18 HAIDA NATION

This section of the Application provides an assessment of the effects of the Project on Haida Nation interests, conducted as described in Section 6.0, with departures from conventional assessment based on the feedback provided by interested Indigenous nations or their representatives (e.g., measurements of duration; magnitude). Additional feedback provided by Haida Nation has influenced other aspects of the assessment (i.e., not limited to the assessment methods). For example, based on feedback from all participating Indigenous nations, the Proponents expanded the marine shipping route assessment to include an assessment area between the BC Pilot Station at Triple Island and Canada's 12 nautical mile (**nm**) territorial sea limit.

The assessment of potential effects of the Project (both adverse and positive) on Haida Nation interests includes consideration of impacts to Aboriginal or treaty rights recognized and affirmed by section 35 of the *Constitution Act*, *1982* as well as any other interests identified by the Nation.

18.1 Scope and Methods

The assessment of effects on Haida Nation interests was scoped according to the following steps:

- Identify appropriate contacts and engage with Haida Nation to understand the nature and content of its Indigenous rights, recognizing that Haida Nation are best placed to identify the Project's potential impacts on its rights.
- Identify guiding values and "valued components" (**VCs**) with respect to the Application, through the identification of Haida Nation priority values and topics associated with community well-being, cultural expression, and the preferred means of exercising its rights.
- Establish clear criteria with input from the Haida Nation on impact characterizations.
- Establish an iterative two-way dialogue on measures proposed to address the impact.
- Maintain ongoing engagement throughout the environmental assessment (**EA**) process, which includes revisiting these steps and the analysis, which will be subject to revision based on new information and continued dialogue between all parties.

Additional information regarding the efforts taken to scope the assessment with Haida Nation is provided in Section 18.1.2.

18.1.1 Regulatory Context

The following current federal and provincial acts, impact assessment policies, and best practices guided the assessment:

- British Columbia (**BC**) Declaration on the *Rights of Indigenous Peoples Act* (Province of British Columbia 2019) and associated Action Plan for 2022-2027 (Province of British Columbia 2022)
- British Columbia *Environmental Assessment Act* (**BC EAA**) (2018)

- BC Environmental Assessment Office (**BC EAO**) (2020a) Guide to Indigenous Knowledge in Environmental Assessments
- BC EAO (2020b) Effects Assessment Policy
- Impact Assessment Agency of Canada (**the Agency**) (2022) Guidance: Assessment of Potential Impacts on the Rights of Indigenous Peoples
- The Agency (2020a) Guidance: Indigenous Knowledge under the *Impact Assessment Act*
- The Agency (2020b) Guidance: Protecting Confidential Indigenous Knowledge under the *Impact Assessment Act*
- The Agency (2021) Guidance: Gender-based Analysis Plus in Impact Assessment
- The Agency (2022a) *Impact Assessment Act* – Effects within Federal Jurisdiction
- The Agency (2022b) *Impact Assessment Act* – Factors defined under Section 22(1)
- The Agency (2022c) Indigenous Knowledge Policy Framework for Project Reviews and Regulatory Decisions

18.1.1.1 Statutory Requirements Under the Federal Impact Assessment Act

The scope of this assessment is designed to address statutory requirements under the IAA and the equivalent requirements of the BC EAA for the assessment of Project-related effects on Haida Nation's rights and interests.

The outcomes of this assessment relative to the statutory requirements under the IAA are provided in Section 18.10.1 and address the following factors and effects:

- Factor 22 (1)(c): Changes to Haida Nation's Rights Recognized and Affirmed by section 35 of the *Constitution Act, 1982*
- Factor 22 (1)(g): Consideration of Indigenous Knowledge Provided with Respect to the Project
- Factor 22(1)(l): Consideration of Changes to Haida Nation Culture
- Factor 22(1)(r): Consistency with any Plan or Study Prepared by Haida Nation that has been Provided for the Project (including any existing Land-Use or Marine-Use Plans)
- Factor 22(1)(s): Disproportionate Effects on Distinct Human Populations (Intersections of Sex and Gender with Other Identity Factors)
- Effects under Section 2(b)(i): Changes to the Environment that would occur on Federal Lands
- Effects under Section 2(c)(i): Changes to Physical and Cultural Heritage
- Effects under Section 2(c)(ii): Changes to Current Use of Lands and Resources for Traditional Purposes

- Effects under Section 2(c)(iii): Changes to any Structure, Site or Thing of Historical, Archaeological, Paleontological, or Architectural
- Effects under Section 2(d): Changes to the Health, Social or Economic Conditions of the Indigenous Peoples of Canada

A complete listing and analysis of the Application's concordance to federal requirements can be found in Section 24.0 Summary of Statutory Requirements under the Federal *Impact Assessment Act*.

18.1.2 Influence of Consultation and Engagement

This section of the Application provides information regarding the efforts taken to seek the views of Haida Nation with respect to the Project.

18.1.2.1 Summary of Past Engagement

The Proponents have engaged with Haida Nation through written correspondence since March 2021, and have engaged directly with Haida Nation since January 2023. This engagement includes:

- Providing notification of Project steps and processes
- Introducing the Project and the Proponents
- Providing a copy of the draft Application Information Requirements (**AIR**), the Detailed Project Description (**DPD**), the VC selection document, and other Project materials for review and comment
- Providing a copy of the preliminary list of potential effects and preliminary list of information sources for review and comment
- Providing preliminary drafts of EA documents and technical data reports for review in advance of submission to the BC EAO
- Providing updates regarding Project design and evolving timelines
- Providing a mitigation workshop and follow-up bilateral discussions with the Indigenous nations to discuss how the proposed measures mitigate potential effects to the Indigenous interests set out in the Application and to explore Nation recommendations regarding mitigation and enhancement measures for the Project
- Providing opportunities for remote workshops and meetings based on Haida Nation's availability and preference to discuss the Nation's concerns and to work collaboratively towards the resolution of concerns related to the review of this Application

The Proponents remained available to engage diverse populations of Haida Nation (also referred to herein as 'the Nation') in culturally appropriate ways at the direction of Nation leadership, including a consideration of disproportionately distributed effects on Indigenous local group/sub-group (e.g., clan; family) areas within the broader territory, and groups identified by gender, age, or other community relevant factors to support the collection of information needed to complete the gender-based analysis

plus (**GBA Plus**). For the GBA Plus assessment, the Proponents also relied on publicly available information.

Other diverse methods of engagement were also made available by the Proponents through public consultation activities, including the following:

- Providing online or phone-based consultation opportunities as alternatives to in-person meetings, including open houses and information sessions held virtually and, in the evenings, to provide greater accessibility for those limited in mobility, and/or with time, financial, or other familial constraints
- Posting early engagement phase documents on the BC EAO's website
- Maintaining a website with Project information and contact information for how to request in-person meetings

Additional information regarding the Proponents' engagement with Haida Nation will be provided in the Indigenous Engagement Report.

18.1.2.2 Key Areas of Concern

The development of the AIR and this assessment was influenced by the Proponents' engagement with citizens of Haida Nation. This section describes information and concerns related to Haida Nation interests shared through engagement.

Table 18.1–1 provides a summary of the key information (including Indigenous knowledge), and concerns that the Proponents identified as part of their consultation and engagement efforts with Haida Nation, as well as a summary of the influence that the outcomes of this consultation and engagement had on the assessment.

Table 18.1–1 – Summary of Key Information, Indigenous Knowledge and Concerns for the Project Related to Haida Nation Interests

Key Information and Concerns	Influence on the Assessment
Extent of Project planning and scope, including: • Spatial scoping for the effects assessment (i.e., beyond Triple Island) • Air emissions, effects of greenhouse gases (**GHG**) emissions from marine shipping	The Application has assessed the potential effects of the Project activities and interactions identified by Haida Nation. These assessments are found in Sections 7.02 to 7.15, the results of which have informed the assessment of potential effects on Haida Nation interests. <u>Open Water Assessment Route (**OWAA**) and increased marine vessel traffic</u> • LNGCs, NGL product vessels, and tugboats will be owned, insured, and operated by third parties. The present estimate of LNG shipments per year is between 140 and 160, depending on the size of the LNGCs used and the total LNG produced by the Project (see Section 1.4.6.3). To address marine safety and potential marine accidents and malfunctions, a navigation safety assessment (**NSA**) has been conducted as part of the Application. See Section 9.0 for more information on the NSA. Marine shipping is also included as a Project component for the assessment of potential effects on Haida Nation interests (see Section 18.1.5).

Table 18.1–1 – Summary of Key Information, Indigenous Knowledge and Concerns for the Project Related to Haida Nation Interests

Key Information and Concerns	Influence on the Assessment

	<u>Air emissions, GHGs</u>
	• Assessment of the potential effects of the Project on air quality is provided in Section 7.02.
	• Climate change has also been identified as a topic to be assessed for the Project; Section 8.0 provides the GHG estimates from the Project during construction and operation. Decommissioning phase emissions are expected to be less than construction phase emissions. The assessment of GHG emissions associated with the Project considered direct and indirect emissions.
	• The Strategic Assessment of Climate Change (**SACC**) provides a framework to establish whether a designated project will hinder or contribute to Canada's ability to meet its international commitments to reduce GHG emissions by 30% below 2005 levels by 2030, and to help to achieve a low carbon economy by 2050. The SACC requires:
	  ◦ Estimation of GHG emissions for the Project.
	  ◦ Estimation of GHGs from upstream activities.
	  ◦ Review of best available technologies.
	  ◦ Assessment of climate change resilience.
	  ◦ Plan to achieve net-zero emissions by 2050.
	• The SACC Technical Data Report (Appendix 8B) provides mitigation measures and net zero plan, carbon sinks, and upstream GHG assessment.

Accidents and malfunctions and development of emergency response plans.	• As described in Section 9.0 Malfunctions and Accidents, the Proponents will develop and implement an emergency response program in accordance with the requirements of the Emergency Management Regulation and section 8 of the Pipeline and Liquefied Natural Gas Facility Regulation under the *Energy Resource Activities Act (formerly Oil and Gas Activities Act)* and CSA Z246.2 (Emergency preparedness and response for petroleum and natural gas industry systems).
Potential impacts to Haida Nation rights and interests, including: • Sense of place • Access and travel • Citizen health and wellbeing and ability to access off-island services • Ongoing and future development of ecotourism and cultural tourism • Cumulative effects of marine shipping on marine wildlife, marine harvesting and access and travel	• Feedback shared by Haida Nation has informed the Proponents' understanding of existing conditions and the assessment of Project effects on Haida Nation interests in Section 18.0 and applicable VC Sections. • The Application has also assessed the potential effects of the Project on the VCs that support the interests identified by Haida Nation (e.g., marine harvesting, access, and travel). These assessments are found in Sections 7.02 to 7.15, the results of which have informed the assessment of potential effects on Haida Nation interests. • Sections 18.2 to 18.5 provide the assessments of potential effects of the Project on the interests identified by Haida Nation. Section 18.8 provides the assessment of cumulative effects on Haida Nation interests.

Table 18.1–1 – Summary of Key Information, Indigenous Knowledge and Concerns for the Project Related to Haida Nation Interests

Key Information and Concerns	Influence on the Assessment
	• Distribution of disproportionate effects on Haida Nation interests is considered throughout the assessment in Section 18.0. Based on the predicted residual effects, the ways in which the Project may disproportionately affect on Haida Nation subgroups are described in Section 18.6.1 and Section 18.9.1. • The Proponents are committed to working directly with Haida Nation to identify opportunities for Haida Nation to realize potential benefits from the Project that can be used to both offset potential adverse effects and create positive effects for the Nation.

18.1.3 Indigenous Knowledge, Information Sources, Assumptions and Limitations

The Proponents understand that there is no universally accepted definition of Indigenous knowledge, and that it is community-specific and place-based, arising from Indigenous peoples' intimate relationship with their environment and territory over thousands of years (The Agency 2022c). Indigenous knowledge is therefore understood to be embedded within Indigenous legal, political, and governance systems, and may include Nation-specific direct observations about the biophysical world as well as ecological indicators, oral histories, community practices, language, teachings, laws, relationships, rituals, cultural identity, spirituality, worldview, cultural values, and other ways of knowing that have been identified by the Nation (EAO 2020a; The Agency 2022c). Indigenous knowledge is considered cumulative and dynamic, developed through the experiences of earlier generations, informing the practice of current generations, and evolving in the context of contemporary Indigenous societies (The Agency 2022c). Indigenous knowledge used in this Application is derived from ongoing engagement, Project-specific and nation-led studies, secondary sources, and publicly available information identified through engagement with Haida Nation. The treatment of Indigenous knowledge within this section of the Application is presented with any changes requested by Haida Nation following opportunities for review and comment.

The Proponents recognize that Haida Nation is best positioned to identify the sources of information, including Indigenous knowledge, appropriate for this assessment. The sources of information and Indigenous knowledge used in describing background information for the assessment of effects on Haida Nation interests were identified through review of publicly available information, including websites maintained by Haida Nation.

The use of data throughout this chapter of the assessment has been presented according to the preference of the Nation through its iterative reviews, its respective policies and protocols, consent for its use and public disclosure, and views regarding the characterization of its data and Indigenous knowledge within the Application.

Refer to Section 6.0 for detailed methods regarding the incorporation of Indigenous knowledge into the Application.

This assessment uses a conservative approach that recognizes that an absence of Indigenous or traditional use information does not necessarily represent an absence of Indigenous or traditional use for that location or activity. This assessment assumes that Indigenous and traditional use sites, activities, and resources have the potential to occur on accessible land within the Nation's territory and that Indigenous or traditional use species identified as being present near the Project could be hunted, trapped, fished, or gathered by Indigenous groups, even if Indigenous groups did not identify specific sites, areas, or resources in relation to the Project.

18.1.3.1 Literature Review

A literature review was conducted to provide an overview of existing publicly available information for Haida Nation.

The literature review focused on social and economic, demographic, and ethnographic information for Haida Nation as well as information related to the availability of harvested resources, access to resources and use areas, and locations of cultural importance that support the exercise of rights as described by Haida Nation. The Proponents also identified and considered potential Project effects on Haida subgroups from literature review where effects have been demonstrated in similar resource development projects. The identification of Haida Nation subgroups considered those citizens that may experience disproportionate effects of the Project due to the intersectionality of identity factors (e.g., Indigenous females, Indigenous low-income single parent households, Indigenous two spirit individuals, Indigenous individuals with disabilities) (The Agency 2021; Province of British Columbia 2018; see also Section 7.13).

The literature review considers information from the following sources:

- Publicly available information collected for studies previously completed by Haida Nation for other development projects in the region
- Regulatory filings for proximate projects
- Government reports and databases
- Historical and ethnographic literature
- Relevant internet sources (e.g., Nation websites)

Information was drawn from sources relevant to the locations of the Project assessment areas and to Haida Nation.

18.1.4 Identifying Interests for Assessment

Indigenous interests, as defined by the BC EAO, refer to "interests related to an Indigenous nation and their rights recognized and affirmed by section 35 of the *Constitution Act, 1982*, including Treaty rights and Aboriginal rights and title, that may be impacted by a proposed project" (BC EAO 2020a). The Proponents understand that Indigenous interests are intricately linked and are also connected to the Nation's rights, culture, history, protocols, health, and well-being.

A preliminary list of four Indigenous interests were identified for this assessment. Additional guidance from current federal and provincial acts, impact assessment policies, and best practices also informed the identification of Indigenous interests for this assessment (Section 18.1.1 Regulatory Context).

The preliminary list of potential effects on Haida Nation interests are as follows:

- Changes to Haida Nation marine harvest and consumption
- Changes to Haida Nation governance and social and economic conditions
- Changes to Haida Nation sacred places and heritage sites
- Changes to Haida Nation access and travel

No additional interests or potential effects were recommended for this assessment by Haida Nation following provision of drafts of this section of the Application for review.

Potential effects on Haida Nation interests may occur through multiple pathways, including:

- Biophysical (e.g., effects to marine resources)
- Related to the ability to use and access lands and waters
- Cultural/experiential (e.g., presence of industrial activity disrupts peaceful enjoyment)
- Social and economic (e.g., presence and demands of Project workforce)

This assessment uses a conservative approach that recognizes that an absence of information regarding Haida Nation interests does not necessarily represent an absence of the exercise or practice of an Indigenous right. As such, this assessment assumes that Haida Nation interests have the potential to occur on accessible lands and waters within Project assessment areas that overlap with Haida Territories (as defined in Section 18.1.5). This assessment reflects the best available information regarding Haida Nation interests in relation to the Project and efforts to validate assessment assumptions are described in Section 18.1.2.1.

Where possible, the assessment of potential effects on Haida Nation interests considered measurable parameters that are quantifiable (e.g., area of direct marine habitat loss). However, not all effects pathways can be quantified (e.g., cultural/experiential). Therefore, some effects are predicted qualitatively through use of the results of other the assessments for relevant VCs, and professional judgment. Finally, this assessment was shared in draft form with Haida Nation for review and comment.

The potential effects on Haida Nation interests listed in Table 18.1–2. For each effect in Table 18.1–2, effect pathways and indicators/measurable parameters have been identified to facilitate the quantitative and/or qualitative measurement of change in Project-specific and cumulative effects potentially caused by the Project.

Table 18.1–2 – Potential Effects, Effects Pathways and Indicators/Measurable Parameters for Haida Nation Interests

Potential Effect	Effect Pathway	Indicator and/or Measurable Parameter(s) and Units of Measurement
Changes to Haida Nation marine harvest and consumption	• Loss or alteration of preferred marine harvesting methods, locations, or opportunities (e.g., alteration to the cultural component of harvesting, interference with fishing equipment) • Loss of time when harvesting, including when harvesting for Elders or redistribution to other Haida Nation citizens • Loss or alteration of harvested marine species, including culturally critical species (e.g., change in species population health, abundance, migration routes, distribution, morbidity, and mortality) • Alteration in marine species behaviour • Alteration to the harvesting experience • Alteration or reduction of subsistence-based livelihoods and trade networks with neighbouring Indigenous nations • Alteration to the quality and quantity of marine species and country foods (real or perceived) (e.g., marine birds, marine fish)	• Quantitative consideration of change in availability of habitat for harvested marine resources with qualitative consideration for indirect effects on habitat (e.g., changes in underwater noise and sensory disturbances, changes in light conditions, increased risk of species mortality or injury) • Quantitative consideration of change in water quality and quantity parameters (i.e., salinity, total suspended solids [mg/L], nutrients [nitrogen], hydrocarbon [from stormwater]) • Qualitative consideration of factors contributing to lost or altered access, opportunities, and quality of experience (e.g., sensory disturbance associated with marine vessel traffic, increased vessel traffic and type, changes in aesthetic qualities) • Qualitative consideration of estimated change in provision of food to Elders and hereditary leaders as well as feasting events • Qualitative consideration of estimated change to status-building activities such as in-community and external trade relationships with other Indigenous nations • Qualitative consideration of the intersectionality of factors contributing to the distribution of disproportionate effects on Haida Nation subgroups • Other changes identified by Haida Nation
Changes to Haida Nation governance, and social and economic conditions	• Changes in the status and position of Hereditary leaders • Loss or alteration in the production of foods from discrete clan territories • Loss or alteration in the ability to uphold Haida Nation management principles and ability to make decisions regarding land and marine use • Loss or alteration in regional employment, business, and economy	• Qualitative consideration of available opportunities for Haida Nation involvement in development decision making • Qualitative consideration of change in the quality and quantity harvested resources at discrete house territories • Qualitative consideration of access to and use of house territories • Qualitative consideration of potential changes in level of feasting

Table 18.1–2 – Potential Effects, Effects Pathways and Indicators/Measurable Parameters for Haida Nation Interests

Potential Effect	Effect Pathway	Indicator and/or Measurable Parameter(s) and Units of Measurement
	• Alteration in Indigenous health (e.g., psychological and physical) due to outside stressors and loss of culture • Loss or alteration in infrastructure, services, accommodation, and transportation • Alteration to quality of country foods • Alteration to the safety of Nation citizens • Reduction or alteration of cultural practices tied to identity • Reduction of house status due to loss or alteration of harvested resources within discrete house territories • Reduction of cultural transference opportunities in the territory • Reduction in ability to fulfill obligations in marine plans, nation-to-nation agreements and off-island services Haida Nation citizens rely upon	• Qualitative consideration of reduction in rank of a house due to disruption of their house territory • Qualitative consideration of estimated change to status building activities such as in-community and external trade relationships with other Indigenous nations • Qualitative consideration of factors contributing to changes in human exposure to chemicals of potential concern, quality of country foods, noise level and electric and magnetic fields, and subsequent health effects • Qualitative consideration of changes in community health and Nation citizens well-being due to changes to related interest (e.g., change in harvest and consumption, change in cultural identity, change in cohesion) • Qualitative consideration of the intersectionality of factors contributing to the distribution of disproportionate effects on Haida Nation subgroups • Qualitative consideration of changes to the right to maintain cultural distinctiveness and integrity • Qualitative consideration of Haida Nation conditions for connection to its territory
Changes to Haida Nation sacred places and heritage sites	• Loss or alteration of use or required conditions of sacred places and heritage sites • Loss or alteration of ability to share Indigenous knowledge at sacred places and heritage sites • Reduced quality of experience and increased avoidance due to sensory disturbance (e.g., qualitative disconnect due to changes in noise levels) • Loss or alteration of heritage sites	• Qualitative consideration of factors contributing to loss or altered access to sacred places and heritage sites (e.g., associated with marine vessel traffic, increased vessel traffic and type, changes in aesthetic qualities) • Quantitative consideration of affected heritage and cultural sites • Qualitative consideration of the intersectionality of factors contributing to the distribution of disproportionate effects on Haida Nation subgroups • Other changes identified by Haida Nation

Table 18.1–2 – Potential Effects, Effects Pathways and Indicators/Measurable Parameters for Haida Nation Interests

Potential Effect	Effect Pathway	Indicator and/or Measurable Parameter(s) and Units of Measurement
Changes to Haida Nation access and travel	• Loss or alteration of access to preferred marine harvesting locations and associated travel routes • Loss or alteration of access to sacred places and heritage sites and associated travel route • Loss or alteration of access to regional infrastructure and services (e.g., health centers, shopping centers) and associated travel routes (marine)	• Qualitative consideration of factors contributing to loss or altered access to important cultural areas (e.g., sacred places, heritage sites, marine harvesting sites) and regional infrastructure and services (e.g., health centers, shopping centers) • Qualitative consideration of factors contributing to loss or altered access to preferred travel routes on land and water (e.g., increased vessel traffic and type) • Qualitative consideration of the intersectionality of factors contributing to the distribution of disproportionate effects on Haida Nation subgroups • Other changes identified by Haida Nation

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18.1.5 Assessment Boundaries

The spatial, temporal, administrative, and technical boundaries for the assessment of effects on Haida Nation interests are described below.

18.1.5.1 Spatial Boundaries

The assessment areas are defined by spatial boundaries that consider the geographic extent over which the Project activities may affect Haida Nation interests and are illustrated in Figure 18.12–1 to Figure 18.12–6.

The spatial boundaries for this assessment are based on the Project components and activities, which include:

- **Project footprint**: the physical footprint for the Project (i.e., the areal extent of planned terrestrial clearing and marine infrastructure development at the Project Site (**the Site**). The Project footprint measures 43.6 hectares (**ha**), and encompasses terrestrial areas (34.9 ha), riparian areas (7.9 ha), and intertidal areas (0.8 ha). The adjacent Water Lot measures approximately 96.4 ha. The Project footprint has been defined conservatively to encompass the maximum extent for Project development for both land-based and marine-based Project infrastructure and activities.
- **Marine shipping route (MSR)**: the expected marine shipping route between Wil Milit and the BC Coast Pilots boarding location at or near Triple Island Pilotage Station, and the materials and supply shipping routes between Wil Milit and Prince Rupert and between Wil Milit and Gingolx.
- **Open Water Assessment Area (OWAA)**: the open water marine shipping route between the 12 nm limit of Canada's territorial sea and the BC Coast Pilots boarding location at or near Triple Island Pilotage; as assessed for Air Quality (Section 7.02), Acoustic (Section 7.03), Wildlife and Wildlife Habitat (Section 7.07), Marine Resources (Section 7.09), Marine Use (Section 7.11), and Community Health and Wellness (Section 7.13). The OWAA includes the geographic extent over which direct and indirect effects may be expected to occur, and the geographic extent over which the predicted residual effects of the Project may act in combination with those of past, present, and reasonably foreseeable future projects.

The spatial boundaries for the assessment of third-party infrastructure that may be developed in relation to the Project include:

- **Transmission Line Assessment Area (TLAA):** the marine and/or terrestrial areas within which a portion of the transmission line between the Project and Nisg̲a'a Lands (as defined under the Nisg̲a'a Treaty) will be developed. A third-party will own, design, construct and operate the transmission line. The transmission line within the TLAA will connect to the BC Hydro grid. The TLAA encompasses portions of Nisg̲a'a Category A Lands and the Nass Area. As a specific route for the transmission line has not been developed, the TLAA encompasses a broad area measuring approximately 36,400 ha, within which the route is anticipated to occur (Figure 18.12–7).

The Project footprint, the MSR, and TLAA do not intersect with Haida Territories as identified by Haida Nation. The OWAA intersects with the northern extent of Haida Territories as identified by Haida Nation.

The assessment areas considered for the assessment of effects on Haida Nation interests therefore include the OWAA, and:

- **Haida Territories as identified by Haida Nation**: Haida Territories comprise the entire Haida Gwaii archipelago, approximately 10,000 square kilometres of land as well as their adjacent territorial waters. Haida Gwaii is comprised of two main islands, with Graham Island in the north and Moresby Island in the south as well as 200 smaller islands. Haida Gwaii is located approximately 85 kilometres (**km**) west of Prince Rupert (Cedar 2022b). Haida territorial waters include the entire Dixon Entrance, half of the Hecate Straits, halfway to Vancouver Island and Westward into the abyssal ocean depths (Council of Haida Nation [**CHN**] 2018) (Figure 18.12–1). None of the VC local assessment areas or regional assessment areas overlap with Haida Territories, as identified by Haida Nation (Figure 18.12–1 to Figure 18.12–7).

18.1.5.2 Temporal Boundaries

Temporal boundaries identify when an effect is evaluated in relation to specific Project phases and activities. Temporal boundaries are based on the timing and duration of the Project activities and the nature of the interactions with Haida Nation interests, where relevant. Temporal boundaries also consider seasonal sensitivities, as applicable (e.g., seasonal harvesting), associated with the Project activities within each phase of the Project.

The temporal boundaries for the assessment of effects on Haida Nation interests are the same as those described in Section 6.3.2:

- **Construction:** approximately three to four years, commencing following receipt of necessary regulatory approvals and a final investment decision by the Proponents
- **Operation:** a minimum of 30 years following completion of construction
- **Decommissioning:** approximately 12 months following the end of operation

18.1.5.3 Administrative and Technical Boundaries

Haida Nation administration, governance, and guardianship of its territory inform this assessment. The OWAA is located within Haida Territories as identified by Haida Nation. Haida Nation has developed several Land Use Plans (**LUPs**) to balance the ecological, cultural, and economic interests on Haida Gwaii (CHN 2005). Haida Nation has protected important landscapes including (CHN 2005):

- Tsuuaay, cedar—forests set aside to protect the workplaces of Haida Nation ancestors and monumental cedars for Haida culture
- Tsiin, salmon—riparian forest areas set aside to protect salmon stream conditions and restore degraded watersheds

- Taan, bear—habitat for denning and foraging within their territories where future logging may occur
- Kil, plants—places set aside to protect food and medicinal plants
- Xiit'lit, birds—places set aside to protect nesting and foraging habitat
- Sk'waii, beach—places set aside to protect life along the shore and intertidal zone

Similarly, the CHN developed a policy for the long-term management of Cedar Stewardship Areas on Haida Gwaii (HNRD 2016). Industrial logging on Haida Gwaii has been ongoing for the last century and threatens much of the old growth and second growth cedar stands on the archipelago. Since the signing of the Kunst'aa guu Kunst'aayah Reconciliation Protocol, logging continues under the guidance of yaagudaang (respect) to ensure the natural function of the forests on Haida Gwaii (HNRD 2016).

Haida Nation and the Province of BC implemented a Land Use Agreement in 2007, committing both parties to the cooperative development of a strategic LUP guided by an Ecosystem-Based Management (**EBM**) framework (British Columbia and CHN 2007). Together, they have established an advisory committee and working group to make recommendations on further development, monitoring, and implementation of EBM on Haida Gwaii. The advisory committee is called "The Plan Implementation Monitoring Committee" and is comprised of Haida Gwaii island community citizens who monitor the implementation of the 2007 Land Use Agreement, and the working group established as part of the Coast Land Use Announcement of February 2006 (British Columbia and CHN 2007).

Haida Nation and the Province of BC collaborated to create the Haida Gwaii Marine Plan, which is founded on an ecosystem-based framework and uses the best available science and traditional and local knowledge (Marine Planning Partnership Initiative 2015). The Haida Gwaii Marine Plan describes a long-term vision, and outlines objectives and strategies for the protection, conservation, and management of Haida Gwaii's coastal and marine areas and resources (Marine Planning Partnership Initiative 2015). Haida Nation developed the Haida Gwaii Marine Plan as part of the broader First Nations–British Columbia Marine Planning Partnership for the North Pacific Coast (**MaPP**) initiative (Marine Planning Partnership Initiative 2015). The Marine Plan Partnership is a co-led process between the Province of BC and 16 Indigenous nations focused on the development and implementation of plans for marine uses on the North Pacific Coast of BC (MaPP 2020). This plan compliments the 2007 Strategic Land Use Agreement between the Council of the Haida Nation and the Province of BC by providing management direction and zoning within EBM framework for uses and activities of marine environments (Marine Planning Partnership Initiative 2015).

The Gwaii Haanas Integrated Land-Sea-People Management Plan, established in 2010, has resulted in Gwaii Haanas being the first protected area in the world to be managed from the mountain top to the seafloor. The protected area is cooperatively managed by the CHN and the Government of Canada through the Archipelago Management Board (CHN 2017).

The SGaan Kinghlas-Bowie Seamount Marine Protected Area is a plan which is cooperatively managed by representatives of the CHN and the Minister of Fisheries and Oceans, who became signatories on a

Memorandum of Understanding in April 2007, with the area officially designated as a Marine Protected Area in April 2008 (CHN and GoC 2019; CHN 2017).

Haida Nation has relayed to the Proponents that the Nation is in active litigation against BC and Canada to assert Haida Title to Haida Territory.

Section 18.1.5.1 further defines the way in which the Project components and potential effects overlap with Haida Territories, as identified by Haida Nation; in addition to the existing land and marine use plans described above, Haida Nation's administration, governance, and guardianship of Haida Territories are described in Section 18.3 and inform this assessment.

18.1.6 Project Interactions

Table 18.1–3 identifies which Project components and physical activities have the potential to result in effects on Haida Nation interests. Interactions that have been identified (ranked as 1 or 2) are carried forward and assessed within this section. Each of the effects identified are discussed in detail, in the context of effects pathways, mitigation/enhancement, and residual effects.

The highest-ranking interaction was selected in cases where multiple VCs or potential effects inform the Nation-specific assessment (e.g., change in marine habitat and changes due to sensory disturbance, which both inform Haida Nation's harvest and consumption practices).

Rationale for interactions ranked as 0 is provided following Table 18.1–3.

Table 18.1–3 – Potential Project Interactions and Effects on Haida Nation Interests

Project Activities and Physical Works	Potential Project Effects			
	Change s to marine harvest and consumption	Changes to Governance and social and economic conditions	Changes to sacred places and heritage sites	Changes to access and travel
Construction				
Procurement of labour, goods, and services	0	0	0	0
Site preparation and clearing	0	0	0	0
Construction of temporary and permanent land-based infrastructure (includes transmission line within the TLAA,)	0	0	0	0
Construction of temporary and permanent marine-based infrastructure (includes transmission line within the TLAA,)	0	0	0	0
Marine transport of workforce, and construction materials to the Site	1	1	1	1

Table 18.1–3 – Potential Project Interactions and Effects on Haida Nation Interests

Project Activities and Physical Works	Potential Project Effects			
	Change s to marine harvest and consumption	Changes to Governance and social and economic conditions	Changes to sacred places and heritage sites	Changes to access and travel
Land transportation of workforce and construction materials from Terrace to Gingolx or Prince Rupert/ Port Edward (for marine transport to Site)	0	0	0	0
Waste management	0	0	0	0
Operation				
Procurement of labour, goods, and services	0	0	0	0
Natural gas pre-treatment, liquefaction, storage and offloading of liquefied natural gas (**LNG**) and natural gas liquids (**NGL**) products (condensate) at the floating liquefied natural gas (**FLNG**) production, storage and offloading facility barges (includes storage of NGLs)	0	0	0	0
LNG carrier and NGL product vessel loading	0	0	0	0
Marine shipping and transportation (includes tugboat) to the Site	2	2	2	2
Land transportation of workforce to Gingolx (for marine transport to Site)	0	0	0	0
Facility and infrastructure maintenance (includes transmission line within the TLAA)	0	0	0	0
Waste management	0	0	0	0
Temporary on-Site power generation on barges	0	0	0	0
Decommissioning				
Procurement of labour, goods, and services	0	0	0	0
Decommissioning or repurposing of land-based infrastructure (includes transmission line within the TLAA)	0	0	0	0
Decommissioning of marine-based infrastructure (includes transmission line within the TLAA)	0	0	0	0
Land transportation of workforce to Gingolx (for marine transport to Site)	0	0	0	0
Marine transport of decommissioned infrastructure	1	1	1	1
Waste management	0	0	0	0

Table 18.1–3 – Potential Project Interactions and Effects on Haida Nation Interests

Project Activities and Physical Works	Potential Project Effects			
	Change s to marine harvest and consumption	Changes to Governance and social and economic conditions	Changes to sacred places and heritage sites	Changes to access and travel

Key:

0 = Negligible or no effect expected; no further consideration warranted.

1 = Potential adverse effect that warrants consideration, and requires mitigation through current legal or policy management, best management practice(s) and/or Project-specific mitigation.

2 = Potential adverse effect of particular importance or concern that warrants further detailed assessment.

+ = Potential positive effect that can be enhanced; warrants further consideration.

The non-interactions (i.e., 0 ranking) identified in Table 18.1–3 vary by effect and indicate a lack of cause-effect mechanism between the Project and Haida Nation interests. For example, procurement of labour, goods, and services, land-based transportation of workforce, as well as activities restricted to the Project footprint (waste management, facility and infrastructure maintenance, LNG carrier and NGL product vessel loading) will occur on lands and marine waters located approximately 88 km northeast of Haida Territory.

18.1.7 Residual Effects Characterization

Each residual effect on Haida Nation interests is characterized using the following characterization terms: magnitude, geographic extent, timing, duration, reversibility, frequency, affected subpopulation, risk (likelihood and consequence). The definitions for these terms as they relate to this assessment are provided in Table 18.1–4.

Table 18.1–4 – Characterization of Residual Effects on Haida Nation Interests

Characterization	Description	Quantitative Measure or Definition of Qualitative Categories
Magnitude	The amount of change in measurable parameters or the ability to exercise or practice rights / maintain the interest, relative to existing conditions.	**No Measurable Change –** no measurable change **Low –** effect may increase the effort necessary but will not reduce the ability to exercise or practice rights / maintain the interest **Moderate –** effect may reduce but not eliminate the ability to exercise or practice rights / maintain the interest **High –** effect will greatly reduce or eliminate the ability to exercise or practice rights / maintain the interest
Geographic Extent	The geographic area in which a residual effect occurs.	**OWAA –** residual effects are restricted to the OWAA. **Beyond Regional** – residual effects extend beyond the OWAA but are within or beyond Haida Territories as identified by Haida Nation.
Timing	Considers when the residual environmental effect is expected to occur. Timing considerations are noted in the evaluation of the residual environmental effect on Indigenous interests, where applicable or relevant.	**Not Applicable** – seasonal aspects are unlikely to affect residual effects on the Indigenous interest. **Applicable** – seasonal aspects may affect residual effect on the Indigenous interest.
Duration	The length of time the residual effect is expected to persist or be experienced by Haida Nation.	**Short-term –** the residual effect is restricted to the construction phase (3 to 4 years) or decommissioning phase (12 months). **Medium-term –**the residual effect extends beyond the construction or decommission phases but is less than the timespan of a single human generation (25 years[1]). **Long-term –** the residual effect extends beyond the timespan of a single human generation (> 25 years) and the operation phase (30 years).
Reversibility	Pertains to whether or not the residual effect on the Indigenous interest can return to its existing condition after the Project activity ceases.	**Reversible** – the residual effect is likely to be reversed after activity completion and reclamation. **Partially reversible** – the residual effect can be partially reversed after activity completion and reclamation. **Irreversible** – the residual effect is unlikely to be reversed after activity completion and reclamation.

Table 18.1–4 – Characterization of Residual Effects on Haida Nation Interests

<table>
<tr><th>Characterization</th><th>Description</th><th>Quantitative Measure or Definition of Qualitative Categories</th></tr>
<tr><td>Frequency</td><td>How often the residual effect occurs and how often during the Project or in a specific phase.</td><td>Single event - effect occurs once.
Multiple irregular event – occurs at no set schedule.
Multiple regular event – occurs at regular intervals.
Continuous – occurs continuously.</td></tr>
<tr><td>Affected Sub-Populations (where appropriate)</td><td>The distribution of the effect amongst the Haida Nation population.</td><td>Evenly distributed – the effect will be experienced by any or all Haida subpopulations.
Disproportionately distributed – the effect will be experienced only by certain Haida subpopulations or experienced more acutely by certain Haida subpopulations.</td></tr>
<tr><td>Risk (likelihood and consequences)</td><td>Assesses the likelihood and consequences of the potential residual effect. Likelihood is the probability of the residual effect occurring and should consider many factors. Consequence is the potential outcome of the residual effect.
Risk is the interaction between likelihood and consequence (see risk rating table).</td><td>Consequences: are assessed as minor, moderate, or major based primarily on a combination of Magnitude and Geographic Extent as:
<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="2">Geographic Extent*</th></tr>
<tr><th>Project Footprint or LAA (if different from RAA)</th><th>RAA and/or OWAA</th></tr>
<tr><td rowspan="4">Magnitude</td><td>No Measurable Change</td><td>Minor</td><td>Minor</td></tr>
<tr><td>Low</td><td>Minor</td><td>Minor or Moderate</td></tr>
<tr><td>Moderate</td><td>Minor or Moderate</td><td>Moderate</td></tr>
<tr><td>High</td><td>Moderate or Major</td><td>Major</td></tr>
<tr><td colspan="4">*Where relevant, Duration is also taken into consideration (e.g., a high Magnitude event within the LAA may be Moderate or Major in Consequence and Duration could be considered).</td></tr>
</table>
Likelihood: as defined in the Risk table below
Risk:
Low: Low risk/uncertainty of effect prediction.
Moderate: Moderate risk/uncertainty of impact. prediction
High: High risk/uncertainty of impact prediction.</td></tr>
</table>

Table 18.1–4 – Characterization of Residual Effects on Haida Nation Interests

<table>
<tr><th>Characterization</th><th>Description</th><th>Quantitative Measure or Definition of Qualitative Categories</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td colspan="2"></td><td colspan="3">Consequence</td></tr>
<tr><td colspan="2"></td><td>Major</td><td>Moderate</td><td>Minor</td></tr>
<tr><td rowspan="3">Likelihood</td><td>High (>80% chance)</td><td>High</td><td>Moderate</td><td>Low</td></tr>
<tr><td>Medium (40-80% chance)</td><td>High</td><td>Moderate</td><td>Low</td></tr>
<tr><td>Low (<40% chance)</td><td>Moderate</td><td>Low</td><td>Low</td></tr>
</table>
</td></tr>
<tr><td>Uncertainty</td><td>The degree of uncertainty as assessed for the data and methods including potential effectiveness of mitigation that have been used in the assessment of effects.</td><td>Low – good understanding of the pathway to effect(s) on the Indigenous interest due to the Project activities and/or physical works and sufficient data is available to support the assessment. Uncertainty associated with data and/or modelling is low. The effectiveness of the selected mitigation is expected to be moderate to high. Overall, uncertainty in the predicted residual effect is low.
Moderate – potential uncertainty associated with the pathway to effect(s) on the Indigenous interest due to the Project activities and/or physical works, e.g., due to unknown external variables or incomplete data. Potential for uncertainty associated with data and/or modelling. The effectiveness of mitigation is expected to be moderate to low. Uncertainty in the predicted residual effect is considered moderate.
High – poor understanding of the pathway to effect(s) on the Indigenous interest due to the Project activities and/or physical works. May be unknown external variables and/or data for the Project is incomplete. Modelling results may vary considerably with inputs. The effectiveness of the mitigation may be expected to be low or is unproven. Overall, there is a high degree of uncertainty associated with the predicted residual effect.</td></tr>
</table>

NOTE:

[1] "Twenty-five years" is representative of a single generation, as established by EAs conducted for comparable projects on the North Coast and based on the Proponents' understanding that Indigenous knowledge and associated customs, traditions, practices, or locales can be displaced from collective memory if transmission of knowledge, or the ability to engage in associated cultural activities, are disrupted beyond a single generation's time.

18.1.7.1 Context and Resilience

The characterization of the Project's residual effects inherently considers the effects of past and present projects and activities, and potential trends in the condition of the Interest, as applicable. Literature reviewed, and feedback received from Haida Nation describes historical, ongoing, and future development as modifications to the existing conditions of its Interests.

Resilience is notionally understood as the ability of a receptor to recover from or adapt to a change in its environment, real or perceived. The degree of resilience may be measured or characterized for species or ecosystems relied upon by Indigenous peoples for the exercise of their rights, traditional activities, and practices. Such characterization may be relevant and incorporated to this assessment, where noted, given the interdependence of community health, well-being, and culture, and the health and availability of the land and water. However, the ability of Indigenous peoples to recover from or adapt to environmental effects of the Project remains contingent on personal, cultural, esthetic, or spiritual values that are subjective and cannot be meaningfully reduced to EA criteria. When applied to human receptors, resilience in this sense, or as a concept overall, is viewed as uniquely personal as it is informed by an individual's lived experience, individually and/or collectively in social and community groups. It would not be appropriate, given the subjective and complex nature of these considerations, for anyone but the affected party to characterize resilience. As such, the "context" or "resilience" criterion is not carried forward for the assessment of the effects of the Project on the collectively held rights and interests of Haida Nation.

The more commonly understood and accepted criteria defined for this assessment, including: (1) consideration for disproportionate effects on vulnerable populations, (2) Haida Nation views regarding existing environmental, social, or economic barriers, and (3) Haida Nation preferred conditions required to maintain or enhance its rights and Interests, are viewed as sufficient to assist the BC EAO in determining the overall seriousness of Project effects on Haida Nation Interests.

18.1.8 Mitigation Measures

Mitigation and enhancement measures described throughout this Application are proposed to reduce adverse residual effects and enhance positive effects on Haida Nation interests, as applicable, and are discussed relative to specific potential effects for each of the identified Indigenous interests in Sections 18.2 to 18.5. These sections also describe:

- Criteria or rationale used to determine technically and economically feasible mitigation measures
- Additional accommodation, mitigations, and complementary and enhancement measures that are specific to Haida Nation interests, as applicable
- Relative level of uncertainty, effectiveness, or risk associated with the accommodation, mitigation, and complementary options
- An assessment of the effectiveness of the mitigation measures and adaptive management measures applied to mitigate the residual effects and cumulative effects

- In cases where measures to mitigate these effects are beyond the control of the Proponents, what parties have authority to act on the measures and commitments made by the other parties regarding the implementation of necessary measures and any associated communication plans
- A discussion of potential regional implications of applying Project-specific mitigation and enhancement measures (e.g., interactions with initiatives of other projects), taking into account any reasonably foreseeable development in the area
- How the measures will be integrated into the Project design, if applicable
- How the GBA Plus results on disproportionate effects specific to Haida Nation, as described in Section 7.13 Community Health and Wellness, have been used to inform these measures

Mitigation measures were selected based on:

- Their effectiveness to limit Project interactions that affect Haida Nation interests during all Project phases
- Their technical and economic feasibility
- Their inclusion on similar projects proposed for the Pacific North Coast
- Views of Haida Nation regarding mitigation appropriateness
- Professional judgment of the effects assessment team

A summary of mitigation or enhancement measures, review processes, or monitoring initiatives for Haida Nation interests is described in Sections 18.2 to 18.5.

18.1.9 Assessment of Adverse Residual Effects

The assessment of residual effects is described for each of the identified Indigenous interests in Sections 18.2 to 18.5. This evaluation focuses on the effect pathways listed in Section 18.1.4 and characterizes residual effects according to the approach described in Section 18.1.7. A summary of the assessment of adverse residual effects is described in Section 18.6.

Residual effects on aspects of Haida Nation interests identified for this assessment have been conservatively overestimated with consideration for the interconnectedness of the effect pathways that inform Haida Nation interests. The analysis in Sections 18.2 to 18.5 incorporates the findings of relevant VCs; however, potential effects may not fully align with effects on Haida Nation interests. As a result, the characterization of residual effects on Haida Nation interests are generally ranked higher than the residual effects characterized for related VCs, specifically duration, magnitude, and likelihood. This is considered when evaluating the need for additional mitigation and enhancement measures, review processes, or monitoring initiatives that are specific to Haida Nation interests.

18.1.10 Assessment of Positive Residual Effects

The assessment of any positive residual effects to Haida Nation interests, where anticipated because of the Project and its associated effects management approaches, is provided in Section 18.7.

18.1.11 Assessment of Cumulative Effects

The assessment of cumulative effects is initiated when the following two conditions are met:

- The Project is assessed as having residual effects on the Indigenous interest
- Residual effects could act cumulatively with residual effects of other past, present, or reasonably foreseeable future physical activities

If neither condition is met, the assessment of cumulative effects concludes with a statement that further assessment of cumulative effects is not warranted because the Project does not interact cumulatively with other projects or activities.

When both conditions are met, the Application identifies the Project residual effects likely to interact cumulatively with the residual effects of other projects or physical activities.

The assessment of the Project's contribution to cumulative effects on Haida Nation interests and the identification of any additional mitigation measures is described for the identified Indigenous interests in Section 18.8 (Cumulative Effects Assessment). The assessment of cumulative effects includes:

- Background and context, including how the identified Indigenous interests have been affected by cumulative effects to date
- A description of the Project's residual effects on Haida Nation interests that are likely to interact cumulatively with residual effects of past, present, or reasonably foreseeable projects and physical activities
- An assessment of the likelihood of any adverse residual cumulative effects on the Indigenous interests

A summary of the results of the cumulative effects assessment is described in Section 18.9.

18.2 Changes to Haida Nation Marine Harvest and Consumption

This section provides the assessment of the potential effects of the Project on Haida Nation marine harvest and consumption.

18.2.1 Background and Existing Conditions

Haida Territories, as identified by Haida Nation, have been occupied for millennia (CHN 2021, 2018) and, according to Haida Nation, "the seamless sea-to-mountaintop connection is an integral part of Haida heritage and cultural identity" (CHN 2013). The Haida Gwaii archipelago occupies a unique location and encompasses three regional oceanographic domains: the oceanic west coast, the eastern coast, and Dixon Entrance. These three oceanographic domains are connected and play a role in the biological diversity of the marine and terrestrial environments of Haida Gwaii (CHN 2011).

Haida Nation's Raven and Eagle families and clans each possess a distinct origin story and lineage history, rooting them to harvesting, cultural, and sacred sites throughout Haida Gwaii (CHN 2011). Haida Nation citizens believe that their knowledge of the land and ocean has ensured their continued success through the generations by the passing of intergenerational knowledge of fishing grounds and harvesting methods (CHN 2011). Many citizens of the Haida Nation recall early memories of digging for shellfish, gathering seaweed, learning to spear octopus, and helping to prepare and preserve fish (CHN 2011). Haida long-term reliance on marine, coastal, and inland environments is supported by the archaeological record of Haida Gwaii, which documents a minimum 10,500-year-old cultural history (CHN 2011).

Haida people continue to thrive through harvesting and managing the abundant natural resources available in Haida Territories (HaiCo n.d.). Wild salmon, halibut, clams, scallops, and seaweed are some of the culturally important staples that are continually harvested from the land and sea that help sustain Haida people and their economies (HaiCo n.d.). However, there are over 150 culturally important species throughout Haida Gwaii and surrounding waters that continue to be harvested by Haida people today (CHN 2013).

Several species are harvested and have cultural significance throughout Haida Gwaii and Haida territorial waters, including in the vicinity of the OWAA (CHN 2013).

Fish and related marine species that are harvested or have cultural significance include arrowtooth flounder, basking shark, big skate, black rockfish, blue shark, bocaccio rockfish, butter sole, cabezon rockfish, canary rockfish, China rockfish, chum salmon, coho salmon, copper rockfish, cutthroat trout, dogfish shark, dolly, dusky rockfish, great white sharks, halibut, Pacific herring, Humboldt squid, lemon sole, leatherback turtle, lingcod, longnose skate, mackerel, needlefish, octopus, Pacific cod, Pacific ocean perch, Pacific sanddab, Pacific saury, Pacific tomcod, pilchards, pink salmon, quillback rockfish, ratfish, redbanded rockfish, rock sole, sablefish (black cod), sea cucumber, sea star, sea turtles, silvergray rockfish, six-gill shark, smelt, sockeye salmon, spring salmon, starry founder, steelhead trout, sunfish, tiger rockfish, varden char, vermillion rockfish, thornyheads, widow rockfish, yelloweye rockfish, and yellowtail rockfish (CHN 2013). Species that have important habitat within Dixon Entrance include oolichan (eulachon), Pacific halibut, hake, Pacific herring, Pacific cod, pollock, sole, sablefish, and rockfish (Cedar 2022b). Adult oolichan concentrate in Dixon Entrance, specifically McIntyre Bay during the summer months. McIntyre Bay is also home to rearing habitat for Pacific halibut and summer feeding habitat for adult herring. Humpback whales also concentrate within McIntyre Bay (Cedar 2022b).

Sea-mammal species that are harvested or have cultural significance include blue whale, Dall's porpoise, dolphins, fur seal, gray whales, harbour porpoise, harbour seal, humpback whale, killer whale, minke whales, Pacific white-sided dolphin, sea lion, and sperm whale (CHN 2013). Critical habitat for northern resident killer whale overlaps with the Dixon Entrance, along the north coast of Graham Island to Rose Spit (Cedar 2022b).

Shellfish species that are harvested or have cultural significance include abalone, black chiton, blue mussel, box crab, butter clam, California mussel, cockle, Dungeness crab, gooseneck barnacle, green sea urchin, gumboot chiton, horse clam, Japanese oyster, limpets, native littleneck clam, purple olive snails, purple sea urchin, purple-hinged rock scallop, razor clam, red rock crab, red sea urchin, red turban snails, rock oysters, spider crab, spot prawn, shrimp, tanner crab, and weathervane scallop (CHN 2013). Dixon Entrance, especially McIntyre Bay, has the largest population of razor clam in BC and is significant habitat for Dungeness crab, particularly for crab larvae, a species that continues to be an important food source and source of local employment for Haida Nation (Cedar 2022b).

Marine bird species that are harvested or have cultural significance include ancient murrelet, black oystercatcher, black-footed albatross, black-legged kittiwake, brant goose, Canada goose, common merganser, common murre, cormorant, fulmar, green-winged teal, harlequin duck, mallard duck, marbled murrelet, northern fulmar, pigeon guillemot, puffin, rhinoceros auklet, sandpiper, sooty shearwater, and seagull (CHN 2013).

Haida Nation indicated that there are five marine bird species of conservation concern that have the potential to occur in pelagic offshore waters that intersect with the Dixon Entrance (Cedar 2022b), including:

- Red-necked phalarope (*Phalaropus lobatus*)
- Marbled murrelet (*Brachyramphus marmoratus*)
- Ancient murrelet (*Synthliboramphus antiquus*)
- Cassin's auklet (*Ptychoramphus aleuticus*)
- Tufted puffin (*Fratercula cirrhata*)

Plant species that are harvested or have cultural significance include bull kelp, dulse seaweed, early seaweed, eelgrass, giant kelp, laver seaweed, and wild sea asparagus (CHN 2013).

All the species listed above are important to Haida Nation for subsistence, spiritual, cultural, trade, and commercial reasons (CHN 2013). Haida heritage and cultural identity is inseparable from the laws and customs surrounding harvesting, therefore harvesting "is more than an activity to obtain sustenance" (CHN 2013). When Haida Nation citizens are out harvesting in their territorial lands and waters they share traditional knowledge between all citizens present, ensuring the transmissions of traditional knowledge through generations (CHN 2013). Fishing for halibut and salmon occurs throughout the summer and fall along the north coast of Graham Island and in McIntyre Bay and extend to Hecate strait. Dungeness crab is harvested in McIntyre Bay and Naden Harbour. Chinook and coho salmon, Pacific halibut, lingcod, and rockfish species area harvested around Haida Gwaii, Langara Island, and the north and west coast of Graham Island (Cedar 2022b).

Haida Nation previously reported that basking shark, leatherback sea turtle, and northern abalone are endangered species that occur in Dixon Entrance. There has been a dramatic decline of northern abalone in Dixon Entrance and many Haida Nation citizens have not harvested northern abalone in ten years (Cedar 2022b). Haida Nation has reported that shellfish populations have declined due to overharvesting or proximity to sewage outflow (Cedar 2022b). Haida Nation has also reported consistent decline in abundance and size for culturally important species, particularly salmon and pacific herring (Cedar 2022b). In addition, Haida Nation has previously reported that environmental changes causing increased winds and weather patterns have made it more challenging to fish. Haida Nation is therefore concerned about potential impacts to harvested species and cultural areas in Dixon Entrance (Cedar 2022b).

Haida Nation previously expressed concern that residual effects from projects will change behavior of fish or mammals due to underwater noise from marine shipping and transportation during construction and operation. Haida Nation noted that LNG carriers produce underwater noise from the engines, gearboxes, and propellers of moving vessels. Haida Nation also noted concern that there would be increased marine mammal injury or mortality due to vessel strikes along marine shipping routes from transportation of materials and LNG shipping during all phases of a project (Cedar 2022b). Haida Nation has previously expressed concern that LNG transport during operation will cause:

- Change in habitat for marine birds through indirect effects, such as changes in habitat suitability while LNG carriers are passing through areas occupied by marine birds
- Change in movement for marine shipping during Project operation, such as change in flight direction around LNG carriers or movement towards vessels if attracted to the lighting at nighttime
- Increase in mortality risk for marine birds because of the presence of LNG carriers and associated lighting. Birds may collide with lighting or lit areas and become stranded or injured.

Haida Nation has noted the potential for other Project-related marine shipping activities in the Dixon Entrance area to impact Haida marine navigation and marine fisheries due to an increase in regional shipping traffic (Cedar 2022b). Haida Nation has noted concerns that marine shipping activities within Dixon Entrance have increased the ambient concentrations of air pollutants in the area (Cedar 2022b).

18.2.2 Project Pathways

All phases of the Project (construction, operation, decommissioning) have the potential to affect Haida Nation marine harvest and consumption. Changes to Haida Nation marine harvest and consumption could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.2.3 Mitigation and Enhancement Measures

Mitigation measures were selected based on the considerations described in Section 18.1.8 and are intended to be implemented in combination with Project design considerations and measures to mitigate and enhance potential effects of the Project on environmental resources and conditions that support Haida Nation marine harvest and consumption. A complete listing of measures can be found in Appendix A and additional details can be found in the following VC Sections:

- Air Quality (Section 7.02)
- Acoustic (Section 7.03)
- Wildlife and Wildlife Habitat (Marine Birds) (Section 7.07)
- Marine Resources (Section 7.09)
- Marine Use (Section 7.11)

Table 18.2–1 provides additional mitigation and enhancement measures to further avoid or reduce impacts to Haida Nation interests, including marine harvest and consumption. In conjunction with these measures, the Proponents will develop and implement a Project-specific construction environmental management plan that describes the mitigation and enhancement measures tied to Project-related activities and physical works associated with construction. The construction environmental management plan will be incorporated into appropriate construction-related contracts.

While the mitigation measures are intended for the Proponents, Project contractors will be required to implement these measures as applicable to their scope of work.

Table 18.2–1 – Mitigation and Enhancement Measures to Avoid or Reduce Potential Effects on Haida Nation Interests

Mitigation/Mitigation Mechanism	Rationale for Selection	Expected Success/Risks and Uncertainty	Timing and Effectiveness	Management and/or Compensation Plans
Mitigation IN-1: The Proponents will continue to work with Haida Nation to develop a shared understanding of how the Project may affect its Indigenous interests. The Proponents will continue engaging with Haida Nation to discuss the Project and its effects, understand concerns that may arise, and respond to those concerns. **Mechanism:** The Proponents will continue to work with Haida Nation to explore opportunities to further mitigate adverse effects to Haida Nation's interests and enhance Project benefits. To this end, the Proponents will continue to engage Haida Nation to seek its opinions, recommendations and Nation-specific expertise in the development of the social and economic effects management plan and for components of the construction environmental management plan specific to the marine environment. Through ongoing engagement (i.e., throughout the life of the Project), the Proponents aim to maintain a positive long-term relationship with Haida Nation.	This measure was selected based on their effectiveness to mitigate potential changes in health, technical and economic feasibility, their inclusion as mitigation measures in similar projects proposed for the Pacific North Coast, the views of Haida Nation regarding mitigation appropriateness, and professional judgment of the effects assessment team.	**Expected Success:** The success of this measure is contingent upon Haida Nation willingness to engage with the Proponents, Haida Nation's specific communication protocol needs, and implementation of additional public notices. **Risk and Uncertainty:** Low	**Project Phase:** All phases **Effectiveness**: This mitigation measure is effective in the long-term.	Indigenous Engagement and Collaboration Plan construction environmental management plan Health and medical services plan social and economic effects management plan

18.2.4 Project Residual Effect

During the construction phase, two FLNG barges will be towed through the OWAA for installation within the Project footprint. If the FLNG barges are destined for a foreign shipyard, they would be towed through the OWAA during the decommissioning phase. FLNG barge transits through the OWAA during the construction phase, and possibly during the decommissioning phase, represent single events.

During the operation phase, approximately 140 to 160 Project-related LNG carriers and 8 - 12 NGL product vessels travelling at speeds of 12 to 19 knots/hour will transit the OWAA. An LNG carrier will therefore transit the OWAA approximately every 2.3 days during the operation phase (30 years). Adverse residual effects are anticipated on Haida Nation marine consumption and harvest and on related VCs (e.g., Marine Resources) within the OWAA during the operation phase.

As described in Section 7.02, existing air quality in the OWAA has limited influences due to its remote location (approximately 25 km north of Haida Gwaii), however, limited influence may occur from existing marine traffic. Predicted concentrations for NO_2 and SO_2 because of shipping (i.e., LNG carrier) activities in the OWAA are less than the regulatory criteria. Predicted concentrations for the Project, in combination with the existing conditions (baseline), are less than provincial, federal and international standards along the OWAA. The extent of residual effects is limited to within the OWAA and close to the LNG carrier along the shipping route, in locations over water. Concentrations do not persist in one location due to the transient nature of the LNG carrier, and concentrations decrease rapidly with increasing distance from the LNG carrier and tugboat emission sources. The residual effects associated with change in air quality along the OWAA are therefore reversible; ambient concentrations will reduce once operation shipping cease.

As described in Section 7.03, residual effects associated with the acoustic environment will result from noise emissions during construction and operation. However, the Project-related marine traffic residual effect on change in noise along the OWAA is below the baseline sound level. The Proponents understand that Haida marine usage or boat/marine passage may take place within proximity to the LNG carrier within the OWAA. Haida marine users may therefore experience sensory disturbance due to the audibility of the LNG carrier. When a receptor on a vessel is passing near a Project-related LNG carrier, noise effect from the Project will depend on the background sound level and distance from the LNG carrier. The background sound level will be a combination of natural and anthropogenic sound. In an open water environment, natural sound is typically wind, tidal waves, and wildlife (e.g., birds). The background sound level can exceed 60 decibels (dBA) during high wind and tidal waves. Anthropogenic sound could be the noise level from the vessel engine and exhaust on board the LNG carrier or other marine vessel passing by. If the background sound level is equal or higher than the LNG carrier noise level, the Project noise effect may not be noticeable. The pass-by sound level is the maximum sound level that will be experienced by a receptor momentarily, and it will decrease as the LNG carrier moves further away from a receptor. With the implementation of mitigation and management measures specific to change in noise levels, the residual effects are not anticipated to result in an exceedance of applicable provincial and federal noise guideline limits at most receptors.

Marine shipping activities during the operation phase may adversely affect Haida Nation marine harvest and consumption by altering the abundance and distribution of fish and marine mammals within the OWAA (Section 7.09). Vessel wakes produced during operation may result in increased wave activity throughout the OWAA; however, they are not expected to result in additional shoreline erosion, degradation of marine vegetation, or meaningful increases to total suspended solids (**TSS**) when compared to natural wave action in the area (Section 7.09). Underwater noise related to marine shipping activities is anticipated to be emitted into the marine environment of the OWAA during the operation phase; however, shipping-generated noise is not expected to exceed the threshold of injury for species of cultural importance to Haida Nation (Section 7.09).

The Project is not expected to result in residual effects that may adversely affect the long-term persistence of any marine population harvested and consumed by Haida Nation. A measurable change in the productivity of relevant fish, invertebrate, marine mammal, or sea turtle populations is not predicted within the OWAA (Section 7.09). Population-wide effects to any culturally important marine mammal species caused by vessel strikes are not anticipated within the OWAA (Section 7.09). During all Project phases, Project activities may increase mortality risk for marine birds and some mortality events may be unavoidable, but the sustainability of regional populations within the OWAA is not expected to be adversely affected (Section 7.07).

A measurable change in Haida Nation overall marine access along the OWAA is predicted to occur due to the increase in marine shipping activity; however, as the Project is expected to comply with existing marine use plans and participate in federal initiatives and requirements, it is not expected to create a change or disruption that widely reduces or restricts Haida Nation present marine access and use activities to a point where the Nation's citizens cannot continue at current activity levels (Section 7.11). Marine navigation is unlikely to be affected as the waters of OWAA are open and not confined by geography, allowing adequate space for Haida Nation marine users to navigate.

With the implementation of mitigation measures outlined in Table 18.2–1 and Appendix A, residual effects on Haida Nation interests related to marine harvest and consumption during the operation phase are anticipated to be moderate in magnitude within the OWAA, inclusive of timing considerations due to the seasonal movements of migratory species. Residual effects are long-term, lasting for longer than one generation (25 years), and may occur as multiple regular events during the operation phase (30 years). However, residual effects are largely considered reversible as they are primarily tied to the Project marine shipping traffic and associated effects. However, during Application review Haida Nation reported that its citizens may not recover from reduced levels of harvesting that persist for more than one generation due to the potential for reduced knowledge transmission, therefore, pursuant to the conservative approach, the reversibility of the residual effects on Haida Nation marine consumption and harvest and associated cultural practices is assessed as partially reversible. The risk of a residual effect on Haida Nation marine harvest and consumption is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. Sensory disturbances from LNG carriers, both real and perceived, may further deter Haida Nation citizens from accessing harvesting sites within the OWAA. However, the Project activities will occur within an established shipping route where marine and other

cultural activities will be able to safely continue in a manner that is generally consistent with existing conditions.

18.3 Changes to Haida Nation Governance and Social and Economic Conditions

This section provides the assessment of potential effects of the Project on Haida Nation governance and social and economic conditions.

18.3.1 Background and Existing Conditions

Haida Nation is a matrilineal society which recognizes a prominent role of hereditary matriarchs as part of its governing body (CHN 2018). Haida matriarchs are therefore consulted regarding important decisions related to Haida people and territories (CHN 2018).

Haida Nation is governed by the CHN, formed in 1974, which consists of 14 elected representatives, including a President, a Vice President, four regional representatives for HlGaagilda Skidegate, four regional representatives for Gaaw Old Massett, two regional representatives for T'agwan Vancouver, and two regional representatives for Kxeen Prince Rupert (CHN 2018, 2021). In addition to the elected representatives, Old Massett Village Council and Skidegate Band Council (**SBC**) will each appoint a councillor to the CHN (CHN 2018). Hereditary Chiefs assemble as the Hereditary Chiefs Council to address issues of the Haida Nation and attend sittings of the CHN (CHN 2018).

The CHN also maintains the Secretariat of the Haida Nation. This includes representatives of the CHN, Old Massett Village Council, SBC, and the Hereditary Chiefs Council (CHN 2018). The Old Massett Village Council and the SBC are elected and are responsible for the well-being of the communities and enact legal policies and programs in the areas of Capital, Education, Membership (citizens), and Health and Social Development, among others (CHN 2021). The House of the Assembly is the lawmaking authority of the Haida Nation. The decisions of the voting Haida Nation citizens of the House of Assembly is binding upon the Council of the Haida Nation (CHN 2018). The House of Assembly meets on the third week of October each year, alternating between Gaw Tlagee (Old Massett) and HIGaagilda (Skidegate), as well as on a quarterly basis as required (CHN 2021).

Gaw Tlagee (Old Massett) follows a policy-based model, and a new Chief and Council is elected every three years. There is currently an elected Chief and seven Councillors representing Gaw Tlagee (Old Massett) and the current term expires in June 2026 (CIRNAC 2024a). HIGaagilda (Skidegate) Chief and Council is elected on a two-year term and there is currently an elected Chief and seven Councillors, and the current term expires in March 2025 (CIRNAC 2024b).

The Council of the Haida Nation strives for full independence, sovereignty, and self-sufficiency of the Haida Nation while perpetuating Haida heritage and cultural identity (CHN 2021). The CHN represent Old Masset Village Council and the SBC (BC Treaty Commission 2021). As reported by Haida Nation to the Proponents, Haida Nation is in active litigation against BC and Canada to assert Haida Title to Haida Territory.

18.3.1.1 Haida Nation Arrangements with the Province of British Columbia, the Government of Canada, and other Indigenous Nations

In 2009, Haida Nation and the Province of BC signed Kunst'aa guu–Kunst'aayah Reconciliation Protocol to establish a more productive working relationship. This Protocol stipulates that land-use decisions will be shared between the two governments, recognizing the Haida Nation's right to ensure that land development on Haida Gwaii reflects Haida values and objectives (Haida Nation 2009, 2016).

In 2016, Haida Nation, along with the other Nations of the Great Bear Initiative Society, signed a Letter of Understanding on Environmental Quality and LNG Developments on the North Coast, and Skills Training & Employment with the Government of BC. The goal of this Letter of Understanding is to set out the major process commitments and understandings related to LNG shipping as well as air shed impacts, greenhouse gas emissions and offsets, renewable energy, and skills training and employment through the development of a Labour Partnership with Great Bear Initiative Member Nations (CFN and Province of British Columbia 2016).

In 2017, the Coastal First Nation Great Bear Initiative and the Province of BC signed the Amended Coastal First Nations Liquefied Natural Gas Benefit Agreement. This agreement promised the development of the liquefied natural gas industry in BC in an environmentally responsible manner to benefit the population of BC, including Great Bear Initiative Member Nations. In the Agreement, the Great Bear Initiative Nations indicated the interest in engaging with the province, including in collaboration on environmental impacts of future LNG project on the north Coast of BC and insurance of benefits for Great Bear Initiative Member Nations (CFN and Province of British Columbia 2017).

In 2018, Haida Nation also signed the Reconciliation Framework Agreement for Bioregional Oceans Management and Protection between 14 Pacific North Coast Nations and the Government of Canada; the agreement supports the collaborative planning, implementation, and integration of existing and proposed marine planning initiatives in the Northern Shelf bioregion (Pacific North Coast Nations and Government of Canada 2018). It promotes a more coordinated and efficient approach to the governance, management, and protection of oceans in the Pacific North Coast, including marine ecosystems, marine resources, and marine use activities (Government of Canada 2019).

Haida Nation, as a member of Coastal First Nations, signed in 2020 the Memorandum of Understanding, Coastal First Nation/British Columbia Pathway to Reconciliation: Long-Term Economic, Social, Governance and Environmental Sustainability Agreement. The objective of the Memorandum of Understanding is to continue to work together to protect the environment and boost the regional economy. Key interests of the memorandum include cooperative land marine stewardship, social and economic initiatives, climate change and conservation initiatives, and connectivity and digital capacity building (CFN and Province of British Columbia 2020).

In 2024, the Council of Haida Nation signed the Gaayhllxid Gíhlagalgang "Rising Tide" Haida Title Lands Agreement with the BC Provincial Government. This agreement grants ownership and jurisdiction of land from the Crown to Haida Nation. The agreement recognizes and affirms the Aboriginal title of Haida Nation to Haida Gwaii under Section 35 of the *Constitution Act*, 1982. Under the agreement, private

property interests remain unaffected, local governments, services and infrastructure remain under current Provincial laws, residents of Haida Gwaii will continue to receive municipal services and the payment of property taxes will not be affected, public infrastructure and services such as highways, airports, ferries, healthcare and education will remain unaffected, and Provincially issued leases, permits, and other approvals to use Crown lands will remain in effect over several years with future management to be negotiated (Haida Nation and Government of British Columbia 2024).

Haida Nation has not entered treaty negotiations with Canada and BC in the BC treaty process (Government of British Columbia 2022). In regard to Haida sovereignty, Haida Nation and the Canadian and BC governments entered into the GayG̲ahlda Changing Tide Framework Agreement to set out the process for all three parties to engage in negotiations that would "reconcile pre-existing Haida sovereignty with assumed Crown sovereignty and will be capable of evolving over time based on the co-existence of Crown and Haida Nation governments and the ongoing process of reconciliation" (Haida Nation, Canada and British Columbia 2021). In addition, this agreement sets out to address long-term issues, including issues identified by Haida Nation relating to environmental, social and community health and well-being, and economic well-being concerns.

The Proponents are not aware of any existing agreements made directly between Haida Nation and other Indigenous nations regarding governance of areas of territory overlap, as relevant to the Project.

18.3.1.2 Population and Reserves

As of April 2024, the registered population of Haida Nation Old Masset Village Council is 3,266 (CIRNAC 2024a) and the registered population of Haida Nation Skidegate is 1,759 (CIRNAC 2024b). There are approximately 5,025 total registered Haida Nation citizens comprised of 2,456 men and 2,569 women (CIRNAC 2024a, 2024b).

Approximately 653 Haida people live at Skidegate 1 and approximately 702 Haida people live at Masset 1 (CIRNAC 2024a, 2024b). Approximately 3,577 Haida people live off reserve and are reportedly "scattered throughout the world" (CIRNAC 2024a, 2024b).

A list of Haida Nation reserve lands is provided in Table 18.3–1 and the Nation's reserves are shown on Figure 18.12–1.

Haida Nation is comprised of Old Masset Village Council (Band No. 669) or Haida Village, located 5 km northwest of Masset at Masset Indigenous Reserve (IR) 1, and the Skidegate Mission (Band No. 670), located on the southeast corner of Graham Island at Skidegate IR 1 (CIRNAC 2024a, 2024b).

Old Masset Village Council has 27 reserves covering 970 ha, and Skidegate Mission has 11 reserves covering 842 ha.

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
Old Masset Village Council							
07669	AIN 6	QUEEN CHARLOTTE DISTRICT, AT MOUTH OF THE AIN RIVER, NORTH SHORE OF MASSET INLET, GRAHAM ISLAND	66.40	N/A	202.78	44.2	64.2
07683	COHOE POINT 20	QUEEN CHARLOTTE DIST., LOT 2079, ON DIBRELL BAY, EAST OF LANGARA ISLAND, OFF NORTHWEST TIP OF GRAHAM ISLAND	10.10	N/A	199.90	0	9
07675	DANINGAY 12	QUEEN CHARLOTTE DIST., ON WEST SHORE OF VIRAGO SOUND, NORTH COAST OF GRAHAM ISLAND	8.50	N/A	186.09	5.9	25.9
07682	EGERIA BAY 19	QUEEN CHARLOTTE DIST., LOT 2080, ON EGARIA BAY, EAST SHORE OF LANGARA ISLAND, NORTHWEST TIP OF GRAHAM ISLAND	10.10	N/A	201.50	0.4	10.5
07685	GUOYSKUN 22	QUEEN CHARLOTTE DISTRICT, LOT 2078, AT RHODE 4S POINT, WEST COAST OF LANGARA ISLAND	20.20	N/A	204.04	0.1	10.4
07665	HIELLEN 2	QUEEN CHARLOTTE DIST. AT MOUTH OF HIELLEN RIVER E. OF TOW HILL PROVINCIAL PARK, MCINTYRE BAY N. COST OF GRAHAM ISLAND	27.40	N/A	147.26	7	27.1
07677	JALUN 14	QUEEN CHARLOTTE DIST. SOUTHWEST OF NANKIVELL POINT AT MOUTH OF JALUN RIVER NORTH COAST OF GRAHAM ISLAND	7.10	N/A	195.76	0.7	20.8

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
07678	KIOOSTA 15	QUEEN CHARLOTTE DISTRICT ON SOUTH SHORE OF PARRY PASSAGE NORTHWEST TIP OF GRAHAM ISLAND	40.90	N/A	205.55	0.2	14.4
07372	KOSE 9	QUEEN CHARLOTTE DIST LEFT BANK OF THE NADEN RVR 4 MLS S. OF MOUTH ON NADEN HARBOUR, GRAHAM ISLAND	3.60	N/A	205.10	25.7	45.7
07674	KUNG 11	QUEEN CHARLOTTE DISTRICT ON WEST SIDE OF ALEXANDRA NARROWS NODEN HARBOUR VIRAGO SOUND, GRAHAM ISLAND	28.70	N/A	187.96	9.6	29.6
07667	LANAS 4	QUEEN CHARLOTTE DISTRICT AT MOUTH OF THE YAKOUN RIVER YAKOUN BAY SOUTHEAST SHORE OF MASSET INLET	78.00	N/A	200.71	53.8	73.9
07688	MAMMIN RIVER 25	QUEEN CHARLOTTE DISTRICT LOT 2085, AT MOUTH OF THE MAMMIN RIVER ON MAMMIN BAY, MASSET INLET, GRAHAM ISLAND	2.50	N/A	207.71	57.3	77.4
07664	MASSET 1	QUEEN CHARLOTTE DIST ON EAST SHORE OF MASSET HARBOUR BELOW ENTRY POINT NORTH COAST OF GRAHAM ISLAND	299.60	N/A	168.02	9.9	30
07671	MEAGWAN 8	QUEEN CHARLOTTE DISTRICT AT WIAH POINT NORTH COAST OF GRAHAM ISLAND EAST OF VIRAGO SOUND	19.80	N/A	170.48	2.7	22.7

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
07673	NADEN 10	QUEEN CHARLOTTE DISTRICT ON WEST SHORE AT MOUTH OF NADEN RIVER, NADEN HARBOUR, GRAHAM ISLAND	10.90	N/A	200.34	21.2	41.1
07686	NADEN 23	QUEEN CHARLOTTE DISTRICT LOT 2084, AT MOUTH OF STANDLY CREEK NADEN HARBOUR NORTH SHORE OF GRAHAM ISLAND	2.60	N/A	199.43	18.6	38.2
07687	OWUN 24	QUEEN CHARLOTTE DISTRICT, AT THE MOUTH OF THE AWUN RIVER, AWUN BAY, SOUTH SHORE OF MASSET INLET, GRAHAM ISLAND	3.00	N/A	214.71	53.9	74
07681	SAOUCHTEN 18	QUEEN CHARLOTTE DISTRICT, LOT 174, AT ROONEY POINT, WEST SIDE OF MASSET HARBOUR, GRAHAM ISLAND	11.40	N/A	170.46	13.6	33.6
07668	SATUNQUIN 5	QUEEN CHARLOTTE DISTRICT, AT STRATHDANG KWUN, POINT ON WEST SIDE OF YAKOUN BAY OF MASSET INLET, GRAHAM ISLAND	3.60	N/A	199.88	52.1	72.2
07680	SUSK 17	QUEEN CHARLOTTE DISTRICT, LOT 2083, AT PERIL BAY, EAST OF FREDERICK ISLAND, WEST SHORE OF GRAHAM ISLAND	63.10	N/A	224.54	21.5	41.5
07679	TATENSE 16	QUEEN CHARLOTTE DISTRICT, ON S.W. TIP OF LANGARA ISLAND, N. OF PARRY PASSAGE, N.W. OF GRAHAM ISLAND	6.50	N/A	202.93	0.4	14

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
07689	TIAHN 27	QUEEN CHARLOTTE DISTRICT, LOT 2082, AT TIAN BAY, W. SHOTE OF GRAHAM ISLAND	2.30	N/A	233.47	40.4	60.4
09534	TLAA GAA AAWTLAAS 28	Location not available at public datasets.	63.70	N/A	169.43	15.5	35.6
07666	YAGAN 3	QUEEN CHARLOTTE DISTRICT, AT YAKAN PT. W. OF TOW HILL PROV. PARK, ON MCINTYRE BAY, SOUTH OF GRAHAM ISLAND	34.80	N/A	149.31	7.6	27.7
07670	YAN 7	QUEEN CHARLOTTE DISTRICT, ON WEST SIDE OF ENTRANCE TO MASSET HARBOUR, NORTH COAST OF GRAHAM ISLAND	106.80	N/A	169.67	7.3	27.3
07684	YASITKUN 21	QUEEN CHARLOTTE DISTRICT, LOT 2081, ON NORTHWEST COAST OF LANGARA ISLAND, NORTHWEST OF GRAHAM ISLAND	20.20	N/A	203.66	0	6.6
07676	YATZE 13	QUEEN CHARLOTTE DISTRICT, SOUTHEAST OF KLASHWUN POINT, WEST OF VIRAGOSOUND, NORTH COAST OF GRAHAM ISLAND	18.20	N/A	186.71	0	19
Skidegate Mission							
07700	BLACK SLATE 11	QUEEN CHARLOTTE DIST, BLK A, SEC. 23, TP 2, ON SLATECHUCK CREEK ABT 2 MLS WEST OF ITS MOUTH ON KAGAN BAY SKIDEGATE INLT	17.70	N/A	240.15	100.3	120.4
07696	CUMSHEWAS 7	QUEEN CHARLOTTE DIST. ON NORTH SHORE OF CUMSHEWAS INLET WEST OF MCCOY COVE, EAST SIDE OF MORESBY ISLAND	22.60	N/A	240.44	122.2	142.2

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
07692	DEENA 3	QUEEN CHARLOTTE DISTRICT, ON SOUTH SHORE OF SKIDEGATE INLET ON NORTH SIDE OF SOUTH BAY NORTH END OF MORESBY ISLAND	48.20	N/A	242.95	110.1	130.1
07695	KASTE 6	QUEEN CHARLOTTE DISTRICT, AT MOUTH OF COPPER CREEK, ON COPPER BAY, NORTHEAST COAST OF MORESBY ISLAND	15.40	N/A	231.76	109	129
07693	KHRANA 4	QUEEN CHARLOTTE DISTRICT, ON THE EAST END OF MAUDE ISLAND IN SKIDEGATE INLET BTWN. GRAHAM & MORESBY ISLANDS	85.00	N/A	233.60	102.4	122.4
07694	LAGINS 5	QUEEN CHARLOTTE DISTRICT AT MOUTH OF LAGINS GREEK AT HEAD OF GRAHAM ISLAND, SKIDEGATE INLET	16.20	N/A	243.02	101.3	121.3
07699	NEW CLEW 10	QUEEN CHARLOTTE DISTRICT LOT 175, ON NORTH SHORE OF LOUISE ISLAND IN THE QUEEN CHARLOTTE GROUP	11.20	N/A	244.81	124.1	144.2
07691	SKAIGHA 2	QUEEN CHARLOTTE DIST. ON EAST COAST OF GRAHAM ISLAND AT HALIBUT BAY, 7 MILES N. OF SKIDEGATE MISSION	25.10	N/A	215.17	85	105.1
07697	SKEDANCE 8	QUEEN CHARLOTTE DISTRICT, ON EAST TIP OF LOUIS ISLAND OF THE QUEEN CHARLOTTE GROUP	68.40	N/A	246.42	130.7	150.8

Table 18.3–1 – Haida Nation Reserves

Number	Name	Location	Size (ha)	Valued Component Assessment Areas Overlapping Reserve Lands	Distance to Project Footprint (km)	Distance to OWAA (km)	Distance to MSR (km)
07690	SKIDEGATE 1	QUEEN CHARLOTTE DIST. AT SKIDEGATE MISSION, MOUTH OF SKIDEGATE INLET, SOUTHEAST OF GRAHAM ISLAND	505.70	N/A	223.85	93.8	113.9
07698	TANOO 9	QUEEN CHARLOTTE DISTRICT, ON THE EAST SHORE OF TANOO ISLAND, QUEEN CHARLOTTE GROUP	26.30	N/A	267.80	152.87	172.92

18.3.1.3 Housing, Education, and Health Services

The Haida Housing Department is operated by the SBC (SBC 2014) and supports Haida Nation citizens living on-reserve with a variety of housing issues such as securing social housing, rentals, mould remediation/renovations, general home renovations, and construction of new homes and home financing (SBC 2014). The Housing Department also offers support to Elders seeking accessible unit rentals, and other citizens seeking band housing rentals (SBC 2014).

Haida Nation offers educational services on-reserve to support its citizens. The Skidegate Education Committee is comprised of 10 active citizens formed by a mix of Band Council members and Haida volunteers (SBC 2014). The SBC offers several programs including the Skidegate Inlet Adult Day Program, the Skidegate Head Start Program, the Skidegate Daycare Program, the Skidegate Nursery School Program, and the Sk'aadgaa Naay Elementary School Program, and offers funding for Haida people pursuing post-secondary education off-reserve (administered through the Skidegate Education Committee) (SBC 2014).

The SBC also offers other forms of education in cultural protocols such as the Friends Together Singing—Hltaaxuulang Gud ad K'aajuu Dance Group and the Hlgaagilda Children's Haida Dance Group (SBC 2014). The Friends Together Singing—Hltaaxuulang Gud ad K'aajuu is a traditional Haida dance group comprised of Haida people from various clans that come together to learn and pass on Haida song and dance, and the history and protocols that guide them (SBC 2014). The Hlgaagilda Children's Haida Dance Group is open to Haida toddlers to teens and "is an important venue for the passing down of Haida culture, stories, songs, and dance." Parents are deeply involved in the children's dance group and support them with preparation of "regalia, masks, discipline, and fundraising" (SBC 2014).

Haida Nation is greatly invested in the health and well-being of its citizens. The Social Development Department of the SBC provide health services (e.g., counselling, access to doctors and nurses) through the Health Center (Xaaynangaa Naay) at Skidegate 1 (SBC 2014). The Health Center Director and staff develop and implement a range of programs to meet the health (physical, mental, social) needs of Haida Nation citizens at Skidegate 1 (SBC 2014).

The Proponents understand that sites associated with resources and cultural values support the health and well-being of Haida Nation. For this assessment, community cohesion is defined as the social attachment and/or sense of belonging that Indigenous people may express within their unique communities (e.g., common identity, interpersonal and/or intergroup trust, norms of reciprocity, participation in community/cultural events, intergenerational solidarity and social networks of emotional, and social and spiritual support) (Northern Health 2018; Statistics Canada 2016).

18.3.1.4 Economic Development

In 2016, the average total income of Haida Nation citizens living at Masset 1 was $19,873, approximately $26,000 less than the average total income of other households in BC (CIRNAC 2022a). The average total income of Haida Nation citizens living at Skidegate 1 was $32,761 in 2016, approximately $13,000 less than the average total income of other households in BC (CIRNAC 2022b).

The recorded unemployment rate in 2016 was 8.3% for Haida women and 25.7% for Haida men living at Masset IR 1 (CIRNAC 2022a), whereas the recorded unemployment rate in 2016 was 8.5% for Haida women and 12.8% for Haida men living at Skidegate 1 (CIRNAC 2022b). The Social Development Department of the SBC provides income assistance and related programs and services to Haida people living at Skidegate 1.

Haida Nation consider its economy to be mixed; Haida people are primarily business owners, entrepreneurs, and artists; however, the service industry, government positions, and employment in the natural resource sectors (fishing and lodging) are also important (HaiCo n.d.). According to the 2016 Census, citizens of Haida Nation living at Masset 1 and Skidegate 1 were primarily employed in “other services”, management, and sales and services (CIRNAC 2023a, 2023b).

Through the Haida Independence Project, the Haida House of Assembly approved the creation of the Haida Enterprise Corporation (**HaiCo**) as a National Corporation to manage, grow, and govern the business enterprises of the Haida Nation, and to develop a sustainable economy on Haida Gwaii with the goals of generating revenue to attain financial independence and improve the quality of life for the collective benefit of the Haida people (BCAFN 2021). Haida people continue to thrive through harvesting and managing the abundant natural resources in their Haida Territories as identified by Haida Nation. Species such as wild salmon, halibut, clams, scallops, and seaweed are some of the culturally important staples that are continually harvested that help sustain Haida people and their economies (HaiCo n.d.).

The HaiCo owns four subsidiaries, interests currently in eco/cultural tourism, forestry, value-added wood manufacturing, and seafood processing, and have won various awards including the Aboriginal Tourism Award, Aboriginal Business Award, and BC Achievement Foundation Business of the Year (BCAFN 2021).

18.3.2 Project Pathways

All phases of the Project (construction, operation, decommissioning) have the potential to affect Haida Nation governance and social and economic conditions. Changes to Haida Nation governance and social and economic conditions could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.3.3 Mitigation and Enhancement Measures

Mitigation measures were selected based on the considerations described in Section 18.1.8 and are intended to be implemented in combination with Project design considerations and measures to mitigate and enhance potential effects of the Project on environmental resources and conditions that support Haida Nation governance and social and economic conditions. A complete listing of measures can be found in Appendix A and additional details can be found in the following VC Sections:

- Air Quality (Section 7.02)
- Acoustic (Section 7.03)
- Wildlife and Wildlife Habitat (Marine Birds) (Section 7.07)
- Marine Resources (Section 7.09)
- Marine Use (Section 7.11)

Table 18.2–1 provides additional mitigation and enhancement measures to further avoid or reduce impacts to Haida Nation governance and social and economic conditions.

18.3.4 Project Residual Effect

As described in Section 18.2.4, residual effects are anticipated on Haida Nation marine harvest and consumption within the OWAA during all Project phases and these residual effects are connected to changes in Haida Nation governance and social and economic conditions. Residual effects may include alteration of the harvesting experience through change in air quality and increased noise levels (real or perceived), changes to the abundance and distribution of fish and marine mammals of social and economic significance to Haida Nation, and changes in the ability to make decisions regarding vessel traffic within the OWAA. These changes could also result in a reduction (real or perceived) of the Nation's ability to fulfill its obligations in marine plans, nation-to-nation agreements and access to off-island services that the Haida Nation citizens rely upon. If Haida Nation experience qualitative disconnect from marine harvesting sites, and / or sacred places and heritage sites along the OWAA, Haida Nation citizens may also experience loss or alteration of the ability to share knowledge and history with current and future generations throughout the operation phase.

However, the Project is expected to comply with existing marine use plans and participate in federal initiatives and requirements and is not expected to create a change or disruption that widely reduces or restricts Haida Nation citizens present marine access and use activities to a point where they cannot

continue at current activity levels (Section 7.11). The overall productivity of relevant fish, invertebrate, marine mammal, and sea turtle populations along the OWAA are not anticipated to be affected during all Project phases (Section 7.09). Haida Nation governance and social and economic conditions may, however, be affected through a related change in the status and position of hereditary leaders and change in the production of foods from discrete clan territories overlapping the OWAA.

With the implementation of mitigation measures outlined in Table 18.2–1 and Appendix A, residual effects on Haida Nation interests related to governance and social and economic conditions are anticipated to be low in magnitude during the construction and decommissioning phases and moderate in magnitude during the operation phase within the OWAA, inclusive of timing considerations due to the seasonal movements of migratory species and the seasonal use of sacred places and heritage sites. Residual effects are short-term during the construction and decommissioning phases and long-term during the operation phase, lasting for longer than one generation (25 years). Residual effects will occur as single events during the construction and decommissioning phases and as multiple regular events during the operation phase (30 years). As described in Section 18.2.4, residual effects are considered reversible during all Project phases as effects associated with marine shipping cease once the FLNG barges and LNG carriers pass through the OWAA. The risk of a residual effect on Haida Nation governance and social and economic conditions is low (minor consequence, low likelihood) during the construction and decommissioning phases and overall uncertainty in the predicted residual effect is low. During the operation phase, the risk of a residual effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. Sensory disturbances from LNG carriers (change in air quality, noise levels, preferred conditions), both real and perceived, may further deter Haida Nation citizens from accessing harvesting sites and sacred places and heritage sites within the OWAA. However, Project activities will occur within an established shipping route where social and economic activities and other cultural activities will be able to safely continue in a manner that is generally consistent with existing conditions.

18.4 Changes to Haida Nation Sacred Places and Heritage Sites

This section provides the assessment of potential Project effects on Haida Nation sacred places and heritage sites.

18.4.1 Background and Existing Conditions

The long-term reliance of Haida on the marine, coastal, and inland environments of Haida Gwaii is supported by the archaeological record, which documents a minimum 10,500-year-old cultural history (CHN 2011). Haida heritage and cultural identity are inseparable from the laws and customs surrounding harvesting, therefore harvesting “is more than an activity to obtain sustenance” and harvesting sites are also considered sacred places (CHN 2013). As previously reported, Haida Nation relies on the uninterrupted use of and access to its sacred places and heritage sites for its citizens’ physical and mental health, well-being, cultural identity, and cultural practices (Cedar 2022a). Haida Nation shares cultural knowledge and gains experience through direct interaction with its Territories, including sacred places and heritage sites. Sacred places and heritage sites are often visited when Haida Nation are harvesting resources, travelling to visit neighboring communities, and in preparation for community events such as,

feasts, potlatches, and other ceremonies (Cedar 2022a). Haida Nation previously noted that a consistent quality of experience free of sensory disturbances (i.e., predictable noise, light, and air quality) is required at sacred places and heritage sites on Haida Gwaii (Cedar 2022a). Haida Nation Sacred places and heritage sites are located within the Dixon Entrance area which is intersected by the OWAA.

Haida Nation citizens continue to gain cultural knowledge and experience through direct interaction with their Territories, including when harvesting resources with their families (e.g., food fishing, commercial fishing), travelling to visit neighboring communities, participating in community events (feasts, potlatches, and other ceremonies), and visiting sacred places and heritage sites (CHN 2013, Cedar 2022a). Haida Nation believe that these activities ensure the inter-generational transmission of traditional knowledge among Haida Nation citizens (CHN 2013).

18.4.2 Project Pathways

All phases of the Project (construction, operation, decommissioning) have the potential to affect Haida Nation sacred place and heritage sites. Changes to Haida Nation sacred places and heritage sites could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.4.3 Mitigation and Enhancement Measures

Mitigation measures were selected based on the considerations described in Section 18.1.8 and are intended to be implemented in combination with Project design considerations and measures to mitigate and enhance potential effects of the Project on environmental resources and conditions that support Haida Nation sacred places and heritage sites. A complete listing of measures can be found in Appendix A and additional details can be found in the following VC Sections:

- Air Quality (Section 7.02)
- Acoustic (Section 7.03)
- Marine Use (Section 7.11)

Table 18.2–1 provides the additional mitigation and enhancement measures to avoid or reduce impacts to Haida Nation sacred places and heritage sites.

18.4.4 Project Residual Effect

As described in Section 18.2.4, sensory disturbances (changes in air quality and noise levels) are predicted within the OWAA during all Project phases. A measurable change in Haida Nation marine access, and therefore Haida Nation ability to access sacred places and heritage sites, is also expected within the OWAA due to the increase in LNG carrier transits occurring during the operation phase (30 years). However, as the Project is expected to comply with existing marine use plans and participate in federal initiatives and requirements , it is not expected to create a change or disruption that widely reduces or restricts Haida Nation ability to access sacred places and heritage sites to a point where the Nation cannot continue at current activity levels.

As described in Section 7.15, 12 archaeological sites and 18 historic Culturally Modified Tree sites are located within the Archaeological and Heritage Resources LAA (Nisg̲a'a Category A lands). After implementation of mitigation measures identified in Section 7.15 and engagement with Nisg̲a'a Nation and other affected Indigenous groups, no adverse residual effects on Archaeological and Heritage Resources are anticipated within the Archaeological and Heritage Resources VC LAA.

As described in Section 7.11, wave heights generated by transiting LNG carriers and escort tugs are anticipated to be within the range of natural wave conditions. Therefore, wake waves are not expected to have adverse effects on sacred places and heritage sites within marine, intertidal, or shoreline areas and are therefore not carried forward in the assessment.

Haida Nation may, however, encounter reduced quality of experience and increased avoidance at sacred places and heritage sites within the OWAA due to real or perceived sensory disturbances (change in air quality and noise levels) associated with the increase in LNG carriers. If Haida Nation experiences qualitative disconnect from its sacred places and heritage sites along the OWAA, the Nation may also experience loss or alteration of the ability to share knowledge and history with current and future generations throughout the operation phase.

With the implementation of mitigation measures outlined in Table 18.2–1 and Appendix A, residual effects on Haida Nation interests related to sacred places and heritage sites are anticipated to be low in magnitude during the construction and decommissioning phases and moderate in magnitude during the operation phase within the OWAA, inclusive of timing considerations due to the seasonal use of sacred places and heritage sites. Residual effects are short-term during the construction and decommissioning phases and long-term during the operation phase. Residual effects will occur as single events during the construction and decommissioning phases and will occur as multiple regular events during the operation phase (30 years). Residual effects are considered reversible during all Project phases as effects associated with marine shipping cease once the FLNG barges and LNG carriers pass through the OWAA. The risk of a residual effect on Haida Nation sacred places and heritage sites is low (minor consequence, low likelihood) during the construction and decommissioning phases and overall uncertainty in the predicted residual effect is low. During the operation phase, the risk of a residual effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. Sensory disturbances from LNG carriers (change in air quality, noise levels, preferred conditions), both real and perceived, may further deter Haida Nation citizens from accessing sacred places and heritage sites within the OWAA. However, the Project activities will occur within an established shipping route where access to sacred places and heritage sites will be able to safely continue in a manner that is generally consistent with existing conditions.

18.5 Changes to Haida Nation Access and Travel

This section provides the assessment of potential effects of the Project on Haida Nation access and travel.

18.5.1 Background and Existing Conditions

Haida Nation citizens use travel routes that depart or end in Old Massett, Masset, or Skidegate (Cedar 2022b). There are several travel and access routes throughout the Dixon Entrance, including travel routes stretching over 240 km northward from Graham Island to Prince of Wales Island, Dalls Island, Forrester Island, and Alaska. In addition, there are routes extending 178 km westward to SGAAN KINGHLAS Bowie Seamount Marine Protected Area, and routes eastward and southward to Hecate Strait and coastal and mainland areas of BC and southern Vancouver Island (Cedar 2022b).

Haida Nation has previously identified that within Dixon Entrance there are several travel routes of cultural importance. Haida Settlements, villages, camps, cultural and historical sites, and intertidal/nearshore harvesting sites span the northern extent of Haida Gwaii and continue to be used and accessed by Haida Nation citizens (Cedar 2022b).

18.5.2 Project Pathways

All phases of the Project (construction, operation, decommissioning) have the potential to affect Haida Nation access and travel. Changes to Haida Nation access and travel could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.5.3 Mitigation and Enhancement Measures

Mitigation measures were selected based on the considerations described in Section 18.1.8 and are intended to be implemented in combination with Project design considerations and measures to mitigate and enhance potential effects of the Project on environmental resources and conditions that support Haida Nation access and travel. A complete listing of measures can be found in Appendix A and additional details can be found in the following VC Sections:

- Air Quality (Section 7.02)
- Acoustic (Section 7.03)
- Marine Use (Section 7.11)

Table 18.2–1 provides the additional mitigation and enhancement measures to avoid or reduce impacts to Haida Nation access and travel.

18.5.4 Project Residual Effect

As described in Section 18.2.4, sensory disturbances (changes in air quality and noise levels) are predicted within the OWAA during all Project phases. A measurable change in Haida Nation marine access and travel is also expected within the OWAA due to the increase in LNG carrier transits during the operation phase. However, as the Project is expected to comply with existing marine use plans and participate in federal initiatives and requirements , it is not expected to create a change or disruption that widely reduces or

restricts Haida Nation ability to access and travel to a point where the Nation cannot continue at current activity levels.

With the implementation of mitigation measures outlined in Table 18.2–1 and Appendix A, residual effects on Haida Nation interests related to access and travel are anticipated to be low in magnitude during the construction and decommissioning phases and moderate in magnitude during the operation phase within the OWAA, inclusive of timing considerations due to the seasonal use of specific access and travel routes (e.g., dependent on seasonal weather conditions, migratory species, seasonal openings of commercial fisheries, seasonal activities at sacred places and heritage sites). Residual effects are short-term during the construction and decommissioning phases and long-term during the operation phase. Residual effects will occur as single events during the construction and decommissioning phases and as multiple regular events during the operation phase (30 years). Residual effects are considered reversible during all Project phases as effects associated with marine shipping cease once the FLNG barges and LNG carriers pass through the OWAA (as discussed in 18.2.4). The risk of a residual effect on Haida Nation access and travel is low (minor consequence, low likelihood) during the construction and decommissioning phases and overall uncertainty in the predicted residual effect is low. During the operation phase, the risk of a residual effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. However, the Project activities will occur within an established shipping route where Haida Nation access and travel will be able to safely continue in a manner that is generally consistent with existing conditions.

18.6 Summary of Adverse Residual Effects

Table 18.6–1 summarizes the Project residual effects on Haida Nation interests. The assessment of disproportionately distributed residual effects on Haida Nation interests is provided following the table.

Table 18.6–1 – Project Residual Effects on Haida Nation Indigenous Interests

Project Phase	Mitigation and Enhancement Measures	Residual Effects Characterization Criteria								
		Magnitude	Geographic Extent	Timing	Duration	Reversibility	Frequency	Affected Sub-Populations	Risk (Likelihood and Consequences)	Uncertainty
Changes to Haida Nation marine harvest and consumption										
Construction	Mitigation IN-1; Applicable mitigations in Appendix A	L	OWAA	A	ST	PR	S	DD	L	L
Operation		M	OWAA	A	LT	PR	MR	DD	M	M
Decommissioning		L	OWAA	A	ST	PR	S	DD	L	L

Table 18.6–1 – Project Residual Effects on Haida Nation Indigenous Interests

Project Phase	Mitigation and Enhancement Measures	Residual Effects Characterization Criteria								
		Magnitude	Geographic Extent	Timing	Duration	Reversibility	Frequency	Affected Sub-Populations	Risk (Likelihood and Consequences)	Uncertainty
Changes to Haida Nation governance and social and economic conditions										
Construction	Mitigation IN-1; Applicable mitigations in Appendix A	L	OWAA	A	ST	R	S	DD	L	L
Operation		M	OWAA	A	LT	R	MR	DD	M	M
Decommissioning		L	OWAA	A	ST	R	S	ED	L	L
Changes to Haida Nation sacred places and heritage sites										
Construction	Mitigation IN-1; Applicable mitigations in Appendix A	L	OWAA	A	ST	R	S	DD	L	L
Operation		L	OWAA	A	LT	R	MR	DD	M	M
Decommissioning		L	OWAA	A	ST	R	S	DD	L	L
Changes to Haida Nation access and travel										
Construction	Mitigation IN-1; Applicable mitigations in Appendix A	L	OWAA	A	ST	R	S	DD	L	L
Operation		M	OWAA	A	LT	R	MR	DD	M	M
Decommissioning		L	OWAA	A	ST	R	S	DD	L	L

KEY

See Table 18.1–4 for detailed definitions

Magnitude:
NMC: No Measurable Change
L: Low
M: Moderate
H: High

Geographic Extent:
OWAA: Open Water Assessment Area
BR: Beyond Regional

Timing:
N/A: Not Applicable
A: Applicable

Duration:
ST: Short-term
MT: Medium-term
LT: Long-term

Reversibility:
R: Reversible
PR: Partially reversible
I: Irreversible

Frequency:
S: Single event
MIR: Multiple irregular event
MR: Multiple regular event
C: Continuous

Affected Sub-Populations:
ED: Evenly distributed
DD: Disproportionately distributed

Risk (Likelihood and Consequences)
L: Low
M: Moderate
H: High

Uncertainty:
L: Low
M: Moderate
H: High

18.6.1 Disproportionately Distributed Residual Effects on Haida Nation Subgroups

Based on the predicted residual effects within the OWAA, the Project may disproportionately affect Haida Nation subgroups in the following ways:

- Reduced quality of the harvesting experience, as well as access to fishing or shoreline harvesting sites, which may disproportionately affect Haida Nation citizens who rely more heavily on this marine environment and its resources for food, social, ceremonial (**FSC**) purposes and or to provide for Elders, hereditary leaders, and others in the community, as well as for feasting or other culturally important events, and for other purposes (e.g., spiritual, trade).
- Reduced decision-making and reduced access to areas where social and economic activities occur (e.g., commercial fishing), which may disproportionately affect Haida Nation citizens who rely more heavily on this marine environment and its resources for income, FSC purposes and/or for other purposes (e.g., cultural, economic, spiritual, trade).
- Reduced access and quality of experience at sacred places and heritage sites, which may disproportionately affect Haida Nation citizens who rely more heavily on these places for knowledge transmission, sharing cultural teachings and history, and spirituality.
- Reduced access and travel, which may disproportionately affect Haida Nation citizens who rely more heavily on established travel and access routes for safe navigation (e.g., seasonal considerations), access to the mainland, maintenance of trade relationships, or for income or FSC purposes and for other purposes (e.g., spiritual, trade).

If Haida Nation decision-making is reduced, or if access and travel routes are altered, or the quality of experience at marine harvesting sites, sacred places and cultural sites is altered, or if the quality and quantity of resources available within the OWAA is diminished, the culture, identity, mental health and physical health, and well-being of Haida Nation subgroups may be impacted.

With the use of mitigation and enhancement measures described throughout the Application, including the development and implementation of a feedback process to hear concerns from residents and members of vulnerable groups, the Proponents aim to reduce the differential effects on Haida Nation sub-groups.

18.7 Summary of Positive Residual Effects

Positive effects are anticipated within Nisga'a villages, and the cities of Terrace and Prince Rupert (i.e., Employment and Economy LAA, Infrastructure and Services LAA, and the Community Health and Wellness LAA) through regional gains in employment and income, business and improvements to municipal services, housing, utilities, and transportation infrastructure. None of these Project assessment areas overlap with Haida Territories, therefore direct positive effects on Haida Nation interests will be limited.

As described in Section 7.11, the addition of aids to navigation near the Site will have a positive effect on marine navigation. The installation of aids to navigation will not only mark dangers and obstructions related to the Project but assist marine users in determining their position and course, warn marine users of other dangers or obstructions, and advise marine users of the location of the best or preferred route (Section 7.09).

No direct positive residual effects to Haida Nation interests are predicted when compared to existing conditions. The Proponents are committed to working directly with Haida Nation to identify opportunities for Haida to realize potential benefits from the Project that can be used to both offset potential adverse effects and create positive effects for the Nation.

18.8 Cumulative Effects Assessment

This section provides the assessment of potential cumulative effects on Haida Nation interests.

18.8.1 Project Residual Effects Likely to Interact Cumulatively with Haida Nation Interests

The Project's residual effects described in Sections 18.2 to 18.5 that are likely to act cumulatively with those projects and physical activities listed in Table 6.9-1, Section 6.9.1 (Project and Physical Activities Inclusion List) are identified in Table 18.8–1 Where residual effects from the Project act cumulatively with residual effects from other projects and physical activities, a cumulative effects assessment is carried out. Effects identified in Table 18.8–1 as not likely to interact cumulatively with residual effects of other projects and physical activities (no check mark) are not discussed further. The assessment of the cumulative effects that are likely to result from the Project in combination with other projects and physical activities are discussed in subsequent sections.

Since not all reasonably foreseeable projects and physical activities may proceed, the cumulative effects assessment should be considered conservative.

Table 18.8–1 – Interactions with the Potential to Contribute to Cumulative Effects Haida Nation Interests

Other Projects and Physical Activities with Potential for Cumulative Effects	Haida Nation Interests			
	Changes to marine harvest and consumption	Changes to governance and social and economic conditions	Changes to sacred places and heritage sites	Changes to access and travel
Past and Present Projects and Physical Activities				
Port of Prince Rupert	✓	✓	✓	✓
LNG Canada Export Terminal	✓	✓	✓	✓
Prince Rupert Airports	-	-	-	-
Northwest Regional Airport Terrace-Kitimat (YXT)	-	-	-	-
Swamp Point – Sand and Gravel	✓*	✓*	✓*	✓*

Table 18.8–1 – Interactions with the Potential to Contribute to Cumulative Effects Haida Nation Interests

Other Projects and Physical Activities with Potential for Cumulative Effects	Haida Nation Interests			
	Changes to marine harvest and consumption	Changes to governance and social and economic conditions	Changes to sacred places and heritage sites	Changes to access and travel
Stewart Bulk Terminals	✓	✓	✓	✓
Stewart World Port	✓	✓	✓	✓
Port of Hyder, Alaska	✓*	✓*	✓*	✓*
Kitsault Mine	✓*	✓*	✓*	✓*
Tru Grit Abrasives	-	-	-	-
All West Trading	-	-	-	-
Various forestry activities	-	-	-	-
Various fishing and aquaculture activities	✓	✓	✓	✓
Marine shipping activities	✓	✓	✓	✓
Coastal GasLink	✓	✓	✓	✓
Reasonably Foreseeable Future Projects and Physical Activities				
Third-party powerline	-	-	-	-
Port of Prince Rupert	✓	✓	✓	✓
Port Edward Small Scale LNG (Port Edward LNG)	✓	✓	✓	✓
Prince Rupert Gas Transmission Project (TransCanada Corp.)	-	-	-	-
Westcoast Connector Gas Transmission Project (Enbridge Inc.)	-	-	-	-
Kinskuch Lake Hydro (Wind River Power Corporation)	-	-	-	-
Cedar LNG	✓	✓	✓	✓
Skeena LNG	✓	✓	✓	✓
Totem LNG	✓	✓	✓	✓
BC Hydro Transmission Line Upgrades	-	-	-	-

NOTES:
✓ = Those "other projects and physical activities" whose effects are likely to interact cumulatively with the Project's residual effects.
– = Interactions between the residual effects of other projects and residual effects of the Project are not expected.
* = Interactions between the residual effects of other projects and the residual effects of the Project are unknown; it is unclear if marine vessels associated with these projects transit the OWAA and/or Haida Territories.

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18.8.2 Assessment of Cumulative Effects on Haida Nation Marine Harvest and Consumption

Haida Nation has previously reported concerns surrounding impacts to marine resources and the cumulative effects of human activities on the environment (Cedar 2022a). In 2015, the Haida Gwaii Marine Plan was developed as a comprehensive approach to consider the relationships between species and habitats, accounting for the short- and long-term and cumulative effects of human activities (Marine Planning Partnership Initiative 2015).

Extensive oceanographic and ecological mapping exists for many areas on the BC coast, however Haida Nation believe there is less information—both mapped and written—that captures and enables cultural transference among Haida Nation citizens (CHN 2011). Some of this information does not exist in written literature, and as Elders pass, Haida Nation believes it is at risk of losing critical information regarding its marine history and cultural relationship to the land and ocean (CHN 2011). For Haida Nation, "any interference with the traditional use of a resource or site resulting from an oil spill (or other vessel incidents or malfunctions) will be culturally significant" (CHN 2013).

Haida Nation recognize that maintaining traditional foods at specific thresholds (e.g., abundance levels) is necessary to sustain not only its harvesting practices, but also the Haida culture and cultural identity (CHN 2013). Over the past several decades, Haida Nation has observed long-term species declines for culturally important species including salmon, Pacific herring, and abalone, driven largely by incremental environmental and biological factors coupled with industrial drivers that expose these at-risk species to further deterioration; these long-term declines are a significant concern of Haida Nation today (CHN 2013). Haida Nation are also concerned about the potential for invasive foreign species (e.g., foreign algae, jellyfish, marine plants and animals) to be transported into Haida Gwaii and surrounding waters via shipping traffic (e.g., via ballast water, bilge discharge, or ship hills) and potential impacts that invasive foreign species may have on existing marine species of the archipelago (CHN 2013). Impacts to marine birds, such as impacts to habitat, mortality, and movement, occur cumulatively as the number of projects in the construction and operation phases increase in the area (Cedar 2022b). In addition, Haida Nation has reported the potential for the cumulative effects of other projects in the region to impact marine fish and mammal behavior and therefore the Nation's ongoing commercial, recreational, and Indigenous vessel use along shipping routes transecting Dixon Entrance (Cedar 2022b).

18.8.2.1 Cumulative Effect Pathways

As summarized in Table 18.8–1, past and present project and physical activities that have been or are being carried out have contributed to the existing conditions for the OWAA and the exercise of Haida Nation rights and title. Reasonably foreseeable projects are also anticipated to contribute to the future conditions in the OWAA. Overall, increased marine vessel traffic within the OWAA has altered the current regional marine areas, contributing to existing cumulative effects on Haida Nation marine harvest and consumption.

All phases of the Project (construction, operation, decommissioning) have the potential to contribute to cumulative effects on Haida Nation marine harvest and consumption. Cumulative effects on Haida Nation marine harvest and consumption could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.8.2.2 Mitigation and Enhancement Measures for Cumulative Effects

Mitigation measures to limit residual cumulative effects to Haida Nation marine harvest and consumption are described in Table 18.2–1 and Appendix A, and additional details can be found in the following VC Sections:

- Air Quality (Section 7.02)
- Acoustic (Section 7.03)
- Wildlife and Wildlife Habitat (Marine Birds) (Section 7.07)
- Marine Resources (Section 7.09)
- Marine Use (Section 7.11)

Mitigation measures include legislation, best practices, and guidelines applicable to limiting cumulative effects within the region, such as:

- Federal legislation related to marine shipping and navigation (e.g., *Canada Shipping Act*, 2001, *Canadian Navigable Waters Act*)
- Project-specific management plans developed in accordance with federal and provincial legislation, regulations, and best practices

The Proponents have identified their willingness to collaborate in the following initiatives or programs regarding cumulative effects in the region:

- Develop and implement, subject to navigation safety, speed profiles for marine shipping to prevent or reduce the risk of collision between LNG carriers and marine vessels and mammals, fishers, and other marine users (Section 7.09)
- Programs planned and developed by government and in conjunction with other proponents, stakeholders, and Indigenous nations regarding regional management of potential cumulative effects of underwater noise on marine mammals in the marine shipping route (e.g., Transport Canada Cumulative Effects of Marine Shipping [**CEMS**] initiative; Section 7.09)
- Government-led initiatives with respect to cumulative effects on marine navigation, marine fisheries, and other uses in the marine shipping RAA (Section 7.11)

It is expected that proponents of future projects that require regulatory approval will develop mitigation measures like those developed for this Project. The Proponents are committed to working with Haida Nation to explore opportunities to further mitigate adverse effects to Haida Nation marine harvest and consumption and enhance the Project benefits. The Proponents are committed to working directly with Haida Nation to identify opportunities for Haida to realize potential benefits from the Project that can be used to both offset potential adverse effects and create positive effects for the Nation.

18.8.2.3 Residual Cumulative Effects

Cumulative effects from past, present, and reasonably foreseeable future projects in combination with the Project are predicted to adversely affect Haida Nation marine harvest and consumption. The general presence of vessels and increased number of vessels on the water within the OWAA may result in reduced access, interference, community concerns, and safety constraints on the water, which may affect Haida Nation's marine harvest and consumption activities.

As described in Section 7.02, cumulative residual effects for Project shipping activities in the OWAA are predicted to have negligible change on air quality from the residual effects for operations shipping. Predicted concentrations for the cumulative residual effects case for the OWAA are less than the provincial air quality objectives, federal standards, and the United States National Ambient Air Quality Standards.

As described in Sections 7.03, Project-related marine traffic residual effect is based on a "worst-case" 24-hour scenario, conservatively assuming that LNG carrier and assistance/harbor tugboat activities will occur on a daily basis. With the conservative assumptions, Project-related marine traffic residual effect along the open water marine shipping route is below the baseline sound level; the magnitude of the cumulative noise effect with respect to the present and future commercial vessels and ferries is predicted to be low.

As described in Section 7.07, residual cumulative effects on marine birds are predicted within the OWAA due to increased marine vessel traffic and associated changes in marine bird movement. As described in Section 7.09, residual cumulative effects on marine resources are predicted within the OWAA due to increased marine vessel traffic and associated underwater noise-related behavioural changes in marine mammals and fish as well as increased risk of marine mammal vessel strikes. These residual cumulative effects are predicted to interact with Haida Nation marine harvest and consumption within the OWAA.

As described in Section 7.11, residual cumulative effects are predicted on marine navigation. Approximately 2,920 vessels are predicted to pass the Triple Island Pilot Boarding Station, through to the OWAA, on both inbound and outbound vessel movements, each year. This total includes the estimated 160 LNGCs and 12 NGL product vessels visiting the Project. Of these, approximately 2,520 will intersect or transit the expected marine shipping route, mostly to and from the Port of Prince Rupert (i.e., approximately 2,340 vessels), and approximately 400 will transit to and from the south (i.e., from Kitimat) to the Triple Island Pilot Boarding Station.

With mitigation, contribution of the Project to residual cumulative effects on Haida Nation marine harvest and consumption is expected to be moderate in magnitude within the OWAA, inclusive of timing considerations due to the seasonal movements of migratory species. Residual cumulative effects are long-term, lasting for longer than one generation (25 years), and will occur as multiple regular events. Residual cumulative effects are considered partially reversible as they are primarily tied to the Project marine shipping traffic and associated effects. However, residual effects of past, present, and reasonably foreseeable future projects and physical activities, combined with the predicted residual effects of the Project, are anticipated to be irreversible for Haida Nation citizens who have already experienced alienation and dispossession from harvesting areas within the OWAA, as these experiences are likely to increase in the future rather than decrease and require regional initiatives and programs to be addressed. The risk of a residual cumulative effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. The Proponents have identified their willingness to collaborate in government-led initiatives with respect to cumulative effects on marine navigation and marine fisheries which may assist with reducing further perceptions of barriers and alienation.

No additional mitigation measures are proposed for the Project's incremental contributions to the cumulative effects on the related VCs or on Haida Nation marine harvest and consumption.

18.8.3 Assessment of Cumulative Effects on Haida Nation Governance and Social and Economic Conditions

A recent report by Berry and Schnitter (2022:91) noted that social, economic, cultural, and environmental values and benefits of Indigenous Guardian programs for Indigenous nations communities along coastal BC contributes "to taking care of their territory, nurturing cultural well-being, improving general health and community well-being, advancing governance authority for the respective Nations, increasing community capacity, opening and promoting economic opportunities, and providing financial capital inflows to the community." This report states that Indigenous peoples have a close relationship to land, water, animals, plants, and natural resources, and climate changes in their geographic areas are a concern for impacts related to health inequities and determinants of health (Berry and Schnitter 2022). Impacts from climate change and changes to environments have also been identified to result in potential cumulative effects on Indigenous food and water security, personal safety, mental well-being, livelihoods, and identity (Berry and Schnitter 2022).

18.8.3.1 Cumulative Effect Pathways

As summarized in Table 18.8–1, past and present project and physical activities that have been or are being carried out have contributed to the existing conditions for the OWAA and the exercise of Haida Nation rights and title. Reasonably foreseeable projects are also anticipated to contribute to the future conditions in the OWAA. Overall, increased marine vessel traffic within the OWAA has altered the current regional marine areas, contributing to existing cumulative effects on Haida Nation governance and social and economic conditions.

All phases of the Project (construction, operation, decommissioning) have the potential to contribute to cumulative effects on Haida Nation governance and social and economic conditions. Cumulative effects on Haida Nation governance and social and economic conditions could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.8.3.2 Mitigation and Enhancement Measures for Cumulative Effects

Mitigation measures to limit residual cumulative effects to Haida Nation governance and social and economic conditions are described Section 18.8.2.2, as well as in Table 18.2–1 and Appendix A.

18.8.3.3 Residual Cumulative Effects

Cumulative effects from past, present, and reasonably foreseeable future projects in combination with the Project are predicted to adversely affect Haida Nation governance and social and economic conditions. The general presence of vessels and increased number of vessels on the water within the OWAA may result in reduced decision-making, interference with Haida vessels, increased community concerns regarding marine travel and safety constraints on the water. In turn, these changes may affect Haida Nation overall mental and physical health, consumption and quality of marine resources, access to fishing, hunting, and cultural sites, trade and traditional journey routes, the transmission of cultural knowledge, the strengthening of family ties, and tourism, all of which are connected to Haida Nation's governance and social and economic conditions.

As described in Section 18.8.2.3, residual cumulative effects are anticipated on air quality, marine birds, marine resources, and marine access within the OWAA due to increased marine vessel traffic. These residual cumulative effects may result in changes in community health and Nation citizens' well-being due to changes to related interests (e.g., change in harvest and consumption, change in cultural identity, change to community cohesion).

With mitigation, contribution of the Project to residual cumulative effects on Haida Nation governance and social and economic conditions is expected to be moderate in magnitude within the OWAA, inclusive of timing considerations due to the seasonal movements of migratory species and seasonal activities at sacred places and heritage sites. Residual cumulative effects are long-term, lasting for longer than one generation (25 years), and will occur as multiple regular events. Residual cumulative effects are considered partially reversible as they are primarily tied to the Project marine shipping traffic and associated effects. However, residual effects of past, present, and reasonably foreseeable future projects and physical activities, combined with the predicted residual effects of the Project, are anticipated to be irreversible for Haida Nation decision-making and commercial fishers who have already experienced alienation and dispossession from harvesting areas within the OWAA, as these experiences are likely to increase in the future rather than decrease and require regional initiatives and programs to be addressed. The risk of a residual cumulative effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. The Proponents have identified their

willingness to collaborate in government-led initiatives with respect to cumulative effects on marine navigation and marine fisheries which may assist with reducing further perceptions of barriers and alienation.

No additional mitigation measures are proposed for the Project's incremental contributions to the cumulative effects on the related VCs or on Haida Nation governance and social and economic conditions.

18.8.4 Assessment of Cumulative Effects on Haida Nation Sacred Places and Heritage Sites

Haida Nation has previously indicated that as environmental conditions, marine populations, and human pressures on resources shift and change, the adaptive and timeless knowledge held by Indigenous people is critical to the survival of both Haida Nation and the settlers who now share the landscape and the ecosystem (CHN 2011).

Haida Nation believes that transmission of cultural knowledge is "disrupted with the loss of a resource" as children and youth will not be able to assist in harvesting; they grow up lacking knowledge of harvesting locations, harvesting techniques and equipment, seasonality, and will not be able to consume it (CHN 2013). Haida Nation have also noted that many Indigenous nations share the growing fear that traditional ways of transmitting knowledge are changing (CHN 2011).

18.8.4.1 Cumulative Effect Pathways

As summarized in Table 18.8–1 past and present project and physical activities that have been or are being carried out have contributed to the existing conditions for the OWAA and the exercise of Haida Nation rights and title. Reasonably foreseeable projects are also anticipated to contribute to the future conditions in the OWAA. Overall, increased marine vessel traffic within the OWAA has altered the current regional marine areas, contributing to existing cumulative effects on Haida Nation sacred places and heritage sites.

All phases of the Project (construction, operation, decommissioning) have the potential to contribute to cumulative effects on Haida Nation sacred places and heritage sites. Cumulative effects on Haida Nation sacred places and heritage sites could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.8.4.2 Mitigation and Enhancement Measures for Cumulative Effects

Mitigation measures to limit residual cumulative effects to Haida Nation sacred places and heritage sites are described Section 18.8.2.2, as well as in Table 18.2–1 and Appendix A.

18.8.4.3 Residual Cumulative Effects

Cumulative effects from past, present, and reasonably foreseeable future projects in combination with the Project are predicted to adversely affect Haida Nation sacred places and heritage sites. The general presence of vessels and increased number of vessels on the water within the OWAA may result in interference, community concerns, and safety constraints on the water, which may affect communities'

mental and physical health, the transmission of cultural knowledge, and Haida Nation ability to access, or maintain the current quality of experience, at Haida Nation's sacred places and heritage sites.

As described in Section 18.8.2.3, residual cumulative effects are anticipated on air quality (though below provincial and federal thresholds), and marine access within the OWAA due to increased marine vessel traffic. Residual cumulative effects on change in noise along the OWAA associated with marine shipping are also predicted to be below the baseline sound levels.

With mitigation, contribution of the Project to residual cumulative effects on Haida Nation sacred places and heritage sites is expected to be moderate in magnitude within the OWAA, inclusive of timing considerations due to the seasonal use of sacred places and heritage sites. Residual cumulative effects are long-term, lasting for longer than one generation (25 years), and will occur as multiple regular events. Residual cumulative effects are considered partially reversible as they are primarily tied to the Project marine shipping traffic and associated effects. However, residual effects of past, present, and reasonably foreseeable future projects and physical activities combined with the predicted residual effects of the Project are anticipated to be irreversible for Haida Nation citizens who have already experienced alienation and dispossession from sacred places and heritages sites in the OWAA as these experiences are likely to increase in the future rather than decrease and require regional initiatives and programs to be addressed. The risk of a residual cumulative effect is moderate (moderate consequence, high likelihood) with moderate uncertainty due to unknown external variables. The Proponents have identified their willingness to collaborate in government-led initiatives with respect to cumulative effects on marine navigation which may assist with reducing further perceptions of barriers and alienation for access to sacred places and heritage sites in the OWAA.

No additional mitigation measures are proposed for the Project's incremental contributions to the cumulative effects on the related VCs or on Haida Nation sacred places and heritage sites.

18.8.5 Assessment of Cumulative Effects on Haida Nation Access and Travel

As described in Section 18.5.1, Haida Nation has previously identified that within Dixon Entrance (and the OWAA), there are several travel routes of cultural importance. Haida Settlements, villages, camps, cultural and historical sites, and intertidal/nearshore harvesting sites span the northern extent of Haida Gwaii and continue to be used and accessed by Haida Nation citizens (Cedar 2022b).

Extensive oceanographic and ecological mapping exists for many areas on the BC coast, however Haida Nation believe there is less information—both mapped and written—that captures and enables cultural transference among Haida Nation citizens (CHN 2011). Some of this information does not exist in written literature; and as Elders pass, Haida Nation believes it is at risk of losing critical information regarding its marine history and cultural relationship to the land and ocean (CHN 2011). For Haida Nation, "any interference with the traditional use of a resource or site resulting from an oil spill (or other vessel incidents or malfunctions) will be culturally significant" (CHN 2013). In addition, Haida Nation has reported the potential for the cumulative effects of other projects in the region to impact marine fish and mammal behavior and therefore the Nation's ongoing commercial, recreational, and indigenous vessel use along shipping routes transecting Dixon Entrance (Cedar 2022b).

18.8.5.1 Cumulative Effect Pathways

As summarized in Table 18.8–1, past and present project and physical activities that have been or are being carried out have contributed to the existing conditions for the OWAA and the exercise of Haida Nation rights and title. Reasonably foreseeable projects are also anticipated to contribute to the future conditions in the OWAA. Overall, increased marine vessel traffic within the OWAA has altered the current regional marine areas, contributing to existing cumulative effects on Haida Nation access and travel.

All phases of the Project (construction, operation, decommissioning) have the potential to contribute to cumulative effects on Haida Nation access and travel. Cumulative effects on Haida Nation access and travel could result through the pathways identified in Table 18.1–2 in Section 18.1.4.

The conclusions in this section are informed by the results of engagement with Haida Nation, the literature review, and related biophysical VC assessments presented in the Application.

18.8.5.2 Mitigation and Enhancement Measures for Cumulative Effects

Mitigation measures to limit residual cumulative effects to Haida Nation access and travel are described Section 18.8.2.2, as well as in Table 18.2–1 and Appendix A.

18.8.5.3 Residual Cumulative Effects

Cumulative effects from past, present, and reasonably foreseeable future projects in combination with the Project are predicted to adversely affect Haida Nation access and travel. The general presence of vessels and increased number of vessels on the water within the OWAA may result in interrupted access to travel, harvesting, and other routes, community concerns, and safety constraints on the water, with implications for Haida Nation access and travel.

As described in Section 18.8.2.3, residual cumulative effects are anticipated on air quality (though below provincial and federal thresholds), and marine access within the OWAA due to increased marine vessel traffic. Residual cumulative effects on change in noise along the OWAA associated with marine shipping are also predicted to be below the baseline sound levels.

With mitigation, contribution of the Project to residual cumulative effects on Haida Nation access and travel is expected to be moderate in magnitude within the OWAA, inclusive of timing considerations due to the seasonal movements of migratory species. Residual cumulative effects are long-term, lasting for longer than one generation (25 years), and will occur as multiple regular events. Residual cumulative effects are considered partially reversible as they are primarily tied to the Project marine shipping traffic and associated effects. However, residual effects of past, present, and reasonably foreseeable future projects and physical activities combined with the predicted residual effects of the Project are anticipated to be irreversible for Haida Nation citizens who have already experience reduced access and travel in the OWAA as these experiences are likely to increase in the future rather than decrease and require regional initiatives and programs to be addressed. The Proponents have identified their willingness to collaborate

in government-led initiatives with respect to cumulative effects on marine navigation which may assist with reducing further perceptions of barriers for access and travel within the OWAA.

No additional mitigation measures are proposed for the Project's incremental contributions to the cumulative effects on the related VCs or on Haida Nation access and travel.

18.9 Summary of Cumulative Effects

Table 18.9–1 summarizes cumulative effects on Haida Nation interests. The assessment of disproportionately distributed residual cumulative effects on Haida Nation interests is provided following the table.

Table 18.9–1 – Summary of Residual Cumulative Effects on Haida Nation Interests

Residual Cumulative Effect	Mitigation and Enhancement Measures	Residual Cumulative Effects Characterization Criteria								
		Magnitude	Geographic Extent	Timing	Duration	Reversibility	Frequency	Affected Sub-Populations	Risk (Likelihood and Consequences)	Uncertainty
Changes to Marine Harvest and Consumption										
Residual cumulative effect with the Project	Mitigation IN-1; Applicable mitigations in Appendix A; Regional Initiatives and Programs	M	OWAA	A	LT	PR/I	MR	DD	M	M
Project contribution to residual cumulative effects		M	OWAA	A	LT	PR/I	MR	DD	M	M
Changes to Governance and Social and Economic Conditions										
Residual cumulative effect with the Project	Mitigation IN-1; Applicable mitigations in Appendix A; Regional Initiatives and Programs	M	OWAA	A	LT	PR/I	MR	DD	M	M
Project contribution to residual cumulative effects		M	OWAA	A	LT	PR/I	MR	DD	M	M

Table 18.9–1 – Summary of Residual Cumulative Effects on Haida Nation Interests

Residual Cumulative Effect	Mitigation and Enhancement Measures	Residual Cumulative Effects Characterization Criteria								
		Magnitude	Geographic Extent	Timing	Duration	Reversibility	Frequency	Affected Sub-Populations	Risk (Likelihood and Consequences)	Uncertainty
Changes to Sacred Places and Heritage Sites										
Residual cumulative effect with the Project	Mitigation IN-1; Applicable mitigations in Appendix A; Regional Initiatives and Programs	M	OWAA	A	LT	PR/I	MR	DD	M	M
Project contribution to residual cumulative effects		M	OWAA	A	LT	PR/I	MR	DD	M	M
Changes to Access and Travel										
Residual cumulative effect with the Project	Mitigation IN-1; Applicable mitigations in Appendix A; Regional Initiatives and Programs	M	OWAA	A	LT	PR	MR	DD	M	M
Project contribution to residual cumulative effects		M	OWAA	A	LT	PR/I	MR	DD	M	M

KEY
See Table 18.1–4 for detailed definitions

Magnitude:
NMC: No Measurable Change
L: Low
M: Moderate
H: High

Geographic Extent:
OWAA: Open Water Assessment Area
BR: Beyond Regional

Timing:
N/A: Not Applicable
A: Applicable

Duration:
ST: Short-term
MT: Medium-term
LT: Long-term

Reversibility:
R: Reversible
PR: Partially reversible
I: Irreversible

Frequency:
S: Single event
MIR: Multiple irregular event
MR: Multiple regular event
C: Continuous

Affected Sub-Populations:
ED: Evenly distributed
DD: Disproportionately distributed

Risk (Likelihood and Consequences)
L: Low
M: Moderate
H: High

Uncertainty:
L: Low
M: Moderate
H: High

18.9.1 Disproportionately Distributed Residual Cumulative Effects on Haida Nation Subgroups

Project activities in combination with activities associated with past/present and reasonably foreseeable projects are anticipated to result in the same disproportionately distributed effects on Haida Nation subgroups as those identified in Section 18.6.1. Disproportionately distributed cumulative effects on Haida Nation subgroups may occur within the OWAA.

18.10 Summary

Section 18.6 and Section 18.7 provide a summary of the assessment for Haida Nation outlining the adverse and positive residual effects on Haida Nation interests for the BC EAO to consider when determining the overall seriousness of impact to the Nation's interests.

The following sections summarize the assessment's concordance to the statutory requirements under the federal *Impact Assessment Act*, the prediction confidence of the assessment overall and discussion regarding follow-up programs for the Project.

18.10.1 Statutory Requirements Under the *Federal Impact Assessment Act*

The Proponents understand that Haida Nation interests are intricately linked to one another and are also connected to the Nation's rights, culture, history, protocols, health and well-being.

Matters of interest to Haida Nation and the potential effects on those interests were identified for assessment through engagement with Haida Nation, a review of issues and concerns about the Project raised by Haida Nation (Section 18.1.2.2 Key Areas of Concern), and guidance from current federal and provincial acts, impact assessment policies and best practices. Haida Nation interests and potential effects on those interests have been disaggregated according to the preference of Haida Nation. Collectively or independently, as applicable, these interests may inform certain factors for assessment under the federal IAA, as discussed below.

The Application's concordance to all statutory requirements under the federal IAA is provided in Section 24.0.

18.10.1.1 Factor 22(1)(c): Changes to Haida Nation Rights Recognized and Affirmed by section 35 of the *Constitution Act*, 1982

Haida Nation is a First Nation and a band as defined in section 2(1) of the *Indian Act*. Haida Nation has not entered treaty negotiations with Canada and BC in the BC treaty process (Government of Canada 2022). Haida Nation has relayed to the Proponents that the Nation is in active litigation against BC and Canada to assert Haida Title to Haida Territory. As described in Section 18.3.1.1, the Gaayhllxid Gíhlagalgang "Rising Tide" Haida Title Lands Agreement was signed in 2024 by the Council of Haida Nation and the BC Provincial Government; the agreement recognizes and affirms the Aboriginal title of Haida Nation to Haida Gwaii under Section 35 of the *Constitution Act*, 1982, and pertains to the transfer of ownership and jurisdiction of land from the Crown to Haida Nation (Haida Nation and Government of British Columbia 2024,). In regard to Haida sovereignty, Haida Nation and the Canadian and BC governments entered into the GayG̲ahlda Changing Tide Framework Agreement to set out the process for all three parties to engage

in negotiations that would "reconcile pre-existing Haida sovereignty with assumed Crown sovereignty and will be capable of evolving over time based on the co-existence of Crown and Haida Nation governments and the ongoing process of reconciliation" (Section 18.3.1.1; Government of British Columbia 2022), which means there is no treaty available to interpret or define section 35 rights specific to Haida Nation. Therefore, the Proponents' understanding of Haida Nation's section 35 rights is informed both in part by interpretations of relevant case law and by the perspectives of Haida Nation regarding its rights, as identified through publicly available literature and through engagement on the Project. Of note, as EA is not a rights-determination process, this section of the Application has assessed Project-related effects on Haida Nation interests that are broader than the activities typically addressed by case law (e.g., hunting, fishing, trapping) to include any interests or matters of importance identified by Haida Nation.

As required under Section 22(1) of the IAA, the assessment of effects regarding changes to Haida Nation rights recognized and affirmed by section 35 of the *Constitution Act, 1982* focused on Haida Nation interests described in Section 18.1.4, as compiled by the methods described in Section 18.1.2 and Section 18.1.3. The findings of the assessment found in Sections 18.2 to 18.5 and 18.8 are the same for this federal factor, which are also summarized in Sections 18.6, 18.7 and 18.9.

18.10.1.2 Factor 22(1)(g): Consideration of Indigenous Knowledge Provided with Respect to the Project

The development of this Application was influenced by the Proponents' consultation with Haida Nation. As discussed in Section 18.1.3, the Proponents recognize that Haida Nation is best positioned to identify the sources of information, including Indigenous knowledge, appropriate for this assessment.

Indigenous knowledge used in this Application is derived from ongoing engagement, Project-specific and nation-led studies, secondary sources, and publicly available information identified through engagement with Haida Nation. The treatment of Indigenous knowledge within this section of the Application is presented with any changes requested by Haida Nation following iterative opportunities for review and comment. Refer to Section 18.1.3 for additional information.

Additionally, within each applicable assessment Section of the Application, a summary of the key information, concerns and Indigenous knowledge shared with the Proponents is provided. This summary also describes the influence that the outcomes of this consultation and engagement has had on the respective assessment.

18.10.1.3 Factor 22(1)(l): Consideration of Changes to Haida Nation Culture

Changes to Haida Nation culture are considered through the assessment of the related interests and potential effects identified in Sections 18.2 to 18.5, including change in marine harvest and consumption, change in governance and social and economic conditions, change in sacred places and heritage sites, and change in access and travel. The assessment of cumulative changes to Haida Nation culture considered through the assessment of related interests is provided in Section 18.8.

18.10.1.4 Factor 22(1)(r): Consistency with any Plan or Study Prepared by Haida Nation that has been Provided for the Project (including any existing Land-Use or Marine-Use Plans)

As described in Section 18.1.5.3, Haida Nation has developed several LUPs to balance the ecological, cultural and economic interests on Haida Gwaii (CHN 2005). Haida Nation has protected important landscapes which include (CHN 2005):

- Tsuuaay, cedar—forests set aside to protect the workplaces of Haida Nation ancestors and monumental cedars for Haida culture
- Tsiin, salmon—riparian forest areas set aside to protect salmon stream conditions and restore degraded watersheds
- Taan, bear—habitat for denning and foraging within their territories where future logging may occur
- Kil, plants—places set aside to protect food and medicinal plants
- Xiit'lit, birds—places set aside to protect nesting and foraging habitat
- Sk'waii, beach—places set aside to protect life along the shore and intertidal zone

Haida Nation and the Province of BC implemented a Land Use Agreement in 2007, committing both parties to the cooperative development of a strategic LUP guided by an Ecosystem-Based Management (EBM) framework (British Columbia and CHN 2007). Together, they have established an advisory committee and working group to make recommendations on further development, monitoring and implementation of EBM on Haida Gwaii. The advisory committee is called "The Plan Implementation Monitoring Committee" and is comprised of Haida Gwaii island community citizens who monitor the implementation of the 2007 Land Use Agreement, and the working group was established as part of the Coast Land Use Announcement of February 2006 (British Columbia and CHN 2007).

Haida Nation and the Province of BC collaborated to create the Haida Gwaii Marine Plan, which is founded on an ecosystem-based framework and uses the best available science and traditional and local knowledge (Marine Planning Partnership Initiative 2015). The Haida Gwaii Marine Plan describes a long-term vision, and outlines objectives and strategies for the protection, conservation, and management of Haida Gwaii's coastal and marine areas and resources (Marine Planning Partnership Initiative 2015). Haida Nation developed the Haida Gwaii Marine Plan as part of the broader First Nations–British Columbia MaPP initiative (Marine Planning Partnership Initiative 2015). The Marine Plan Partnership is a co-led process between the Province of BC and 16 Indigenous nations focused on the development and implementation of plans for marine uses on the North Pacific Coast of BC (MaPP 2020). This plan compliments the 2007 Strategic Land Use Agreement between the Council of the Haida Nation and the Province of BC by providing management direction and zoning within EBM framework for uses and activities of marine environments (Marine Planning Partnership Initiative 2015).

The OWAA is primarily located within the marine portion of Haida Territories as identified by Haida Nation. Although the OWAA overlaps with Langara Island and a small portion of the northwestern tip of Graham Island (i.e., the northwestern extent of Haida Gwaii), marine shipping activities are not

predicted to interact with Haida Nation land use objectives. While the physical activities (marine shipping) associated with Project construction, operation and decommissioning are not explicitly described within either plan, objective 1.4 of the Haida Gwaii Marine Plan identifies the need to "Provide for joint evaluation of existing or proposed marine developments and/or projects through appropriate government arrangements" and strategy 1.4B identifies Haida Nation willingness to "Collaborate with other processes and organizations, including mainland communities and First Nations, on projects related to regional shipping and transportation activities" (Marine Planning Partnership Initiative 2015). The objective and associated strategy are not inconsistent with the Proponents mitigation to limit potential effects on Haida Nation interests through the development and implementation of the Indigenous Engagement and Collaboration Plan and commitment to working directly with Haida Nation to identify opportunities for Haida Nation to realize potential benefits from the Project that can be used to both offset potential adverse effects and create positive effects for the Nation.

Further, Haida Nation wishes that the Proponents reiterate that the Nation is in active litigation against BC and Canada regarding Haida Title to Haida Territorial Waters.

18.10.1.5 Factor 22(1)(s): Disproportionate Effects on Distinct Human Populations (Intersections of Sex and Gender with Other Identity Factors)

Where appropriate and information has been available, disproportionate effects on Haida Nation are described in Sections 18.6.1 and 18.9.1. Additionally, Section 7.10 Employment and Economy, Section 7.12 Infrastructure and Services and Section 7.13 Community Health and Wellness assess potential disproportionate effects on distinct human populations, including those identified by sex, age, and other relevant identity factors. The outcomes of these assessments relative to Haida Nation sub-groups are discussed within Sections 18.6.1 and 18.9.1, as applicable.

18.10.1.6 Effects under Section 2(b)(i): Changes to the Environment that would occur on Federal Lands

The Project is proposed to be built on Category A lands owned in fee simple by the Nisga'a Nation, one of the Proponents. It does not overlap with a national or provincial park, Crown land, land upon which there are other land tenure holders, or private property not owned by the Proponents. As such, there are no direct physical impacts such as vegetation clearing and grading that would occur on federal lands used or accessed by Haida Nation. Haida Nation reserve lands are federal lands in proximity to the Project footprint, the OWAA, and the marine shipping route, however, none of the VCs that may result in changes to the environment have the potential to interact with Haida Nation federal lands (refer to Table 18.3–1).

18.10.1.7 Effects under Section 2(c)(i): Changes to Physical and Cultural Heritage

Changes to physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological, or architectural significance consider all elements of cultural and historical importance to Haida Nation, in addition to provincial heritage legislative requirements. The Proponents understand that there are tangible and intangible elements of physical and cultural heritage such as Indigenous language, place names, sacred, ceremonial or culturally important places and cultural landscapes. Tangible and

intangible elements of physical and cultural heritage are considered aspects of each of the Haida Nation interests and potential effects identified for assessment. Therefore, the assessment of changes to Haida Nation physical and cultural heritage is provided in Sections 18.2 to 18.5 and cumulative changes to Haida Nation physical and cultural heritage are assessed in Section 18.8.

Additionally, Section 7.15 Archaeological and Heritage Resources assessed potential effects to physical heritage resources, including culturally modified trees, archaeological resources, and materials or other physical evidence of human habitation or use before 1846. The outcomes of this assessment relative to Haida Nation are discussed within Sections 18.2 to 18.5, as applicable.

18.10.1.8 Effects under Section 2(c)(ii): Changes to Current Use of Lands and Resources for Traditional Purposes

Changes to Haida Nation Marine harvest and consumption, sacred places and heritage sites, and access and travel were identified as interests and potential effects for assessment. Each of these interests are representative of Haida Nation's current use of land and resources for traditional purposes. The effects pathways evaluated for each of these interests are similarly focused on the conditions and resources that support traditional activities, such as, availability of harvested resources, ability to use and access lands and waters and sensory disturbances. The assessment of changes on each of these interests as they relate to Haida Nation's current use of land and resources for traditional purposes is provided in Sections 18.2, 18.4 and 18.5. Cumulative changes to each of these interests are assessed in Section 18.8.

18.10.1.9 Effects under Section 2(c)(iii): Changes to any Structure, Site or Thing of Historical, Archaeological, Paleontological, or Architectural Significance

The findings of the assessment found in Section 18.10.1.7 are the same for this federal factor.

18.10.1.10 Effects under Section 2(d): Changes to the Health, Social or Economic Conditions of Haida Nation

Changes to Haida Nation governance and social and economic conditions was identified as an interest and potential effect for assessment. Accordingly, the assessment of changes to Haida Nation health, social and economic conditions is provided in Section 18.3 and more broadly in Sections 18.2, 18.4, and 18.5 as these conditions often relate to land-based practices that are intricately connected to health (physical, mental and social well-being) and social and economic conditions (language, culture, governance, land use planning, economic development and self-determination). Cumulative changes to Haida Nation health, social and economic conditions are assessed in Section 18.8.

Additionally, where appropriate and information has been available, the health, social and economic conditions for Haida Nation are described in Section 7.10 Employment and Economy, Section 7.11 Marine Use, Section 7.12 Infrastructure and Services, Section 7.13 Community Health and Wellness and Section 7.14 Human Health. The outcomes of these assessments relative to Haida Nation are discussed within Sections 18.2 to 18.5, as applicable.

18.10.2 Prediction Confidence

The predication confidence in the conclusions for Project residual effects and residual cumulative effects for Haida Nation interests is moderate and is based on:

- Available information and feedback provided by Haida Nation
- Suite of mitigation measures and management plans developed for the Project
- The Proponents' understanding that Haida Nation interests occur on lands and waters within the Project assessment areas that overlap with the Haida territory

Conservative assumptions regarding the Project were also made for VCs related to Haida Nation interests, as described throughout the Application, to overestimate the effects assessed.

18.10.3 Follow-up Program

The Proponents' follow-up programs that relate to Haida Nation interests includes those programs described in Sections 7.02 Air Quality, 7.09 Marine Resources, and 7.11 Marine Use, as well as the following planned engagement activities and commitments:

- Engaging with Haida Nation to develop a shared understanding of how the Project may affect its Indigenous interests
- Engaging with Haida Nation to discuss the Project and its effects, understand concerns that may arise and respond to those concerns
- Working directly with Haida Nation to identify opportunities for Haida Nation to realize potential benefits from the Project that can be used to both offset potential adverse effects and create positive effects for the Nation

Through ongoing engagement (i.e., throughout the life of the Project) the Proponents aim to maintain a positive long-term relationship with Haida Nation.

18.11 Haida Nation Views

This section was authored by the Proponents and reflects the Proponents' understanding of Haida Nation's views shared through engagement to date. Feedback provided by Haida Nation on the Application during the Application Review phase of the EA has been incorporated into the revised Application for submission to the BC EAO[1].During the remainder of the environmental assessment and beyond, the Proponents are open to working with Haida Nation to explore opportunities to mitigate potential adverse effects and enhance Project benefits as well as monitor and manage Project effects.

[1] See the Indigenous Engagement Report for more information on Indigenous engagement activities led by the Proponents during the Application Review phase of the EA.

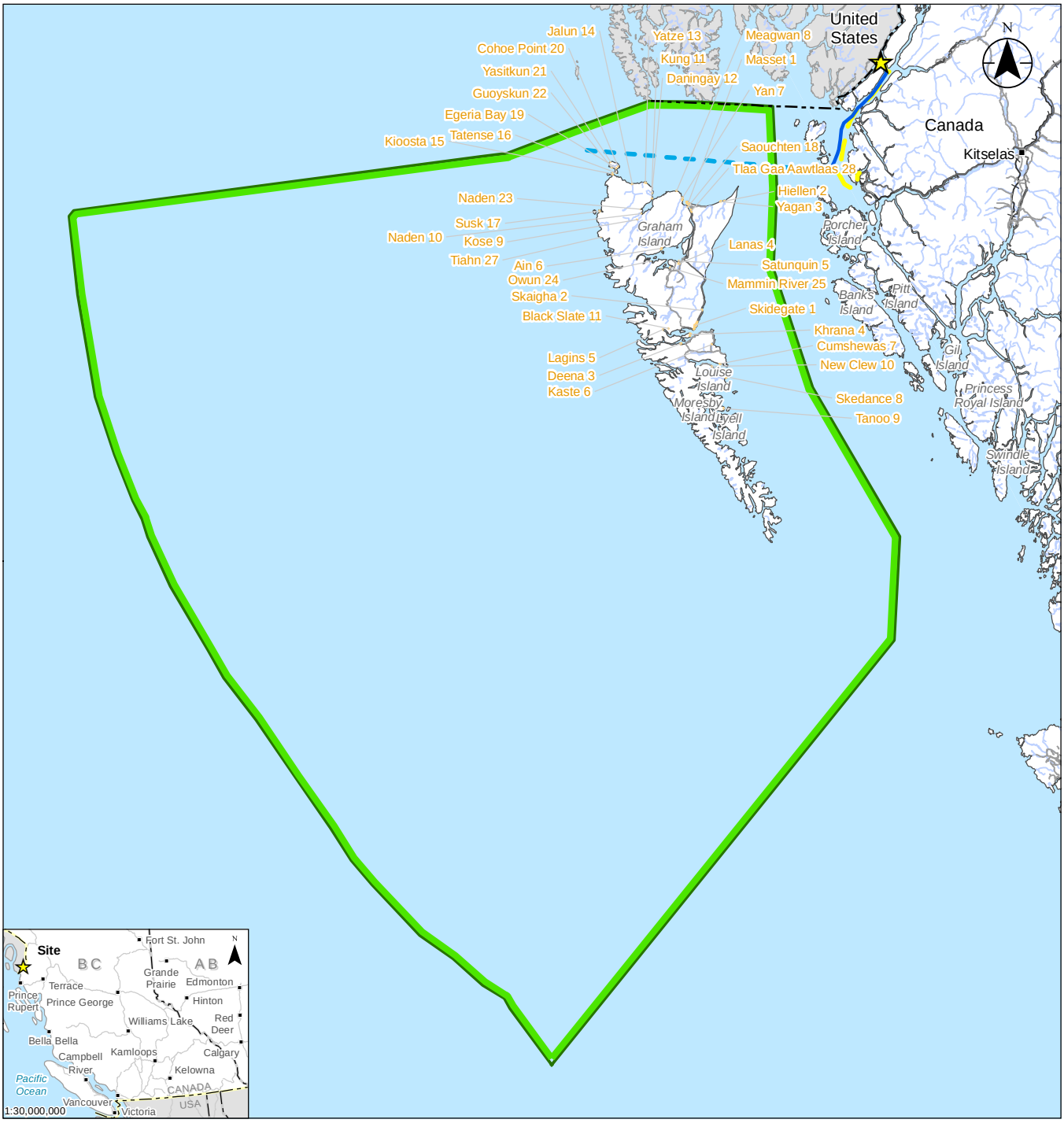
Section 18.1.2.1 of the Application provides a summary of past engagement activities with Haida Nation that have occurred since March 2021. Table 18.1–1 provides a summary of the key information, including Indigenous knowledge, concerns, and other views that the Proponents identified as part of their engagement efforts with Haida Nation, as well as a summary of the influence that the outcomes of this engagement had on the assessment. Section 18.1.2.2 and Table 18.1–1 summarize the Proponents' understanding of the feedback provided by Haida Nation regarding the assessment of the effects of the Project on Haida Nation's interests as well as other areas of interest related to the EA.

All comments received from Haida Nation regarding the Application as well as the Proponents responses are provided in the Issues Tracking Table (see Appendix G of the Application).

Haida Nation advised the Proponents that Haida Nation plans to focus their engagement activities with the EAO rather than participate in engagement activities led by the Proponents. The Proponents look forward to future engagement activities with Haida Nation should their position regarding engagement change. As relayed to the Proponents, Haida Nation does not consent to the Project's vessel traffic entering Haida Territorial Waters. Further, Haida Nation wishes to reiterate that the Nation is in active litigation against BC and Canada regarding Haida Title to Haida Territorial Waters.

Through ongoing engagement activities throughout the life of the Project, the Proponents would like to continue building a positive long-term relationship with Haida Nation. The Proponents encourage Haida Nation to continue participating in the EA so that their concerns, issues and interests are captured in the Assessment Report for the Project.

18.12 Figures



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation
- International Boundary
- Railway
- Watercourse
- Waterbody
- Reserve Land

0 50 100 150 200 km
1:4,200,000 (at original document size of 8.5x11)

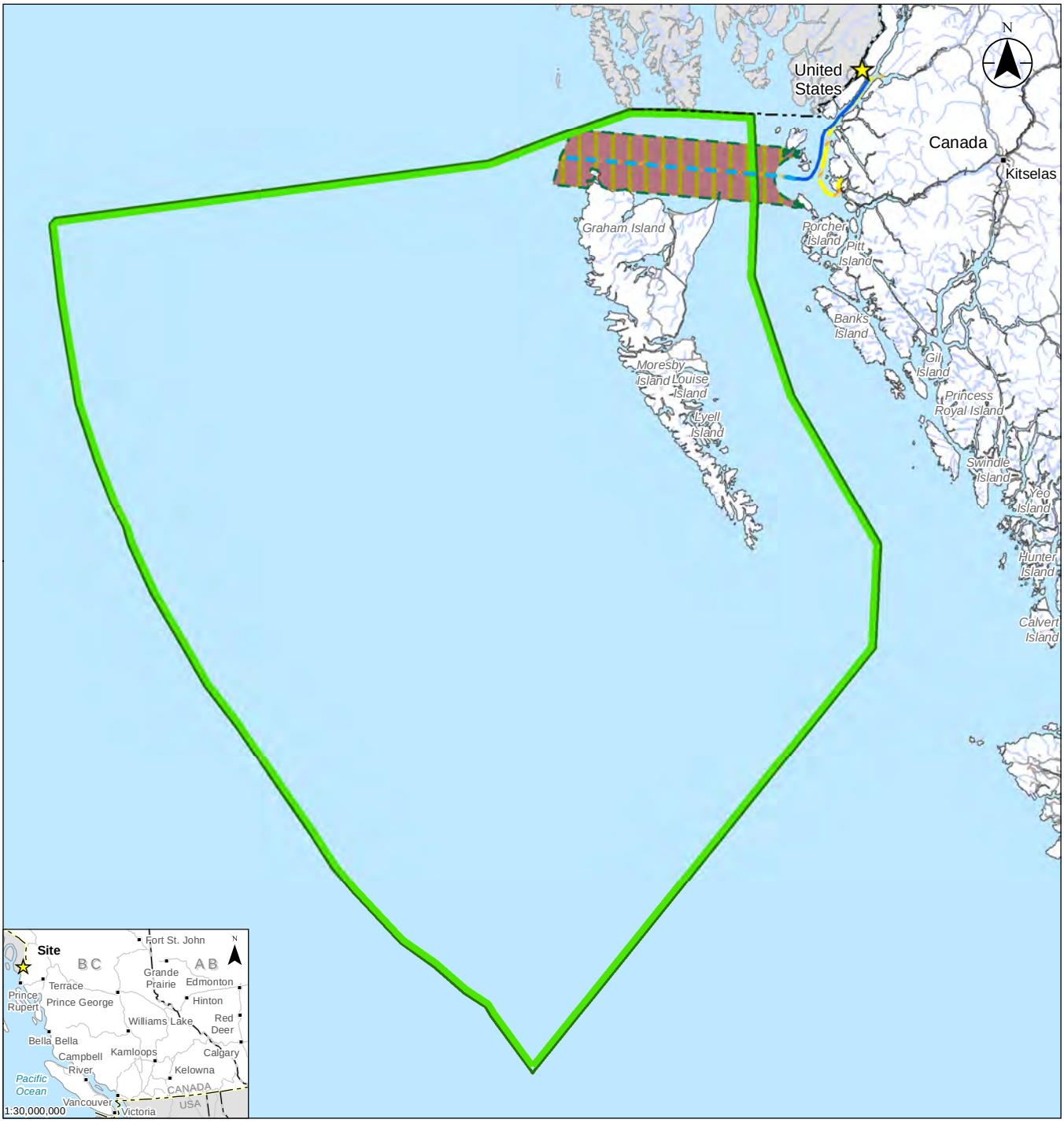
Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by TQUILICHINI on 20220914
Requested by AGAUVREAU on 20220902
Checked by SMOSS on 202209015

Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-1

Title
Haida Territories, as identified by Haida Nation; Overview Map



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation

Marine Resources
- Marine Resources Open Water Assessment Area

Marine Use
- Marine Use Open Water Assessment Area

Wildlife - Marine Shipping
- Marine Shipping Local Assessment Area
- Open Water Assessment Area
- International Boundary
- Railway
- Watercourse
- Waterbody

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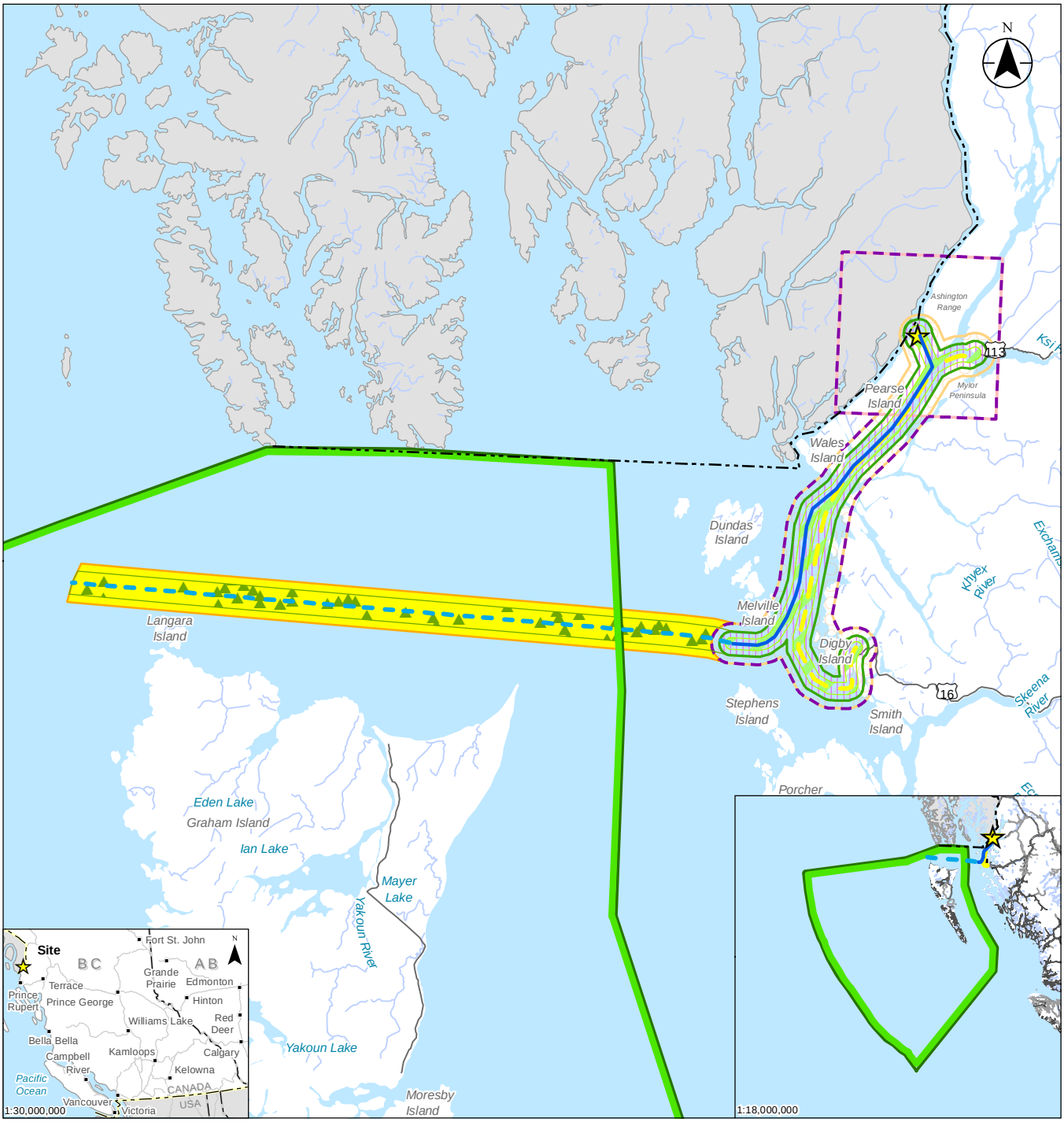
Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-2

Title
Assessment Boundaries for Haida Territories, as identified by Haida Nation; Key Map



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation

Acoustic Study Areas
- Acoustic/Human Health Local Assessment Area
- Acoustic Open Water Assessment Area
- Acoustic Regional Assessment Area

Air Quality
- Air Quality Facility Local Assessment Area
- Air Quality Open Water Assessment Area
- Air Quality Shipping Local Assessment Area

Human Health
- Human Health Local/Regional Assessment Area for Air Quality Effects
- Human Health Regional Assessment Area for Noise Effects
- International Boundary
- Highway
- Waterbody

0 10 20 30 40 km
1:1,500,000 (at original document size of 8.5x11)

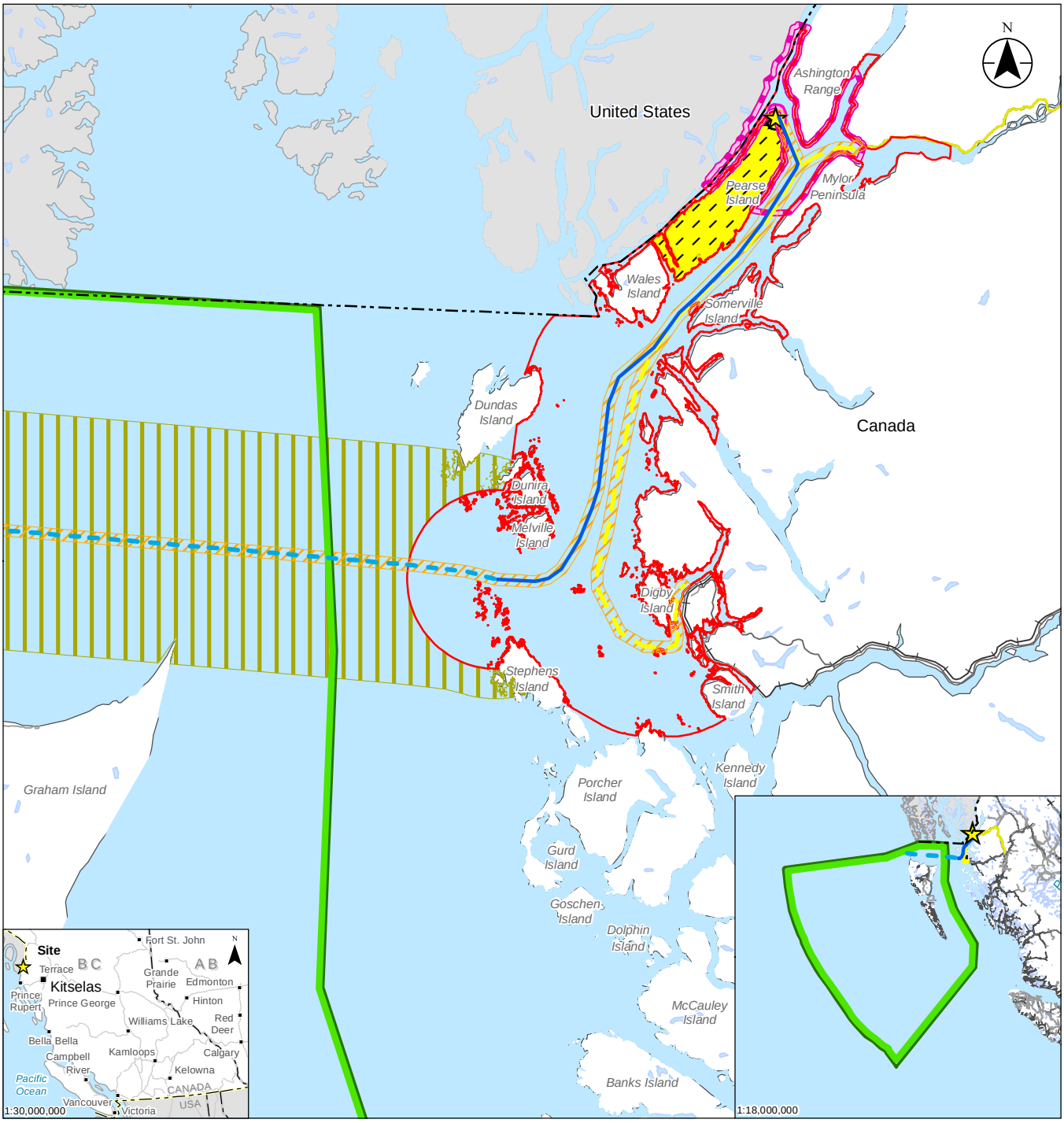
Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by TQUILICHINI on 20220913
Requested by AGAUVREAU on 20220902
Checked by SMOSS on 20220914

Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-3

Title
Assessment Boundaries for Haida Nation Territories as defined by Haida Nation; Air Quality, Acoustic, and Human Health



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation

Wildlife - Marine Shipping
- Marine Shipping Local Assessment Area
- Marine Shipping Regional Assessment Area
- Open Water Assessment Area

Wildlife - Marine Terminal
- Marine Terminal Local Assessment Area
- Marine Terminal Regional Assessment Area

Wildlife and Wildlife Habitat
- Wildlife Local Assessment Area
- Wildlife Regional Assessment Area
- International Boundary
- Railway
- Waterbody

0 10 20 30 40 km
1:1,000,000 (at original document size of 8.5x11)

Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by TQUILICHINI on 20220913
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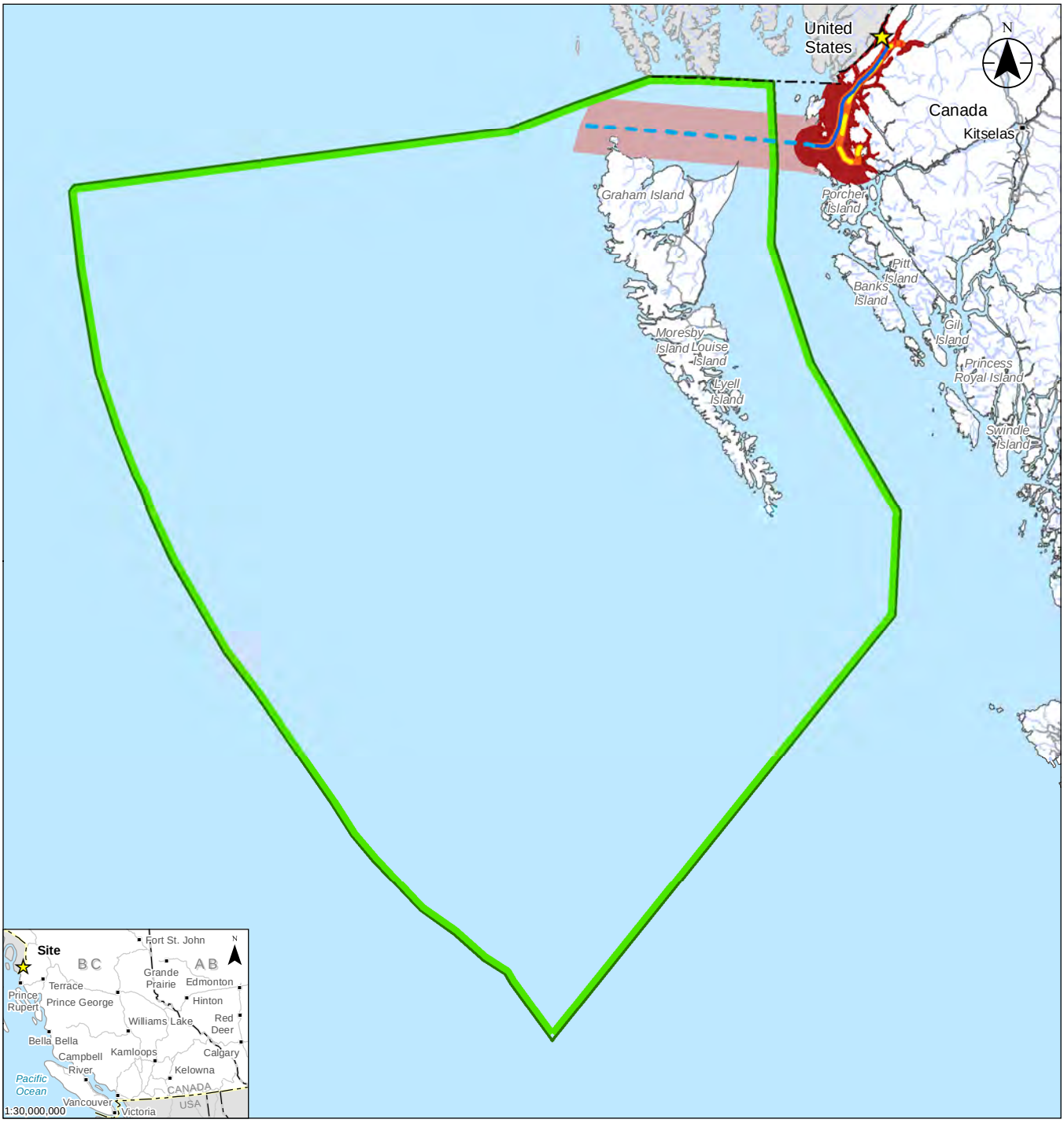
Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-4

Title
Assessment Boundaries for Haida Nation Territories as defined by Haida Nation; Wildlife and Wildlife Habitat



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation

Marine Resources
- Marine Resources Open Water Assessment Area
- Marine Resources Shipping Local Assessment Area
- Marine Resources Shipping Regional Assessment Area
- Marine Resources Terminal Local Assessment Area
- Marine Resources Terminal Regional Assessment Area
- International Boundary
- Railway
- Watercourse
- Waterbody

0 50 100 150 200 km
1:4,200,000 (at original document size of 8.5x11)

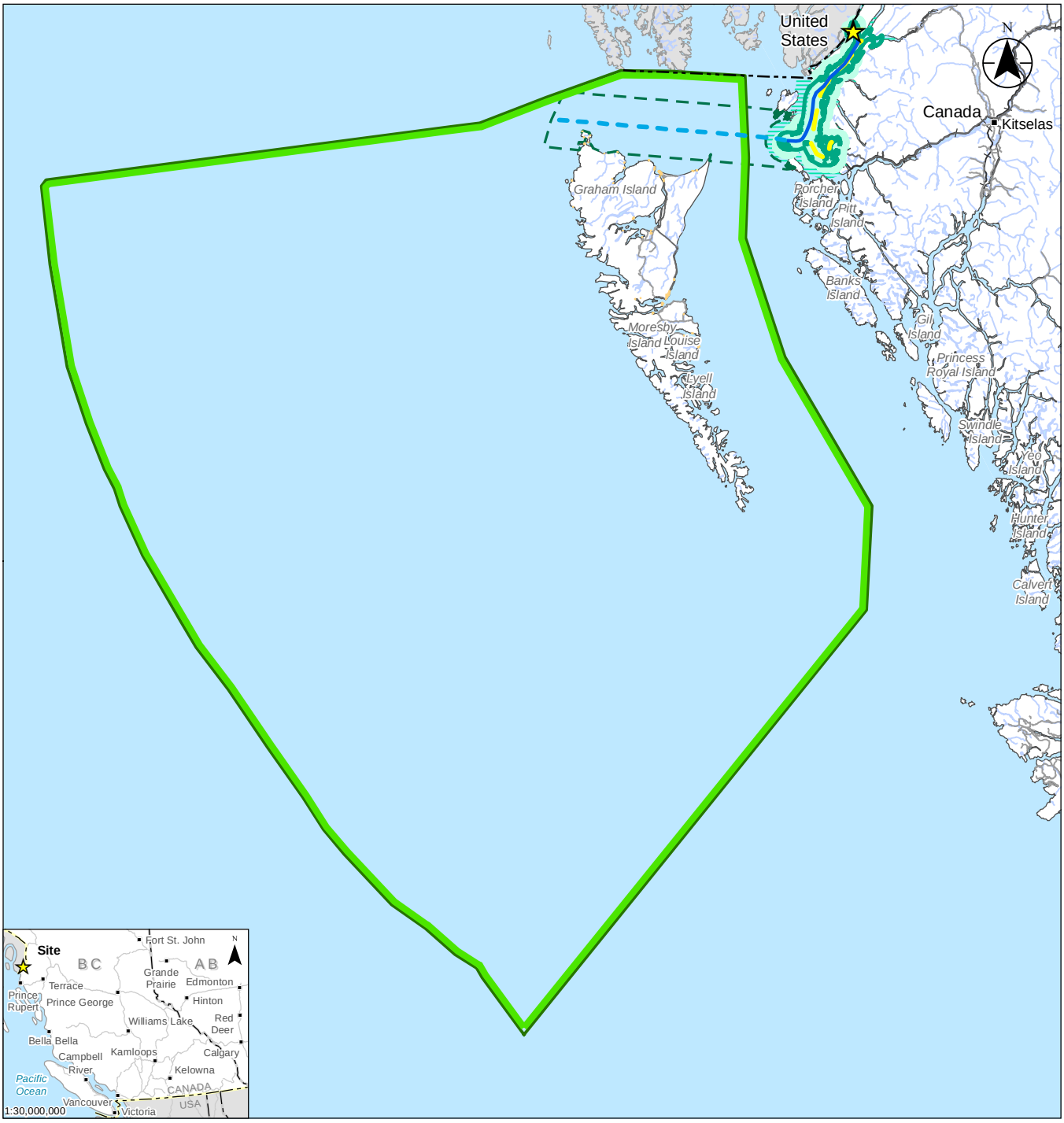
Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by TQUILICHINI on 20220914
Requested by AGAUVREAU on 20220902
Checked by SMOSS on 202209015

Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal Environmental Assessment - Impact Assessment

Figure No.
18.12-5

Title
Assessment Boundaries for Haida Nation Territories as defined by Haida Nation; Marine Resources



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

- Site
- Marine Shipping Route
- Open Water Marine Shipping Route
- Materials and Supply Shipping Route
- Haida Territories, as identified by Haida Nation

Marine Use
- Marine Use Local Assessment Area
- Marine Use Open Water Assessment Area
- Marine Use Regional Assessment Area
- International Boundary
- Railway
- Watercourse
- Waterbody
- Reserve Land

0 50 100 150 200 km
1:4,200,000 (at original document size of 8.5x11)

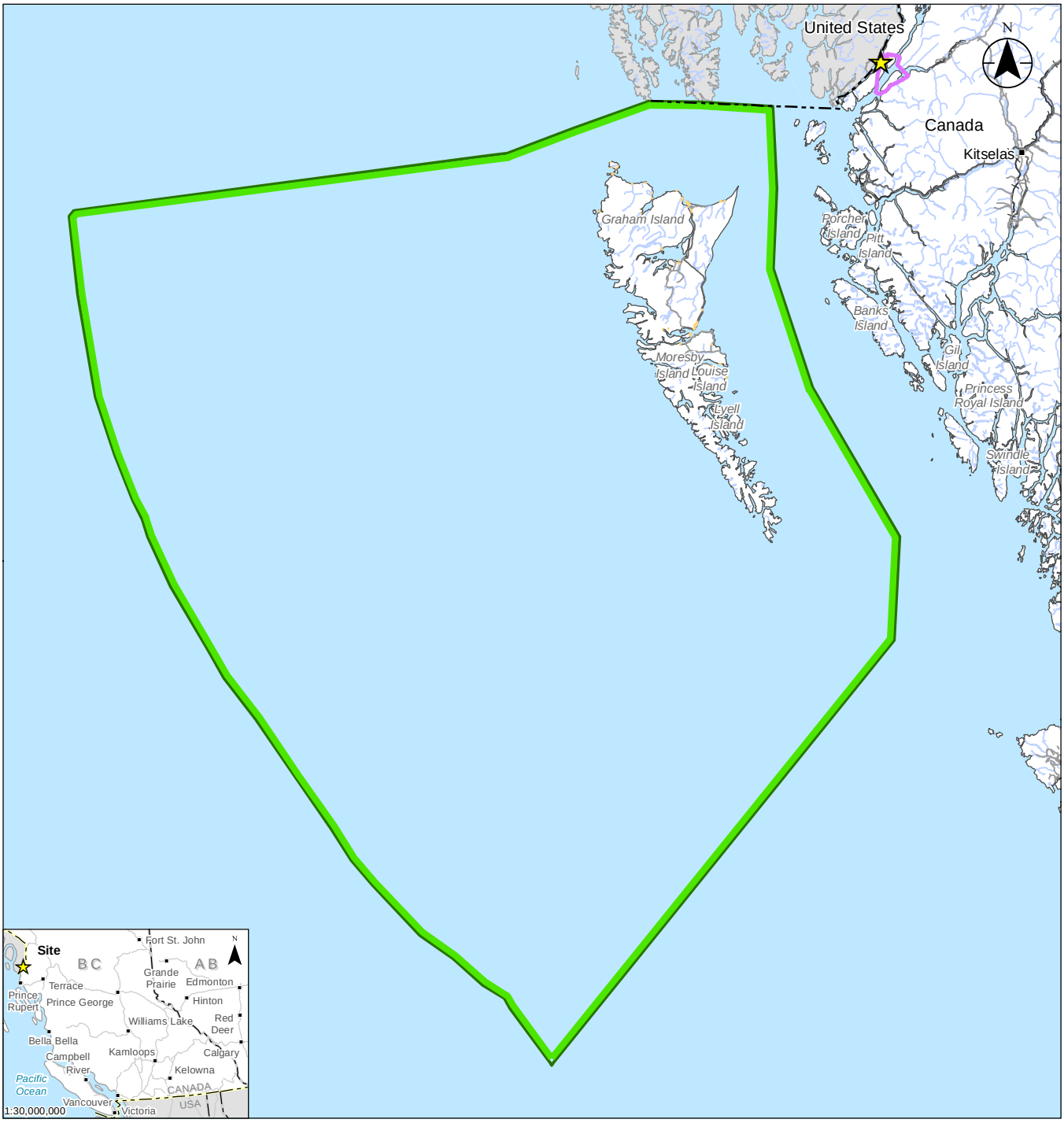
Stantec

Project Location: Pearse Island, BC
Project Number: 123221820
Prepared by TQUILICHINI on 20220914
Requested by AGAUVREAU on 20220902
Checked by SMOSS on 202209015

Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-6

Title
Assessment Boundaries for Haida Nation Territories as defined by Haida Nation; Marine Use



KSI LISIMS LNG

Site

Haida Territories, as identified by Haida Nation

Transmission Line Assessment Area

International Boundary

Railway

Watercourse

Waterbody

Reserve Land

0 50 100 150 200 km

1:4,200,000 (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, Maxar, Rockies LNG

Stantec

Project Location:
Pearse Island, BC

Project Number: 123221820
Prepared by TQUILICHINI on 20230710
Requested by AGAVREAU on 20230705
Checked by XX on 20230710

Client/Project/Report
Ksi Lisims LNG
Natural Gas Liquefaction and Marine Terminal
Environmental Assessment - Impact Assessment

Figure No.
18.12-7

Title
Transmission Line Assessment Area & Haida Territories, as identified by Haida Nation