currently believed to be modest, they will be investigated during the EA-IA.

11 REFERENCES

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1.6 Overview: Cooperation Plan and 1.6.1 Template

1.7 Overview: Permitting Plan and 1.7.1 Template

1.8 Overview: Public Participation Plan and 1.8.1 Template

1.9 Overview: Indigenous Engagement and Partnership Plan and 1.9.1 Template

2. Impact Statement and Impact Assessment Phase

2.1 Guidance: Gender-based Analysis Plus in Impact Assessment

2.2 Guidance: Considering the Extent to Which a Project Contributes to Sustainability

2.3 Framework: implementation of the Sustainability Guidance

2.4 Policy Context: Addressing “Need for”, “Purpose of”. “Alternatives to” and “Alternative means”

2.5 Guidance: Addressing “Need for”, “Purpose of”. “Alternatives to” and “Alternative means”

3. Indigenous Participation and Engagement

3.1 Policy Context: Indigenous Participation in Impact Assessment

3.2 Guidance: Indigenous Participation in Impact Assessment

3.3 Policy Context: Assessment of Potential Impacts on the Rights of Indigenous Peoples

3.4 Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples

3.5 Guidance: Collaboration with Indigenous Peoples in Impact Assessment

3.6 Guidance: Indigenous Knowledge under the IAA: Procedures for Working with Indigenous Communities

3.7 Guidance: Protecting Confidential Indigenous Knowledge under the IAA

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4.1 Policy Context: Public Participation in Impact Assessment

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- Appendix B – Figure B-83, Technical Data Report – Terrain, Dominant Surficial Material Along the Terrain Regional Study Area (RSA Corridor) – *Nasoga Gulf Upland*, PRGT – Stantec, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, March 25, 2014
- Appendix E – Figure E-137, Non-Agricultural Land Reserve Soils, Technical Data Report – Soils – *Nasoga Gulf Upland*, PRGT – Stantec, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, March 25, 2014
- Appendix H – Water Quality, Technical Data Report – PRGT – Stantec, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, May 2014
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- Appendix L-2 – Intertidal Survey, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, REV 1, May 2014

- Appendix L-3 – Shallow Subtidal, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, REV 1, May 2014.
- Appendix L-5 – Sediment and Water Quality Report, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, REV 1, May 2014.
- Appendix L-6 – Conceptual Fish Habitat Offsetting Strategy, PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, REV 1, May 2014.
- Appendix L-8 – Additional Field Data (Nass and Glacier Bay), PRGT, Application for an EAC, PRGT004776-TC-EN-FM-0001, REV 1, May 2014.
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- Marine Ancillary Facilities, Marine Access and Traffic Management Plan, PRGT, PRGT004776-TC-EN-PLN-0015, April 7, 2017, Revision 3.0.
- Marine Mammal Monitoring Plan, PRGT, PRGT004776-TC-EN-PLN-0011, March 31, 2017, Revision 3.0.
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- Appendix 2-H – Technical Data Report: Metocean Study, Westcoast Connector Gas Transmission System (WCGT), Reference Number: 1314760024-031-R-Rev1-2000, ASL Environmental Sciences & Golder Associates, March 6, 2014
- Appendix 2-B, Preliminary Geotechnical Report Book 3, Part 01 and 25 to 30: Table B-1: Marine Geotechnical Summary Table; Table B-2: Marine Geohazard Details and Quantitative Hazard Assessment; and Route Revision F (February 7, 2014) Marine Route With Geohazards Bathymetry Background – Drawing F14A, AMEC, Proposed Westcoast Connector Gas Transmission Project, Application for an EAC, February and April 2014
- Appendix 2-F, Technical Data Report: Marine Environmental, Westcoast Connector Gas Transmission System (WCGT), TERA Environmental Consultants; Archipelago Marine Research Ltd.
- Hydrogeology Technical Data Report, Appendix E – Bedrock Geology, Worley Parsons, Flour & Spectra Energy, Contract S1FP/C0003, March 2014
- Appendix 2-G – Underwater Sound Propagation Assessment for the West Coast Connector Gas Transmission, JASCO Applied Sciences (Canada) Ltd., P001215-001, Document 00655, March 5, 2014
- Appendix 2-l – Dredged Sidecast Material Fate at Shore Approaches, Westcoast Connector Gas Transmission System (WCGT), Application for an EAC, Reference Number: 1314760024-031-R-Rev1-2000, ASL Environmental Sciences & Golder Associates, March 6, 2014

- Geophysical Environment, Section 4.2 – Proposed Westcoast Connector Gas Transmission Project, Application for an EAC, March 2014
- Marine Ecosystems, Section 4.4 – Proposed Westcoast Connector Gas Transmission Project, Application for an EAC, April 2014.

Nisga'a Lisims Government (NLG)

NLG, together with its contractors, have prepared many reports and publications concerning the biophysical conditions of the Nass Area. Many of those contain data and information relevant to the Project. In addition, other research of the region has been conducted. See Appendix 5 for complete list of reports completed by Nisga'a Fish and Wildlife, their contractors or other parties.

Alexander, R.A., W.J. Gazey, and I. Winther. 2004. Assessment of the Dungeness Crab population in the Nass Estuary, 2000 and 2001. Canadian Science Advisory Secretariat Research Document 2004/130. http://www.dfo-mpo.gc.ca/csas-sccs/publications/resdocs-docrech/2004/2004_130-eng.htm

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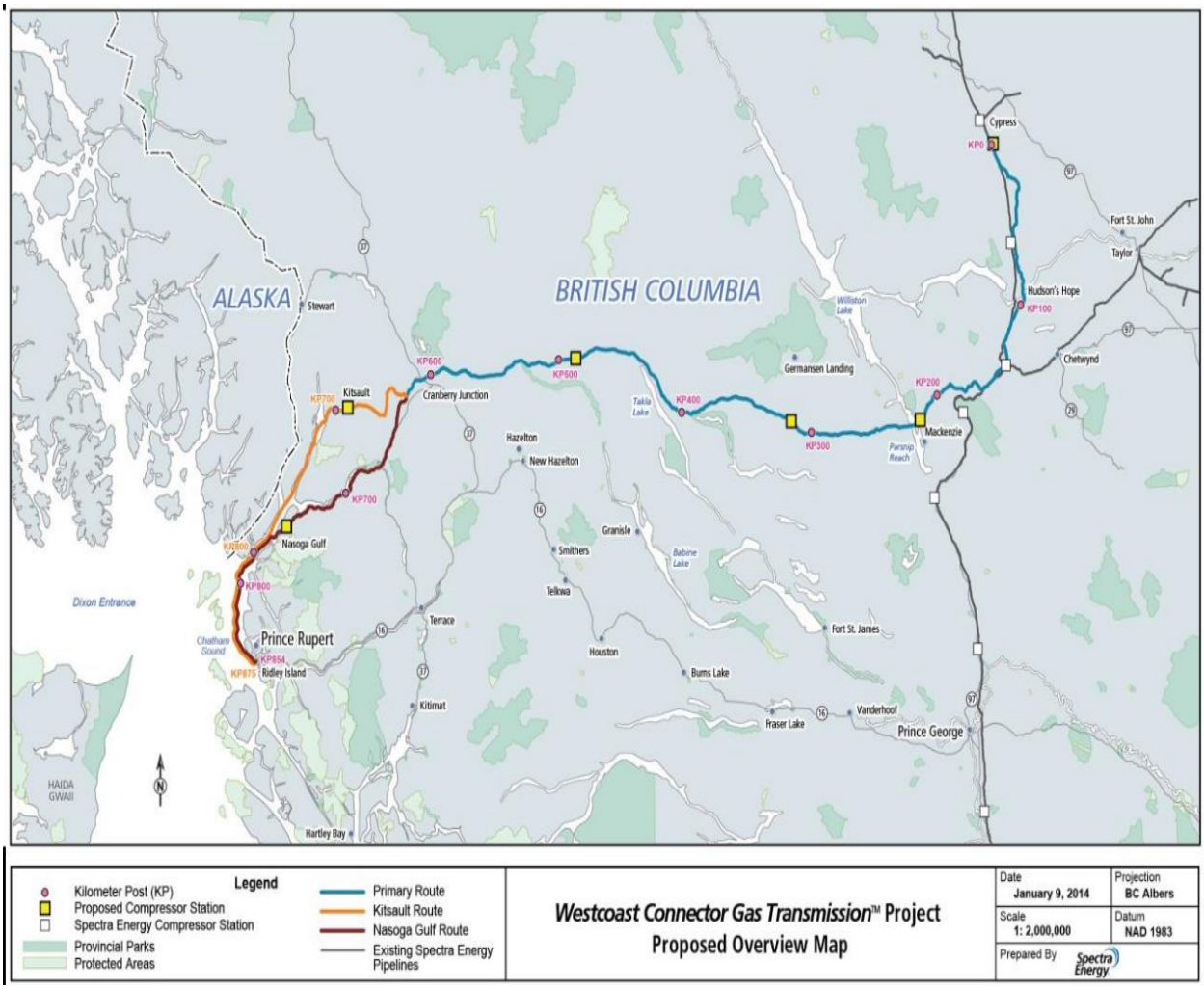
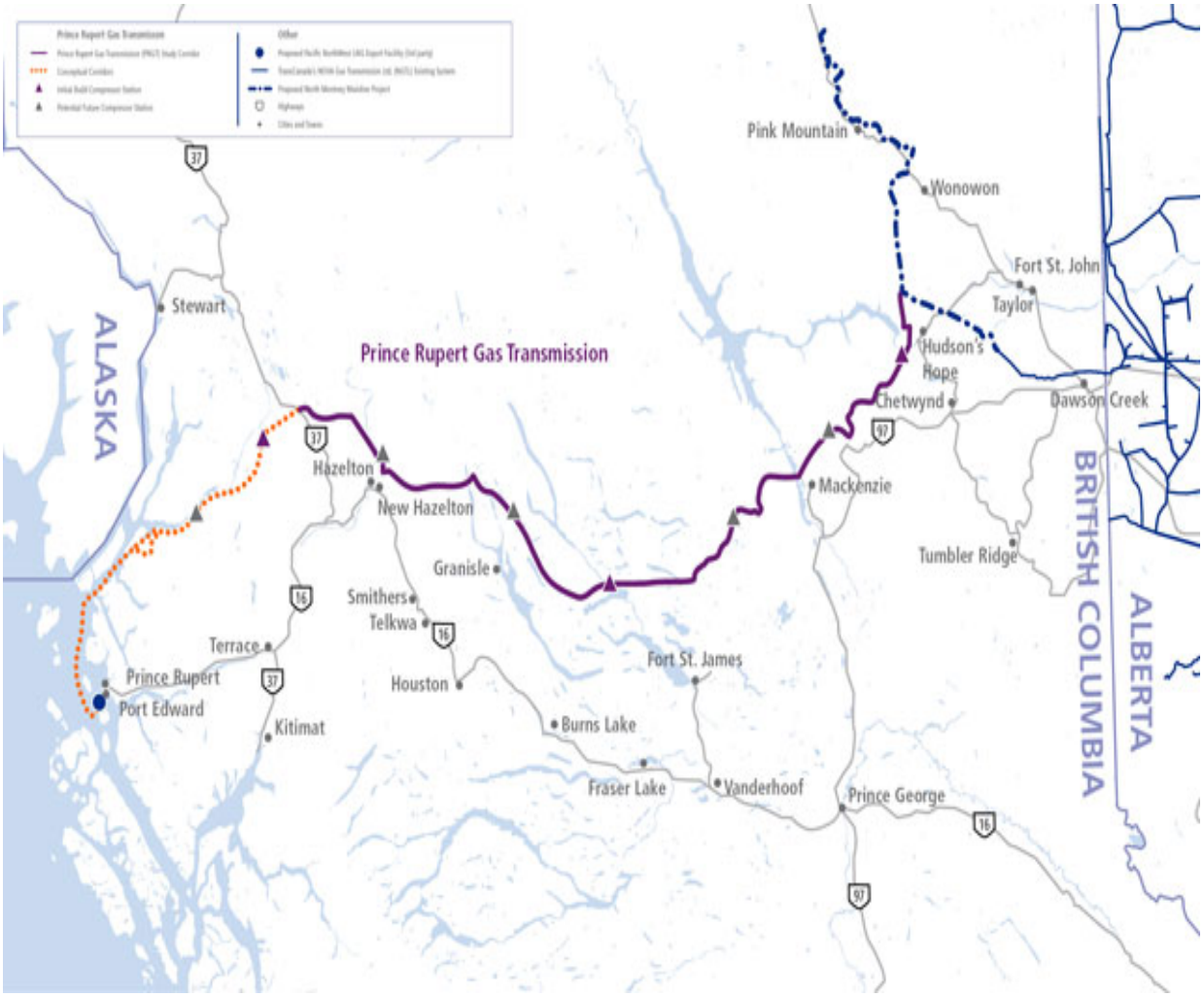
Ryder, J., J. Kenyon, D. Buffett, K. Moore, M. Ceh and K. Stipec. 2007. An integrated biophysical assessment of estuarine habitats in British Columbia to assist regional conservation planning. Yukon, BC. Canadian Wildlife Service Technical Report Series No. 476 https://docplayer.fr/167443564-An-integrated-biophysical-assessment-of-estuarine-habitats-in-british-columbia-to-assist-regional-conservation-planning.html.

APPENDIX 1 – ENBRIDGE – WESTCOAST CONNECTOR GAS TRANSMISSION (WCGT) PIPELINE ROUTE



Source: BC OGC Major Projects Website, 2019.

APPENDIX 2 – TC ENERGY – PRINCE RUPERT GAS TRANSMISSION (PRGT) PIPELINE ROUTE



Source: BC OGC Major Projects Website, 2019

APPENDIX 3 – TABLE OF CONCORDANCE WITH PROVINCIAL INFORMATION REQUIRED IN THE INITIAL PROJECT DESCRIPTION

Requirement	IPD Section
Executive Summary	Executive Summary
General information and Contacts	
Project name.	1
Project location.	1
Project industrial sector and type.	1
Proponent name, mailing address, phone numbers, email address and website URL.	1.1
Name and contact information of the primary representative for the EA.	1.1
Purpose and Rationale	
A general rationale for why the project has been proposed.	1.2
Potential project benefits.	1.2
Legislative and Regulatory Context	
The type and size of the project, with specific reference to EA Regulatory Triggers [e.g., the EAO Reviewable Project Regulations and *Impact Assessment Act* (Canada) thresholds].	6.2, 6.3
A list of anticipated authorizations and permits.	6.6, Table 11
Consider the requirements of any applicable agreements between the Province and Indigenous nations, including treaties.	4.1, 6.1, 6.7
Consider the requirements of any applicable international agreements between the Province and state or federal governments.	6.8
A description of relevant government policies that the project may not be compatible with.	6.9
Proposed timing for conducting the provincial EA and federal EA.	6.6, Figure 7
Project Status and History	
Project history, including past ownership.	1
State if it is a new project or a modification to an existing project.	1
A list of any existing permits or tenure in place.	1
A description of any previous proposal(s) for the project or a similar proposal and the outcomes and history of the proposal(s), if applicable.	N/A
If the project was previously declined or terminated, a description of how this proposal differs and how the issues for which the previous proposal was declined or terminated have been addressed.	N/A
Project Timing	
A list of proposed project phases (e.g., construction, operation, decommissioning, and reclamation) and the anticipated timing and duration of each phase.	2.9
Known seasonal timing constraints.	2.9
Project Location, Activities and Components	
A description of the proposed project's location in a local and regional context, including proximity to communities or locations of interest to the public, government, or Indigenous nations, and key designated or protected areas such as parks or Wildlife Habitat Areas.	2.1, 4.1, 4.2, 4.3
Proposed project activities and components.	2.2, 2.3, 2.4, 2.5, 2.6
Proposed on and off-site facilities and equipment.	2.2, 2.3, 2.4, 2.5, 2.6, Appendix 1, Appendix 2
A brief description of proposed activities related to processing, transportation and/or shipping of materials to/from the site.	2.2, 2.5
A description of any other project(s) that are needed for the proposed project to proceed and be feasible.	1, 2.2.6,2.2.8, 2.11.4, Appendix 1, Appendix 2
A description of the work that has been conducted to arrive at the proposed project as described in the IPD.	2.1, 2.10
A list of design or siting constraints that are flexible and those that are not flexible.	2.10
A list of other design or siting options that may be considered.	2.11
Anticipated daily and annual maximum production or operational capacity of the project.	1, 2.2

Requirement	IPD Section
Maps and Shape Files • Local and regional scale maps of the project showing its location and known off-site components. • Shapefiles of the proposed project footprint and the footprint of known off-site components: o Shapefiles must be in ESRI format and include four file types: .shp, .shx, .dbf, and prj. o Please also provide .KMZ files. o Shapefiles must be in BC Albers (NAD83) projection. o Shapefile polygons and their corresponding polygons on all maps must be identical in shape, size, and location. o Spatial features (.shp and .shx) must be represented as polygons, not as points or line features. o Shapefiles must be named in a way that clearly describes the contents. o To avoid having ArcGIS generate random errors, follow these best practices: avoid starting names by number, add an underscore instead of a space or dash, and do not include a symbol outside of the underscore. o Provide shapefiles demonstrating the overlap of known project components with any identified communities or locations of interest to the public. This may include information regarding specific sites of importance to an Indigenous nation or their territory if this information is not confidential in nature and an Indigenous nation has agreed to allow the information to be shared. • Maps must be presented in the required standard format with legible grids and suitable scaling (typically 1:100,000 to 1:150,000 for centralized projects such as a mine, and up to 1:1,500,000 or 1:1,250,000 scale for linear projects such as a pipeline or transmission line). • Maps must also include a national Topographic System (NTS) Map number, latitude and longitude references, titles, a north arrow, and relevant legends.	Figure 1, Figure 2 and Figure 6 Shapefiles provided in separate cover
Indigenous Nation Interests A description of the proximity of the proposed project to Indigenous nations' territory, communities, locations of interest, *Indian Act* reserve lands, lands subject to a Treaty, or other relevant agreements.	2.1, 4.1, 4.2, 4.3, 6.1, 6.7, Figure 6
A description of potential project interactions with any identified Indigenous interests.	5.4.5, 7.3, 7.4, Table 14
A description of alignment of the IPD with Indigenous nation laws, customs and policies.	4.4, 6.1, 7.4, 7.5, 7.6, Table 14
A list of any issues, concerns, or questions raised by Indigenous nations during engagement on the draft IPD or other information shared in relation to the proposed project.	7.3, Table 14
Biophysical Environment A description of the natural setting characteristics, including coastal, foreshore, riparian, mountainous, watersheds, and agricultural land.	3.1, 3.2, 3.3, 3.4, 3.5
A description of disturbed area characteristics, including brown field; contaminated site(s), and any history of development.	4.4.1
Identification of sensitive or vulnerable species, ecosystems, and/or habitats in the project area.	3.5, Table 3
A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing biophysical conditions.	3.6, 6.4, Table 10, Table 11, Appendix 5
Human and Community Wellbeing A description of the proposed project's proximity to local communities, including seasonal or temporary residences.	4.1
Identification of the municipalities within which the proposed project is located or where effects may occur.	4.1
A description of the proposed project's proximity to important or sensitive community and natural places such as: municipal boundaries, parks, schools, hospitals, housing, water supplies, roads, railways, and protected and recreational areas.	4.1, 4.2, 4.3
A list of existing data, including monitoring reports, previous EAs, regional studies, and/or other sources of information that support the understanding of the existing human environment conditions.	11, Appendix 5
Identification of any sensitive or vulnerable economic, social, heritage, or health values that may be affected by the project.	4.1, 4.4, 6.1, Table 9
A preliminary understanding of the anticipated size of the workforce for each project phase, where the workforce will be drawn from, and where the workforce will be housed.	2.2, 2.3, 2.4
Emissions, Discharges, and Waste A high-level outline of anticipated direct project waste and emissions to land, air, and water. biophysical environment, and/or the human environment.	2.7
Estimated greenhouse gas emissions including direct emissions that are expected to be above provincial or national standards and emissions that have the potential to interact with Indigenous interests.	2.7, 6.9
A description of proposed mitigation measures and/or project design changes to address emissions, including greenhouse gases.	1, 2.2.6, 2.11.3, 5.4.1

Requirement	IPD Section
Public and Environmental Safety A description of potential malfunctions or accidents associated with the industry or specific to the proposed project and how they will be managed. 1. Include any proposed outreach to help Indigenous nations, governments and the public better understand the risks and mitigations.	7.3, Table 14, Table 9
2. Include any issues raised about public and environmental safety during engagement with Indigenous nations, the public, provincial and federal government agencies, and stakeholders and how issues were considered in developing any mitigation measures or design changes.	Table 14, 8.1.1, TTable 16
Alternative Means of Carrying out the Project A high-level description of the alternative options for the proposed project, including a rationale for the preferred option that demonstrates how positive and negative effects and/or issues raised during engagement have been considered.	
The alternative means of undertaking the proposed project may include information related to: 1. the use of best achievable technologies; 2. the technical and economic feasibility; 3. the potential effects, risks and uncertainties of those alternatives; 4. the preferred option and a rationale for this preference; and, 5. the different options for the project location, project routing, technologies, mitigation, or design.	2.10
Effects of the Environment on the Project An overview of potential effects of natural hazards or processes and climate change on the proposed project.	10
Land and Water Use An outline of the anticipated project footprint and proposed area of disturbance.	2.3.1, 2.8, Figure 2, Figure 3,
A description of the land required for the proposed project, including whether the project is located on private lands, provincial or federal Crown lands, or Indian Reserve lands.	2.1, 2.8, 4.4.1, Table 5, Figure 2, Figure 3
Include the applicable zoning, Agriculture Land Reserve designation, land and resource management plans, and other land use designations (e.g., parks and protected areas) and the legal land descriptions and/or tenure numbers of those lands, if known.	2.1, 4.2, 4.3, 4.4
A description of past uses of the land required for the proposed project, including whether the site has been previously developed.	4.4.1
A description of water requirements for the proposed project, if applicable, and the proposed source of water.	2.8
Land Use Plans A list of all relevant land use plans, including provincial land use plans, Indigenous land use plans, and relevant municipal plans. An identification of any rezoning or changes in land designations that would be required for the proposed project.	4.2 N/A
Project Interactions A description of potential interactions between the proposed project and the biophysical and human environments, including Indigenous interests.	5.1, Table 6, Table 7, Table 14, 7.4
A summary of any biophysical feasibility studies undertaken that may be pertinent to understanding potential interactions.	3.6, Table 10, Appendix 5
A list of any activities proposed to be undertaken during the Early Engagement period to inform the development of the DPD or the Application, should the project proceed to an EA.	5.3, Table 8
An identification of existing cumulative effects in the region that the project may interact with.	4.4.1, 4.4.2, 4.4.3, 4.4.3.1, 4.4.3.2, 5.4, 5.4.5, Table 9

APPENDIX 4 – TABLE OF CONCORDANCE WITH FEDERAL INFORMATION REQUIRED IN AN INITIAL DESCRIPTION OF DESIGNATED PROJECT

Requirement	Section Reference
PART A General Information	
1 The project's name, type or sector and proposed location.	1
2 The proponent's name and contact information and the name and contact information of their primary representative for the purpose of the description of the project.	1.1
3 A summary of any engagement undertaken with any jurisdiction or other party, including a summary of the key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	8.1, Table 15, Table 16, 8.1.2
4 A list of the Indigenous groups that may be affected by the carrying out of the project, a summary of any engagement undertaken with the Indigenous peoples of Canada, including a summary of key issues raised and the results of the engagement, and a brief description of any plan for future engagement.	7.1, 7.2, 7.6, Table 13, Table 14
5 Any study or plan, relevant to the project, that is being or has been conducted in respect of the region where the project is to be carried out, including a regional assessment that is being or has been carried out under section 92 or 93 of the *Act* or by any jurisdiction, including by or on behalf of an Indigenous governing body, if the study or plan is available to the public.	4.2, 6.4, Table 10, Appendix 5
6 Any strategic assessment, relevant to the project, that is being or has been carried out under section 95 of the *Act*.	6.4
PART B Project Information	
7 A statement of the purpose of and need for the project, including any potential benefits.	1.2
8 The provisions in the schedule to the Physical Activities Regulations describing the project, in whole or in part.	6.3
9 A list of all activities, infrastructure, permanent or temporary structures and physical works to be included in and associated with the construction, operation and decommissioning of the project.	2.2, 2.3, 2.4, 2.5, 2.6, Appendix 1, Appendix 2
10 An estimate of the maximum production capacity of the project and a description of the production processes to be used.	1, 2.2.1, 2.2.4
11 The anticipated schedule for the project's construction, operation, decommissioning and abandonment, including any expansions of the project.	2.9
12 A list of	
(a) potential alternative means of carrying out the project that the proponent is considering and that are technically and economically feasible, including through the use of best achievable technologies; and	2.11
(b) potential alternatives to the project that the proponent is considering and that are technically and economically feasible and directly related to the project.	2.12
PART C Location Information	
13 A description of the project's proposed location, including	
(a) its proposed geographic coordinates, including, for linear development projects, the proposed locations of major ancillary facilities that are integral to the project and a description of the spatial boundaries of the proposed study corridor;	2.1, Appendix 1, Appendix 2
(b) site maps produced at an appropriate scale in order to determine the project's proposed general location and the spatial relationship of the project components;	Figure 1, Figure 2, Figure 3
(c) the legal description of land to be used for the project, including, if the land has already been acquired, the title, deed or document and any authorization relating to a water lot;	4.4.1, Table 5
(d) the project's proximity to any permanent, seasonal or temporary residences and to the nearest affected communities;	4.1
(e) the project's proximity to land used for traditional purposes by Indigenous peoples of Canada, land in a reserve as defined in subsection 2(1) of the Indian Act, First Nation land as defined in subsection 2(1) of the First Nations Land Management Act, land that is subject to a comprehensive land claim agreement or a self-government agreement and any other land set aside for the use and benefit of Indigenous peoples of Canada; and	4.1, 4.3, Figure 2, Figure 5, Table 4
(f) the project's proximity to any federal lands.	2.1, 4.3
14 A brief description of the physical and biological environment of the project's location, based on information that is available to the public.	3.1, 3.2, 3.3, 3.4, 3.5
15 A brief description of the health, social and economic context in the region where the project is located, based on information that is available to the public or derived from any engagement undertaken.	4.1
PART D Federal, Provincial, Territorial, Indigenous and Municipal Involvement	
16 A description of any financial support that federal authorities are, or may be, providing to the project.	6.10
17 A list of any federal lands that may be used for the purpose of carrying out the project.	6.10
18 A list of any jurisdictions that have powers, duties or functions in relation to an assessment of the project's environmental effects.	6.1, 6.2, 6.3

Requirement	Section Reference
PART E Potential Effects of the Project	
19 A list of any changes that, as a result of the carrying out of the project, may be caused to the following components of the environment that are within the legislative authority of Parliament:	
(a) fish and fish habitat, as defined in subsection 2(1) of the *Fisheries Act;*	5.5
(b) aquatic species, as defined in subsection 2(1) of the *Species at Risk Act*; and	5.5
(c) migratory birds, as defined in subsection 2(1) of the *Migratory Birds Convention Ac*t, 1994.	5.5
20 A list of any changes to the environment that, as a result of the carrying out of the project, may occur on federal lands, in a province other than the province in which the project is proposed to be carried out or outside Canada.	5.1, Table 6, 5.2, 5.4
21 With respect to the Indigenous peoples of Canada, a brief description of the impact — that, as a result of the carrying out of the project, may occur in Canada and result from any change to the environment — on physical and cultural heritage, the current use of lands and resources for traditional purposes and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.	5.4.5, Table 9, Table 13, Table 14, 7.2, 7.3, 7.4, 7.5
22 A brief description of any change that, as a result of the carrying out of the project, may occur in Canada to the health, social or economic conditions of Indigenous peoples of Canada, based on information that is available to the public or derived from any engagement undertaken with Indigenous peoples of Canada.	4.1, 5.1, 7.3, 7.4, 7.5
23 An estimate of any greenhouse gas emissions associated with the project.	2.7
24 A list of the types of waste and emissions that are likely to be generated — in the air, in or on water and in or on land — during any phase of the project.	2.7
PART F Summary	
25 A plain-language summary of the information that is required under items 1 to 24 in English and in French.	IPD Project Summary

APPENDIX 5 – NISGA'A FISHERIES: NASS TECHNICAL AND PROJECT REPORTS

Alexander, R.F. and R.C. Bocking. 1993. Enumeration of chinook and coho smolts released from the Kincolith Hatchery, 1992 and the coded-wire tagging of the 1991 brood. Report NF 92-01 prepared by LGL Limited for the Nisga'a Tribal Council, New Aiyansh, B.C.

Alexander, R.F. and R.C. Bocking. 1994. Results from the Tseax River enhancement program for Coho Salmon, 1992 and 1993, and the monitoring of downstream migrant salmonids, 1993.Report NF 93-01 prepared by LGL Limited for the Nisga'a Tribal Council, New Aiyansh, B.C.

Alexander, R.F. and W.R. Koski. 1995. Distribution, timing and numbers of steelhead returning to the Nass Watershed in 1993. Prepared by LGL Limited, Sidney, BC, for the Nisga'a Tribal Council, New Aiyansh, BC. Nisga'a Fisheries Report NF93-10: 85 p.

Alexander, R.F. and B.L. Nass. 1996. Tseax River enhancement program for Coho Salmon, 1994 and 1995. Report prepared for the Nisga'a Tribal Council by LGL Limited. Nisga'a Fisheries Report No. NF95-03.

Alexander, R.F. 1997. The Kincolith River enhancement program for chinook, coho and chum salmon, 1995-96: Results from the rearing of 1995 brood and release of 1994 brood. Report NF95-07, prepared by LGL Limited for the Nisga'a Tribal Council, New Aiyansh, B.C.

Alexander, R. F. and M.R. Link. 2001. The 1998 fishwheel project on the Nass River, BC.Can. Manuscr. Rep. Fish. Aquat. Sci. 2556: xi + 111 p.

Alexander, R. F. 2001. The 1999 fishwheel project on the Nass River, BC. Can. Manuscr. Rep.Fish. Aquat. Sci. 2588: xi + 113 p.

Alexander, R.F. 2001. The Nass fishwheel steelhead tagging program, 2000. Unpublished data summary report prepared by LGL Limited, Sidney, BC, for the Nisga'a Lisims Government and Fisheries Renewal BC. Nisga'a Fisheries Report NF02-02: 14 p.

Alexander, R.F. 2002. The Nass fishwheel steelhead-tagging program, 2001. Unpublished data summary report prepared by LGL Limited, Sidney, BC, for the Nisga'a Lisims Government and Fisheries Renewal BC. Nisga'a Fisheries Report NF02-02: 13 p.

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