Detailed Project Description Summary

Cedar LNG Liquefaction and Export Terminal

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Prepared for:
Cedar LNG

List of Abbreviations

BC	British Columbia
BCEAA	British Columbia *Environmental Assessment Act*
CEA Agency	Canadian Environmental Assessment Agency
CWH	Coastal Western Hemlock
EA	environmental assessment
EAC	environmental assessment certificate
EAO	BC Environmental Assessment Office
FEED	front end engineering and design
IAA	*Impact Assessment Act*
LNG	liquefied natural gas
mm	millimetre
MNBC	Métis Nation British Columbia
MOTI	Ministry of Transportation and Infrastructure
MTPA	million tonnes per annum
MW	megawatt
NAICS	North American Industry Classification System
PJ	petajoule
RDKS	Regional District of Kitimat-Stikine
ROW	right of way

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1.0 General Information and Contact(s)

The Cedar LNG Project (the Project) is a floating liquefied natural gas (LNG) facility and marine export terminal (the LNG facility) in Kitimat, British Columbia, Canada. The proponent is Haisla Nation, through its wholly owned Cedar LNG Export Development Ltd. (Cedar) [1].

The mailing address for Cedar is:

Cedar LNG Export Development Ltd.
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The Project will require an environmental assessment under the British Columbia *Environmental Assessment Act* (BCEAA) and it is expected to require an impact assessment under the federal *Impact Assessment Act* (IAA) as the Project:

- May include a power generation facility with a peak power demand of up to approximately 215 MW
- Will liquefy between 8,000 and 10,000 tonnes/day of natural gas
- Will store up to 250,000 m^3 of LNG (equivalent to approximately 5.97 PJ)

The British Columbia Environmental Assessment Office (EAO) has requested a substituted environmental assessment for the Project from the Impact Assessment Agency of Canada (IAAC) and IAAC has conducted a comment period on the topic.

[1] It is possible that Cedar will pursue the Project through a limited partnership in which Cedar or its affiliate serves as the general partner and Haisla Nation maintains a majority ownership interest.

2.0 Project Information

2.1 Project Overview

The Project is located in Kitimat, British Columbia and consists of a floating LNG facility and marine export terminal (the LNG facility), and related infrastructure (Figure 1). LNG will be exported pursuant to License GL-327 issued by the National Energy Board on May 27, 2016 in favour of Cedar 1 LNG Export Ltd. (a wholly owned subsidiary of Cedar), which permits annual exports of up to 8.55 billion m^3 for 25 years, with the possibility of extension to 40 years. The Cedar LNG Project Area (Figure 1) is the area where Project components and activities are anticipated to be located.

The Project components, all located in British Columbia, will include:

- A jetty-moored floating nearshore LNG production unit for natural gas pre-treatment, liquefaction, integrated storage, and LNG carrier berthing and loading
- Possible independent jetty/marine terminal for LNG carrier berthing and loading
- Supporting infrastructure and facilities, including pipeline receiving and metering, water supply and handling, support buildings, and possible power supply/handling and liquid refrigerant handling
- Temporary infrastructure and facilities within the Project facility site

The Project is anticipated to process and liquefy approximately 400 to 500 million standard cubic feet per day (11.3 to 14.15 million cubic metres [m^3]) of natural gas into approximately 3 to 4 million tonnes per annum (MTPA) of LNG (averaging between 8,000 and 10,000 tonnes per day), with up to 250,000 m^3 (approximately 108,000 tonnes) of LNG storage capacity (equivalent to approximately 5.97 petajoules [PJ] of energy capacity). Subject to the negotiation of certain agreements, Cedar intends to receive feed gas from the Coastal GasLink pipeline at a meter station within the vicinity of Kitimat. Natural gas will be delivered to the Cedar LNG Project Area by a 20-inch diameter, approximately 8 km long pipeline. The pipeline will follow the shared multi-use corridor established by the Ministry of Transportation and Infrastructure for this purpose[2].

The LNG production unit and other Project facilities are expected to require approximately 200 megawatts (MW) of power, which may be supplied from either the provincial (BC Hydro) transmission grid (preferred option), self-generation (alternative option), or a combination thereof.

Project-related LNG carrier vessels are anticipated to call at the LNG facility approximately 40 to 50 times annually (an average of approximately one LNG shipment every 7 to 10 days). The average size of LNG carriers anticipated to call at the LNG facility will be approximately 180,000 m^3 with the terminal design allowing carriers of up to 216,000 m^3 to berth and load.

[2] The Douglas Channel, Kitimat LNG and Northern Gateway projects collected baseline data in the vicinity of the shared pipeline corridor, and the respective provincial and federal regulatory authorities concluded, based on the findings of the environmental assessment processes for the latter two projects, that the pipelines in the shared corridor would not result in significant adverse environmental effects.

LNG carriers will transit established international shipping lanes through Dixon Entrance southward through Hecate Strait where a Pilot will board at a designated location near the Triple Island pilotage station. Vessels will follow a route south through Principe Channel, Nipean Sound, Otter Channel, Lewis Passage, Wright Sound, and Douglas Channel (Figure 2).

2.2 Purpose of and Need for the Project

The proposed Project will:

- Help meet increasing demand for LNG
- Contribute to the advancement of the LNG sector in British Columbia
- Promote the use of the cleanest-burning fossil fuel
- Generate economic opportunities for British Columbia-based businesses
- Provide long-term revenue generation for local, provincial and national economies to reinvest in health care, education, infrastructure, and other programs.

Over the last decade, global demand for LNG has steadily increased in Asia and Europe and this growth is expected to continue as countries pursue alternatives to diesel and coal to support cleaner electricity generation, heating, and transportation requirements.

The Project will also contribute to economic reconciliation in British Columbia by recognizing and implementing Haisla Nation's authority over economic development on Haisla Nation-owned lands. It is also in keeping with Article 32 of the United Nations Declaration on the Rights of Indigenous Peoples. Income generated by the Project will be invested by Cedar in the Haisla community and will provide jobs and contracting opportunities for Haisla Nation members, member of other local Indigenous group, and local community members.

2.3 Alternatives To and Alternative Means of Carrying Out the Project

The final Project lay-out within the Cedar LNG Project Area will be determined through the engineering design process. The first phase of engineering design, the preliminary front end engineering design (Pre-FEED), is scheduled to start in the second half of 2019. Cedar will incorporate design information from Pre-FEED into the environmental assessment certificate (EAC) application. Alternative means of undertaking the Project that Cedar will carry forward and evaluate through Project design include:

- Jetty Design: The nearshore LNG production unit will be permanently moored to a marine jetty that will either be constructed on traditional marine piles or as a floating structure permanently anchored to the foreshore.

- Power Supply and Handling: Cedar is working with BC Hydro to explore options to power the Project with electricity provided from the provincial transmission grid to the site via a new electric transmission line constructed from the Minette substation in Kitimat. If that is not feasible, the Project will pursue an alternative option involving onsite power generation (self-generation either onshore or onboard the nearshore LNG production unit). If Cedar pursues self-generation of electricity, approximately 5% to 7% of incoming fuel gas will be diverted to the power plant or direct mechanical drive unit (gas turbine) to produce the power needed for the liquefaction process.

- LNG Carrier Loading: Cedar expects that LNG carriers will arrive at the facility and moor directly alongside the nearshore LNG production unit (preferred option). Alternatively, Cedar will construct a separate LNG loading jetty for mooring the LNG carrier.

The Project is uniquely positioned to facilitate economic reconciliation objectives for Haisla Nation and the goals of British Columbia's Natural Gas Strategy. Alternatives to the Project, such as an LNG facility in a different location with a different proponent, or a different Haisla Nation-led economic opportunity on Haisla Nation-owned lands, could contribute towards one of these two objectives, but Cedar is not aware of any viable alternatives to the Project that would contribute towards both of these objectives.

2.4 Project Activities

2.4.1 Construction

Construction activities will include site preparation, as well as the construction and installation of Project components. Construction activities will be refined as design progresses, but are currently anticipated to consist of the following:

- Potential localized removal and disposal of marine sediments to accommodate marine terminals and the nearshore LNG production unit
- Unloading of materials and equipment from trucks and barges
- Potential clearing of areas not already cleared for previous industrial activity
- Potential blasting and grading, where required, to accommodate Project infrastructure
- Construction of the water supply system, including intake, treatment, and distribution
- Installation of storm water management, erosion prevention, and sediment control measures
- Mobilization and construction of onshore components, including administration buildings, supporting infrastructure, electrical transmission, external power reception, laydown areas, customs areas, and warehouses
- Potential mixing of concrete at an onsite batch plant (if required)
- Construction of marine jetties
- Upgrading and construction of access roads

- Installation of perimeter fencing and onshore access/security gates
- Permanent mooring of the nearshore LNG production unit
- Construction of electric transmission line (preferred option; under investigation)
- Connection of utilities (e.g., electrical, controls, gas, water) to the nearshore LNG production unit
- Potential rehabilitation or stabilization of areas not required for the operations phase
- Generation of electricity for construction activities (e.g., using portable generators)
- Waste disposal and recycling in accordance with applicable legislation
- Decommissioning of any temporary facilities

Construction activities may occur up to 24 hours per day, seven days per week.

2.4.2 Operations

The operations phase will include operation of Project components described above to produce, store, and ship LNG to international markets. Project-related activities during the operations phase are expected to include:

- Start-up and commissioning support
- Delivery of natural gas via the feed gas distribution system
- Power generation, aggregation (potential power sources include self-generation facilities and provincial BC Hydro grid power), and distribution to Project components (including the nearshore LNG production unit)
- Gas reception and treatment in gas processing units on the nearshore LNG production unit
- Liquefaction of natural gas, storage and offloading of LNG at the nearshore LNG production unit
- Mooring, loading and transit of LNG carriers, including support tugs
- Water collection, treatment and use
- Wastewater, storm water, and process water treatment and disposal
- Waste disposal and recycling in accordance with applicable legislation
- Import of liquid refrigerant gases (by land or sea)
- Planned and unplanned maintenance
- Project-related marine shipping along the marine access route from the Triple Island Pilotage Station, south through Principe Sound, east and northeast into Douglas Channel to Kitimat Arm

2.4.3 Decommissioning

At the end of the Project's operational life, the decommissioning phase will include removal of the nearshore LNG production unit for either re-use elsewhere or for full decommissioning and scrapping or recycling at a dedicated facility. Cedar LNG will remove onshore infrastructure and facilities and restore the Cedar Project Area as appropriate in accordance with Haisla's development plans and applicable regulatory requirements.

2.4.4 Physical Activities Incidental to the Project

Potential physical activities incidental to the Project are anticipated to include laydown areas and temporary workspace, borrow pits, and Project-related marine shipping.

LNG carriers associated with the Project will transit international shipping lanes from the Triple Island Pilotage Station where they will be boarded by a British Columbia Coast pilot (Figure 2). Project-related LNG carriers will then transit south through Principe Sound, east and northeast into Douglas Channel to Kitimat Arm and the private port of Kitimat. Support tugs will escort and berth LNG carriers. The number, size, and arrangement of tugs to potentially escort and berth the LNG carriers will be determined during FEED. A third party will operate LNG carriers with custody of the vessel transferred at the nearshore LNG production unit. Project-related LNG carriers are not under the care and control of Cedar; however, Cedar will have the ability to require specific LNG carriers calling at the Cedar terminal to adhere to mitigation requirements through contractual requirement.

2.5 Project Schedule

Project construction is planned to occur in one phase scheduled to start in 2022 and continue until 2025. This schedule is contingent on regulatory approvals, First Nations consultation, and a positive final investment decision by Cedar's Board of Directors. Construction may include activities occurring 24 hours a day, seven days a week. Cedar expects operation of the floating facilities to begin in 2025 and continue for the Project's lifespan of 25 years or more. Based on a lifespan of 25 years, decommissioning, reclamation, and abandonment is expected to occur from 2050 to 2065.

2.6 Project Emissions, Discharges and Waste

Cedar will manage construction and operation emissions, discharges and wastes to meet requirement of applicable guidelines, policies, and regulations. The emissions, discharges, and wastes from the Project are expected to include:

- Atmospheric emissions, including:
  - Emissions from combustion sources such as turbines, generators, flares would include CO, SO_x (sulphur oxides), and NOx (mono-nitrogen oxides), GHGs and potentially particulate matter (PM_{10}, $PM_{2.5}$)

- If the full amount of power required by the Project is available from the provincial grid, the Project is expected to produce approximately 168,000 tonnes of CO_2 equivalent (CO_2e) per year. If Cedar is required to self-generate 100% of its power, the Project is expected to produce approximately 840,000 tonnes of CO_2e per year.
- Fugitive hydrocarbons
- In-air noise and light

- Solid, liquid and hazardous waste, including:
  - Solid soil and material excavated from Project footprint, organic waste, wastes from construction, including packing materials including wood, metal, and concrete, domestic and municipal waste
  - Liquid storm water, sanitary wastewater, effluent run off, industrial wastewater from gas dehydration process and ballast water discharge
  - Hazardous waste including treated sewage, medical waste, contaminated soil, chemical waste, mercury and waste absorbents, and miscellaneous waste (e.g. batteries, filters)

2.7 Project Location, Land and Water Use

2.7.1 Project Location and Land Use

Coordinates for the approximate centre of the Cedar LNG site are:

- Latitude/Longitude - 53.974972 -128.698639
- Degrees, minutes, and seconds (DMS) - 53°58'29.9"N 128°41'55.1"W
- UTM (NAD83)—Zone 9 Easting 519765.90 Northing 5980779.08

The Cedar LNG Project Area is located on privately owned lands and adjacent water lots (Figure 1). These lands are within the municipal boundaries of the District of Kitimat and zoned for industrial and port development by the District of Kitimat's Official Community Plan and within the asserted traditional territory of Haisla Nation (Figure 3). The land and water lots on which the LNG facility and marine infrastructure is located (District Lot 99, District Lot 309 and Water Lot A of District Lot 5469) and are owned in fee simple by an affiliate of Haisla Nation. Cedar completed a review of land ownership for the upland and nearshore components of the LNG facility and associated marine infrastructure, as well as for a 200 m buffer around the proposed pipeline right of way (ROW), and anticipated transmission corridor (Figure 1). The results of this review are presented in Section 4.2 of the Detailed Project Description. No Agricultural Land Reserve or range, guide outfitting, or mineral tenures are within proximity of the Project. The Project footprint does not overlap with any lands outside of British Columbia or Canada.

The Project's proximity to parks, federal lands, and First Nation Reserve land is described in Section 4.3.1 of the Detailed Project Description. Kitimat is approximately 650 kilometers (km) northwest of Vancouver by air, approximately 640 km west of Prince George, 210 km east of Prince Rupert, and 60 km south of Terrace by provincial highways. The site is approximately 10 km southwest of Kitimat's town centre. The nearest residence (permanent, seasonal or temporary) to the Project is in Kitamaat Village,

located approximately 3 km directly east across Kitimat Arm. Kitamaat Village is also the closest residential area to the Project.

Project components and Project-related shipping activities are located within several management areas, including: Kalum Sustainable Resource Management Plan; Pacific North Coast Integrated Management Area; and Marine Plan Partnership for the North Pacific Coast.

Project components and shipping activities are located within the management areas of several First Nation marine use plans. These plans include:

- Haisla Nation—marine use planning is currently under development
- Interim Land and Marine Resource Plan of the Allied Tsimpshian Tribes of Lax Kw'alaams Band
- Metlakatla Draft Marine Use Plan
- Kitsumkalum Marine Use Plan
- Gitxaala Marine Use Plan
- Gitga'at Marine Use Plan

2.7.2 Project Water Use

The Cedar LNG Area is not located near a municipal water supply or wastewater treatment system. Freshwater for process and potable water, as well as water for the power generation facility (if required), will be supplied using groundwater, surface water, or a combination thereof. Freshwater may be stored on-site with storage capacity based on demand and supply and water for domestic use may require on-site treatment to comply with drinking water standards.

Wastewater treatment plant(s) will be built within the Cedar LNG Area as required; they will be designed based on the Project and site characteristics, and in accordance with applicable provincial and federal water quality guidelines. No untreated wastewater will be discharged. The location of the treatment plant and associated discharge point will be selected during front end engineering and design (FEED). Treated wastewater will be discharged to the marine environment in compliance with wastewater regulations.

The Project will include systems to control surface water runoff. If required to meet water quality guidelines, storm water will be collected, stored, and treated prior to discharge to the marine environment.

3.0 Regulatory Context

The Project may include a power generation facility with a peak power demand of up to approximately 215 MW, will liquefy between 8,000 and 10,000 tonnes/day of natural gas and will store up to 250,000 m^3 of LNG (equivalent to approximately 5.97 PJ). As such, and pursuant to sections 30, 37d and 52 of Physical Activities Regulations under the federal *Impact Assessment Act* (IAA), the Project meets the criteria of a designated project and is anticipated to require and an environmental assessment.
The Project also meets the criteria for a reviewable project as per Tables 7 and 8 of the Reviewable Projects Regulation under the British Columbia *Environmental Assessment Act* (BCEAA) and the EAO has issued a section 10 order requiring Cedar to obtain an environmental assessment certificate before proceeding with the Project.

The Project is not located in an area that has been the subject of a federal regional environmental study. The Strategic Assessment on Climate Change is the only strategic assessment as defined in the *Impact Assessment Act* (IAA) that is relevant to the Project.

Several LNG and marine projects in the Kitimat area have initiated or completed federal and provincial environmental assessments. These include:

- LNG Canada Export Terminal
- Rio Tinto Terminal A Extension
- Kitimat LNG
- Enbridge Northern Gateway
- Douglas Channel LNG

Environmental assessments for these projects concluded that their pipelines and marine terminals would not result in significant adverse environmental effects and that they could proceed with permitting. Furthermore, the Kitimat LNG, Enbridge Northern Gateway and Douglas Channel projects collected baseline data in the vicinity of the Cedar project's proposed pipeline and transmission corridor.
The Kitimat LNG and Enbridge Northern Gateway projects both assessed potential environmental effects of pipelines in the same shared corridor that is proposed for the Cedar LNG pipeline.

In addition, the British Columbia Ministry of Environment commissioned a study of the Kitimat Airshed to learn about potential effects to human and environmental receptors from acidifying emissions related to proposed development in the region (ESSA Technologies et al. 2014). The Kitimat Airshed Study considered the existing Rio Tinto aluminum smelter as well as four proposed LNG terminals, a proposed oil refinery, gas turbine powered electrical generation facilities, and associated marine transportation and provides an evaluation of potential cumulative effects to the Kitimat Airshed under various development scenarios. Based on this study, the provincial government concluded that "with proper management, Kitimat's airshed can safely accommodate new industrial growth" (BC ENV 2014).

In 2014, the Ministry of Transportation and Infrastructure's (MOTI) initiated the Kitimat West Douglas Channel Corridor Analysis to inform land use planning and permitting decisions related to infrastructure requirements for proposed projects on the west side of Douglas Channel in Kitimat. This study informed the pipeline alignment selected for the Cedar LNG project.

The proposed Project will be provincially regulated, and no federal funding is anticipated. In addition to an EAC and positive federal Decision Statement, the Project will require a range of other approvals, including approvals from the Oil and Gas Commission and other provincial agencies as summarized in Section 5.3 of the Detailed Project Description.

4.0 Environmental Setting

Existing conditions of the natural, biological and human environment in the Project area are well understood and have been characterized through numerous previous projects and studies. The following sections provide an overview of the natural, biological and human environment setting in the vicinity of the Project. Key environmental features are shown in Figure 4. Cedar will conduct site-specific environmental studies to validate existing information.

4.1 Natural Setting

4.1.1 Atmospheric Environment

Kitimat is influenced by Pacific maritime air streams resulting in mild wet winters and cool, moderately humid summers with small seasonal temperature differences. Temperatures hover around freezing in winter and seldom exceed 30°C in summer. Mean annual precipitation in the Kitimat area ranges from 2,200 to 2,400 millimetres (mm). Daily precipitation maximums generally occur in October and December and are in the range of 129 to 145 mm. The average annual wind speed reported at the Kitimat townsite climate station is 18 km/h. The windiest month is March with average wind speeds of 20 km/h with prevailing winds from the south or southwest in summer and from the northwest in winter.

Air quality in the Kitimat area has been influenced by the existing or former industrial facilities but with the prevailing winds, air quality is generally very good. Local air quality and meteorological data have been extensively monitored for more than 20 years and currently monitored on a continuous basis.

The existing acoustic environment is characterized by sound from the natural environment such as wind, waves, marine and terrestrial wildlife, as well as anthropogenic sound (e.g. marine vessel traffic, air traffic, and other human activity). In-air noise levels in the area are generally comparable with rural areas.

4.2 Biological Setting

4.2.1 Freshwater and Aquatic Resources

Several watercourses are present in the Project area, along the pipeline and transmission line corridors, including Moore Creek, Anderson Creek and Beaver Creek with streams and their tributaries flowing into the Kitimat River estuary and Kitimat Arm. Fish species in the Project area that support commercial, recreational, and/or Indigenous fisheries include coho salmon, chinook salmon, chum salmon, pink salmon, coastal cutthroat trout, rainbow trout and Dolly Varden. None of these species are listed under the federal *Species at Risk Act*, and coastal cutthroat trout are provincially blue-listed. Habitat at the watercourse crossings may provide spawning, rearing or overwintering habitat that support the productivity of relevant fisheries.

4.2.2 Marine Resources

The Project area is located within a coastal fjord containing turbid surface waters and hypoxic (i.e., low oxygen) deep water. Sediment loading occurs from major watercourses in the area, such as the Kitimat River. The foreshore environment in the Project area is a mixture of bedrock, sand and gravel, beyond which steep and rocky walls lead to approximately 100 m depth where the substrate changes to soft sediment.

Kelp and eelgrass provide important seasonal habitat for fish and invertebrates and are likely to be found within the Project area. Important estuarine habitat occurs north of the Project area and migratory fish species, such as Pacific salmon and eulachon, pass through during migrations. Pacific herring are also known to use Kitimat Arm for spawning, and rockfish may be found at depth along the rocky fjord wall and soft sediment.

Other fish species such as Pacific halibut, Pacific sandlance, ronquil, eelpout, sculpin, ratfish, and flatfish, are also likely to be found within the Project area. Invertebrate species such as Dungeness crab, Pacific blue mussel, barnacles, sea urchins, sea cucumber, snails, and limpets use the intertidal and subtidal environments within the Project area seasonally or year-round. Other species, such as northern abalone or glass sponge reefs, could also occur. Marine mammals including resident and Bigg's (transient) killer whales, humpback whales, Dall's porpoise, harbour porpoise, Steller sea lion, harbour seal, also occur in Douglas Channel. Several marine mammal species that are known to occur in the Project area are species of conservation concern and are listed federally on Schedule 1 of the *Species at Risk Act* or on the provincial Red or Blue list.

4.2.3 Vegetation and Wetland Resources

The western shore of Kitimat Arm is in the sub-montane variant of the Coastal Western Hemlock (CWH) Very Wet Maritime Subzone (vm1) with a wet, humid, mild, oceanic climate and occupies an extensive area at elevations below 400 m. Zonal forests are dominated by western hemlock, fir, and western redcedar, a thick shrub understory of conifer regeneration and blueberries with a sparse herb layer of bunchberry, deer fern, and spiny wood fern, with a carpet of feather and leafy mosses. Wetter forested site units dominate the landscape in the CWHvm1, even on sloping terrain and are dominated by amabilis fir, western redcedar, western hemlock, Sitka spruce and yellow cedar. Understory vegetation includes devil's club foamflower, salmonberry, and oak fern. Lanky and leafy mosses and green sphagnum are common.

4.2.4 Wildlife and Wildlife Habitat

The Project area is characterized by coastal coniferous forests, riparian areas, rocky shorelines, and deep marine water. Terrestrial ecosystems in the Kitimat area support a wide variety of wildlife species, including mammals (e.g., grizzly bear, black bear, Pacific marten), raptors (e.g., bald eagle, osprey), forest birds (e.g., marbled murrelet, olive-sided flycatcher, western screech owl), and amphibians (e.g., western toad, coastal tailed frog). Nearshore marine ecosystems support many species of shorebirds, wading birds, waterfowl, and marine birds (e.g., great blue heron, surf scoter).

Several wildlife species that are known to occur in the Kitimat area are species of conservation concern and are listed federally on Schedule 1 of the *Species at Risk Act* or on the provincial Red or Blue list. Species of conservation concern that have previously been documented in the area include grizzly bear, little brown myotis, marbled murrelet, northern goshawk, western screech owl, and coastal tailed frog. Habitat in the project area may support one of more of these species of conservation concern.

4.3 Human Environment

4.3.1 Social and-Economic Setting

The Regional District of Kitimat-Stikine (RDKS) provides local government services to an area of 100,000 km^2 in northwestern British Columbia. In 2016, the population of RDKS was estimated at 37,367 persons of whom roughly 36% identified themselves as Indigenous. In 2016, the economic base of the RDKS was weighted toward non-basic industries employing 51% of the labour force (retail trade 11.2%, accommodation and food services 10.9%). Employment in basic industries accounted for 45.7% of the labour force with employment greatest in health care and social assistance (11.3%), followed by construction (10.9%). Employment in non-classified North American Industry Classification System (NAICS) industries accounted for 3.3% of the employed labour force.

4.3.2 Indigenous Groups Setting

The Project, including the Project site and marine shipping route, is within the traditional territory of the following First Nations:

- **Haisla Nation**—is near Kitimat, British Columbia with a traditional territory of approximately four million acres (Figure 3). The home community of the Haisla people is Kitamaat Village, located at the head of the Douglas Channel on British Columbia's West Coast. Kitamaat Village is home to 630 of the 1,944 Haisla members and is located 10 km from Kitimat and 45 km from Terrace. Haisla Nation is the result of the amalgamation of two bands: the Kitamaat of the Douglas and Devastation Channels and the Kitlope of the Upper Princess Royal Channel and Gardner Canal.
- **Gitga'at Nation**—is based in Hartley Bay (IR 4 and 4A) approximately 50 km southwest of Kitimat and 125 km south of Prince Rupert and has a registered population of 777. It is comprised of 15 reserves totaling approximately 641 ha. Hartley Bay is recognized as the home community with approximately 180 residents, and most of the remaining population live in Prince Rupert, Vancouver and on Vancouver Island. Its asserted territory encompasses roughly 7,500 km^2 and includes the lower Douglas Channel, Whale Channel, Wright Sound, and Lewis Pass to Caamaño Sound on British Columbia's North and Central Coast.

- **Gitxaala First Nation**—is based in the Village of Kitkatla on Dolphin Island in Kitkatla Channel, located approximately 120 km west of Kitimat and 55 km south of Prince Rupert. The Nation has approximately 2,000 members, of which 25% live on reserve. Gitxaala Nation has 21 reserves covering 1,885 ha; most of the area is the Dolphin Island 1 reserve where the Village of Kitkatla is located. The Nation's asserted traditional territory covers just over 3,000 ha encompassing the northern extent of its fishing territory on the Nass River, stretching south to the coastal islands just north of Kitasu Bay. The western edge of its territory extends seaward abutting against the marine territories of the Haida Nation. To the east, the territory extends to the mainland shore of Grenville Channel, where it meets Haisla and Gitga'at territories.
- **Lax Kw'alaams Band**—is based in Lax Kw'alaams (formally Port Simpson) near the north end of the Tsimpsean Peninsula. Lax Kw'alaams Band has approximately 3,500 members, of which 20% live on reserve land. There are 78 Lax Kw'alaams reserves throughout the asserted traditional territory, covering approximately 11,900 ha. Its asserted traditional territory encompasses the lands and waters between tributaries of the Skeena River, the height of land east of the Zymoetz River, and the Kitsumkalum River. It includes Nass Bay and Nass River to the west, and Wales and Pearse Islands, the Dundas and Stephens Islands groups as well as lands and waters at the mouth of the Skeena River, stretching south along Grenville Channel to the north.
- **Metlakatla First Nation**—is based in Metlakatla, on the south half of Tsimpsean 2 reserve near Prince Rupert. The Nation has approximately 900 members, of which 10% live on reserve land in Metlakatla. The Metlakatla has 16 reserves, totaling 3,460 ha. Its asserted traditional territory extends from the coastal islands in eastern Hecate Strait to Lakelse Lake near Terrace. Portland Canal and Observatory Inlet mark the northern extent of the boundary, and the headwaters of the Ecstall River mark the southern borders. Its territory includes the lower portions and the mouth of the Skeena River and its tributaries.
- **Kitselas First Nation**—has a registered population of 686 members, of which approximately 45% live on two reserves: Kitselas IR 1 and Kulspai IR 6. These reserves are located along the Skeena River; IR 1 is just outside of Terrace, and IR 6 is in the Kitselas Canyon to the east of Terrace. Kitselas First Nation has 10 reserves covering approximately 1070 ha; one reserve (Port Essington) is jointly administered with Kitsumkalum First Nation. The Kitselas Nation's asserted territory includes the watersheds of the Skeena and Kitimat rivers from Lorne Creek in the east to the Skeena and Kitimat estuaries. In addition to this, the Nation has previously stated that it has traditional harvesting areas in coastal areas of the Prince Rupert Port area, the lower Skeena River and its estuary, and in the Nass River.
- **Kitsumkalum First Nation** - has a registered population of 686 members, of which approximately 45% live on two reserves: Kitselas IR 1 and Kulspai IR 6. These reserves are located along the Skeena River; IR 1 is just outside of Terrace, and IR 6 is in the Kitselas Canyon to the east of Terrace. Kitselas First Nation has 10 reserves covering approximately 1070 ha; one reserve (Port Essington) is jointly administered with Kitsumkalum First Nation. The Kitselas Nation's asserted territory includes the watersheds of the Skeena and Kitimat rivers from Lorne Creek in the east to the Skeena and Kitimat estuaries. In addition to this, the Nation has previously stated that it has traditional harvesting areas in coastal areas of the Prince Rupert Port area, the lower Skeena River and its estuary, and in the Nass River.

Métis are another Indigenous group that could potentially be affected or have an interest in the Project. Métis in British Columbia are represented by Métis Nation British Columbia (MNBC) which represents thirty-eight Métis Chartered Communities. Three of these communities are within the northwest region including the Northwest BC Métis Association based in Terrace. MNBC is recognized as the official governing organization for Métis in British Columbia and its aim is to support and develop opportunities for its communities.

4.3.3 Archaeological and Heritage Setting

The BCEAA and IAA require assessment of physical cultural heritage, such as historic heritage sites and paleontological sites. The IAA defines heritage as “physical and cultural heritage” and “any structure, site or thing that is of historical, archaeological, paleontological, or architectural significance”. The British Columbia *Heritage Conservation Act* extends legal protection to archaeological sites with evidence of human habitation or use before AD 1846, burial places with historical or archaeological value, Aboriginal rock art, and heritage ship and aircraft wrecks.

There are numerous archaeological sites recorded along Kitimat Arm in the general vicinity of the Project including culturally modified tree sites, lithic scatters, shell middens, and human burials. While there are no archaeological or heritage sites recorded in Provincial Heritage Register within the Project footprint, the entire footprint has not undergone an archaeological assessment. Any outstanding areas will be subject to an archaeological impact assessment as part of the regulatory process.

4.3.4 Human Health Setting

The health status of people in the Kitimat area is typical of suburban regions in British Columbia. The overall health status in the Kitimat area is lower than the average for British Columbians, which is influenced by lower levels of access to health care services typically experienced in suburban regions of the province (e.g., shortage of doctors and related professions). The air and water quality in the Kitimat region are characterized as very good.

The seafood harvested from Kitimat Arm is an important local food source for residents and the local Haisla Nation, particularly for people living on reserve in Kitamaat Village, located on the eastern shoreline. Salmon, Dungeness crab, halibut and eulachon (oolichan) are all important traditional marine country foods that help to maintain food security among those who live off the land.

4.4 Potential Effects in Relation to *Impact Assessment Act* Requirements

Carrying out of the Project has the potential to result in changes are to fish and fish habitat (including marine mammals), aquatic species, and migratory birds. Although the Project is not located on federal lands, it is possible that some environmental effects described below may extend to federal lands. Because the Project is located more than 140 km from the United States border trans-boundary effects on lands outside of British Columbia or Canada are not anticipated.

Potential effects in relation to *Impact Assessment Act* requirements include:

- **Air Quality**—The Project has potential to increase ambient concentrations of criteria air contaminants on federal lands, including SO_2, NO_X, carbon monoxide and particulate matter (PM_{10} and $PM_{2.5}$).
- **Noise**—The Project has the potential to increase noise levels on federal lands, causing nuisance, annoyance and sleep disturbance to people, as well as displacement and sensory disturbance to wildlife.
- **Fish and Fish Habitat**—The Project has the potential to cause adverse effects to marine and freshwater fish, as defined in the *Fisheries Act*, including:
  - Harmful alteration, disruption of destruction of fish habitat due to the Project infrastructure and changes in water quality and quantity
  - Changes to fish food and nutrient content
  - Fish mortality
  - Changes in behaviour of marine fish
- **Aquatic Species**—Potential Project-related effects to aquatic species, as defined in the *Species at Risk Act*, include:
  - Changes in habitat quality
  - Loss of habitat from shading of marine vegetation and construction and decommissioning of infrastructure
  - Mortality associated with Project construction
- **Marine Mammals**—The Project has the potential to affect marine mammals, as defined in the *Fisheries Act*, including:
  - Direct and indirect loss of habitat and potential habitat
  - Behavioural response due to sensory disturbance
- **Migratory Birds**—Potential Project-related effects to migratory birds, as defined in the *Migratory Birds Convention Act*, include:
  - Direct loss of habitat and potential habitat due to the Project footprint
  - Indirect loss of habitat and potential habitat due to sensory disturbance
  - Behavioural response due to sensory disturbance
  - Mortality (direct and indirect)

4.4.1 Project-related Effects to Haisla and Other Indigenous Groups

Under the IAA, Schedule 1, sections 3 (21)(22), the Project may result in potential impacts to Indigenous peoples, including:

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

Haisla Nation, as the owner of Cedar, aims to provide benefits to health and socio-economic conditions of Indigenous peoples through pursuit of this economic opportunity, and to appropriately manage potential impacts to physical and cultural heritage and current use of lands and resources for traditional purposes. Cedar will engage with Haisla Nation's technical department (consisting of Lands, Environment and Fisheries) and other potentially affected Indigenous groups throughout the assessment process to understand potential for impacts and develop suitable mitigation and management approaches.

The results of the assessment of environmental, economic, social, heritage and health effects of the Project (per the potential effects described in Section 4.5) in combination with input received from Indigenous groups via consultation activities will be used to inform the assessment of potential effects of the Project on Indigenous interests (i.e., asserted or determined Aboriginal rights, including title and treaty rights), including potential effects identified in the Summary of Issues prepared by IAAC based on feedback provided by Indigenous groups during their review of the Initial Project Description. The EAC application will provide a summary of statutory requirements under the federal *Impact Assessment Act* and describe how the section 22 factors, including Project-related effects to Indigenous groups, have been taken into account in the Project's impact assessment.

4.5 Other Potential Environmental, Economic, Social, Heritage and Health Effects

Construction, operation and decommissioning of the project have the potential to result in environmental effects through land clearing for temporary workspace and installation of permanent infrastructure, emissions from construction activities and operation of the LNG facility, and Project-related shipping activities. To support the IAAC in determining the need for and potential scope of an impact assessment under the IAA, a summary of the potential environmental, economic, social, heritage, and health effects of the Project has been prepared based on general knowledge of the Project and the existing natural and human environment (Table 1).

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

The Project has the potential to contribute cumulatively to potential effects on the environment associated with past, present and reasonably foreseeable future projects and activities in the region. These may include forestry, power, and oil and gas projects and activities. No regional studies as defined by the IAA have occurred within the Project area.

TABLE 1 SUMMARY OF POTENTIAL PROJECT EFFECTS

Component	Potential Project Effects	Project Activities and Anticipated Pathway of Effects
Environmental Effects		
Air Quality	• Increase in ambient concentrations of criteria air contaminants, including SO_2, NO_X, CO and particulate matter (PM_{10} and $PM_{2.5}$)	Construction: land clearing, power generation, fuel combustion and vehicle traffic; Operation: power generation (if required), fuel combustion, flaring, incineration, fugitive emissions, marine support vessels and vehicle traffic. Operational emissions will be lower in the preferred (electrified) option and higher in the alternative (power generation) option; Decommissioning: fuel combustion, demolition, backfilling and removal of infrastructure
Noise	• Increased noise levels causing nuisance; displacement and sensory disturbance to wildlife.	Construction: operation of equipment and vehicles during earthworks and construction, installation of piles (if required), blasting (if required); Operation: operation of the LNG facility, flaring, loading of carriers; Decommissioning: operation of equipment
Greenhouse Gas	• Increase the emission of GHGs including CO_2, CH_4, N_2O expressed as CO_2e	Construction: land clearing, site preparation, fuel combustion and vehicle traffic; Operation: stationary combustion of fossil fuel, flaring, venting and fugitive emissions, power generation (if required) and shipping of products. Operational emissions will be lower in the preferred (electrified) option and higher in the alternative (power generation) option; Decommissioning: dismantling of infrastructure and reclamation activities
Freshwater Fish	• Fish mortality • Harmful alteration, disruption of destruction of fish habitat.	Construction could disturb stream beds and banks, alter riparian vegetation and release deleterious substances (e.g., sediment, hydrocarbons). Decommissioning will have similar impacts as those during construction.
Marine Fish	• Fish mortality • Harmful alteration, disruption of destruction of fish habitat. • Behavioural change caused by sensory disturbances.	Construction and operation of the floating LNG processing facility, mooring dolphins and bollards, marine jetty or jetties, marine offloading facility, and workboat moorage in the marine environment has potential to alter habitat quality for marine vegetation, displace or alter marine fish habitat types within the Project footprint, shade marine plants including photosynthetic kelp or eelgrass (if present), and cause sensory disturbances that could kill, displace or alter habitat use by marine fish and mammals. Marine shipping has potential to affect marine mammals and fish through underwater noise; however, the Northern Gateway and LNG Canada environmental assessments found the project-specific and cumulative effects on marine mammals from shipping were not significant; Decommissioning will have similar impacts as those during construction.
Vegetation and Wetlands	• Change in the abundance of plant species of interest • Change in the abundance of ecological communities of interest • Change in wetland functions	Construction of terrestrial Project components will result in the direct loss or alteration of vegetation, which may potentially include plant species at risk, traditionally used plant species, and native plant communities including provincially listed ecological communities, old forest, and wetland communities. Invasive plant species may be introduced or spread as a result of Project activities which disturb the ground. Project construction could potentially change wetland soils, hydrology, or vegetation that may affect the potential for a wetland to provide certain ecological functions.

Component	Potential Project Effects	Project Activities and Anticipated Pathway of Effects
Wildlife	• Change in the availability and/or suitability of wildlife habitat, increased mortality risk, and changes to movement patterns	Project activities have potential to affect migratory and non-migratory birds and terrestrial wildlife. Construction of project components will remove habitat and alter habitat suitability for some wildlife species. Mortality risk for wildlife may increase during construction due to increased human presence, use of heavy equipment, vegetation clearing, and collision with vehicles or infrastructure. Movement of wildlife may change during construction in response to perceived barriers or increased sensory disturbance. Construction and operation of the floating facility and jetty/jetties are likely to alter shoreline and nearshore habitat and may change habitat availability and suitability for marine birds. Mortality risk and movement patterns of marine birds may also change due to use of artificial lighting and increased vessel traffic. Decommissioning activities are expected to result in similar effects pathways to wildlife.
Social Effects		
Land and Resource Use	• Change in private property and tenured land use • Change in non-tenured land use	Project use of lands may be incompatible with overlapping occurrences and uses of private property and Crown land (tenured and non-tenured use). The presence of construction and operational workforces and mobile equipment (including associated noise and emissions) may result in short-term changes in the quality of experience of engaging in existing land uses near the Project.
Marine Use	• Change in marine navigation • Change in marine fisheries and other uses	Construction of the new marine terminal and related infrastructure will result in new permanent marine structures. These structures and the associated control zones could result in changes in navigation in the vicinity of these marine works. Additional large shipping traffic (LNG carrier traffic) in or along the shipping route could also affect navigation. Shipping traffic could reduce the quality of experience of fishing and marine recreation. Project workers employed during the construction phase may also engage in recreational fishing in the vicinity of other fishers. Construction and operation of marine infrastructure, including the safety zones, will also preclude fishing, recreation, and tourism within the immediate vicinity.
Socio-Community	• Change in community infrastructure and services • Change in accommodation availability • Change in transportation infrastructure • Change in community health and wellness	Construction, operation, closure and remediation of the Project could increase demand for accommodations, community infrastructure and services, and demand on transportation infrastructure. The Project may adversely affect the social and cultural wellbeing of residents as a result of the presence of a temporary workforce, which could disrupt community life. Workers who secure employment with the Project may benefit from increased disposable income and skillsets.
Economic Effects		
Employment and Economy	• Change in regional labour force • Change in regional business • Change in provincial economy	Project expenditures and employment during construction, operation, and closure and reclamation of the Project could result in changes to the regional labour force and business activity as well as the provincial economy. The Project will require an estimated peak workforce in the Kitimat area of approximately 350 to 500 people at the peak of construction. Project construction is expected to generate up to 2,000 person-years of employment. During operations, the Project will directly employ an estimated 70 to 100 people in ongoing full-time roles.

Component	Potential Project Effects	Project Activities and Anticipated Pathway of Effects
Heritage Effects		
Cultural and Heritage Resources	• Loss of information about or alteration to site contents or context	Construction will involve tree clearing and ground disturbing activities that could adversely affect archaeological and heritage resources.
Human Health Effects		
Human Health	• Changes to human health	Construction, operation, and decommissioning activities may release chemicals of concern into the environment. People who are exposed to chemicals of concern through air inhalation, food and water ingestion, and dermal contact may experience a change in their health risk.

5.0 Engagement and Consultation

Cedar recognizes the importance of developing long-term, respectful, and meaningful relationships with Indigenous groups and interested stakeholders potentially affected by the Project. Haisla Nation Chief Councillor, on behalf of Cedar, has had preliminary engagements with groups and introductory letters have been sent to each group and follow-up meetings have or are scheduled to occur. Haisla Nation has had preliminary discussions with government representatives regarding the Project since 2012. Cedar has initiated commercial discussions with Rio Tinto and Coastal GasLink regarding easement agreements for the pipeline and transmission line, and natural gas supply. Cedar is committed to ongoing consultation and engagement with potentially affected Indigenous groups, communities and interested stakeholders.

5.1 Indigenous Engagement

Cedar is committed to engaging with potentially affected Indigenous groups regarding established or asserted Aboriginal rights, title and other interests (including current use for traditional purposes) that may be affected by the Project. Cedar understands that identifying and recommending measures to address potential adverse effects to Aboriginal Interests from the Project, or from its cumulative interaction with other past, present or reasonably foreseeable projects, will be an important element of the environmental assessment and the fulfillment of the Crown's common law duty to consult and accommodate. Subject to any different direction from regulators, Cedar anticipates that the following Indigenous groups will be engaged in consultations related to the project:

- Haisla Nation
- Gitxaala First Nation
- Gitga'at Nation
- Lax Kw'alaams Band
- Metlakatla First Nation
- Kitselas First Nation
- Kitsumkalum First Nation
- Council of the Haida Nation
- Métis Nation of BC.

Preliminary meetings were held with the above groups, with the exception of the Council of the Haida Nation and the Métis Nation of BC, in August 2019 and October 2019 to begin the consultation process for the Project's assessment process.

The main elements for active engagement and consultation with Indigenous groups will include:

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

If the Project is subject to substitution under the IAA, engagement with Indigenous groups will include consideration of potential Project effects to:

- Physical and cultural heritage
- The current use of lands and resources for traditional purposes
- Any structure, site or thing that is of historical, archeological, paleontological or architectural significance
- Any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada

5.2 Engagement with the Public, Stakeholders, Government, and Other Parties

Haisla Nation has had preliminary discussions with government representatives regarding the Project since 2012. This includes recent meetings with the Deputy Minister of Energy, Mines and Petroleum Resources, the EAO and the former Canadian Environmental Assessment Agency to provide an informal early introduction to the Project. Cedar has initiated pre-Application planning phase activities associated with the federal and provincial assessment processes since submission of the Initial Project Description in August 2019. In meetings with the EAO and IAAC, the opportunities for substitution were also discussed.

The IAAC prepared a Summary of Issues based on feedback received from the public, stakeholders, government and other parties during their comment period on the Initial Project Description. Key issues raised in the IAAC's Summary of Issues include:

- Potential effects of accidents or malfunctions, including effects to health and safety
- Potential effects of the Project on the acoustic environment, atmospheric environment, climate change and greenhouse gas emissions
- Potential effects of the Project on quality and quantity of country foods
- Consideration of cumulative effects
- Potential effects of the Project on economic conditions, human health and wellbeing, social conditions, and vulnerable population groups
- Potential effects of the Project on fish and fish habitat marine mammals, migratory birds, species at risk, terrestrial wildlife and wetlands

- Potential effects of the Project on Indigenous peoples' social and economic conditions, use of lands and resources, and rights
- Considerations around marine shipping

If substitution is granted, Cedar anticipates completing the following steps in scoping the impact assessment:

- Cedar will prepare a draft Valued Components (VC) selection document outlining the VCs to include in the assessment of potential positive and negative impacts of the Project.
- Cedar will prepare a draft Application Information Requirements (dAIR) document outlining the proposed scope of assessment of potential positive and negative impacts of the Project. EAO will approve and finalize the Application Information Requirements (AIR) once they are satisfied with its contents.

The issues raised in the Summary of Issues will be considered in developing these documents. There will be opportunities for the Working Group, Indigenous nations, and public to review and comment on the proposed scope of the assessment. Once the AIR is finalized, it establishes and confirms the required scope of the Projects' impact assessment.

Cedar has initiated commercial discussions with Rio Tinto and Coastal GasLink regarding easement agreements for the pipeline and transmission line, and natural gas supply. The Project site is owned in fee simple by an affiliate of Haisla Nation.

6.0 Figures

All figures referenced in this summary hereby follow.

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Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada

- Highway
- Road
- Railway
- Watercourse
- Waterbody
- First Nations Reserve
- Park, Ecological Reserve, Protected Area or Conservancy Area
- Treaty Lands
- Project Location

0 50 100 150 km
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Stantec CEDAR LNG

Project Location
Kitimat,
British Columbia

Project Number 123221301
Prepared by TCARDINAL on 20190716
Discipline Review by JMUNDY on 20190717

Client/Project/Report
Cedar LNG Export Development Ltd
Cedar LNG Project
Detailed Project Description

Figure No.
1

Title
Project Location

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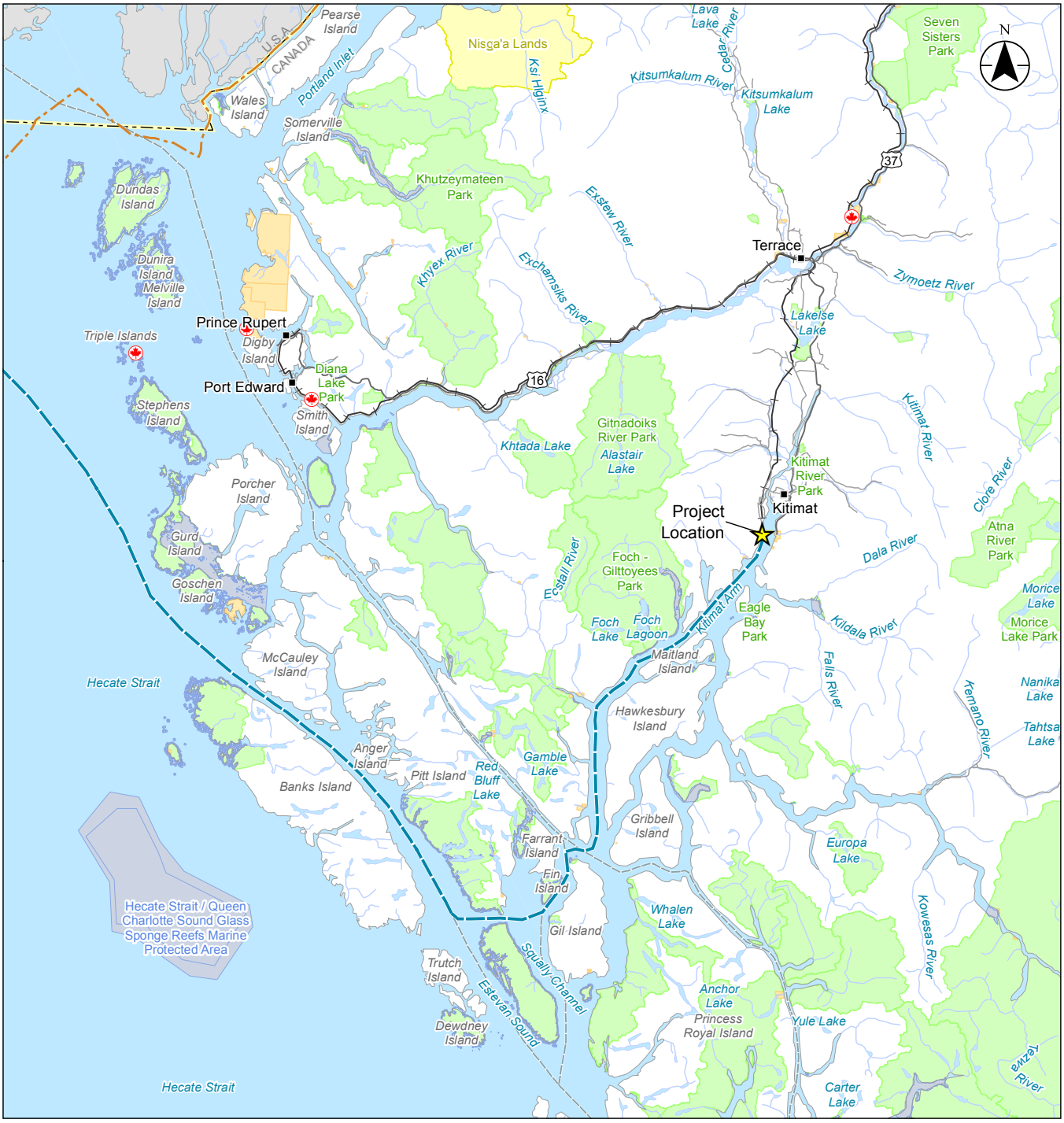

Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada
* Approximate Location

- Highway
- Road
- Railway
- Watercourse
- Waterbody
- First Nations Reserve
- Treaty Lands
- Terrestrial Park, Ecological Reserve, Protected Area or Conservancy Area
- Marine Park, Ecological Reserve, Protected Area or Conservancy Area
- Project Location
- Marine Shipping Route*
- Shipping Route
- 12 Mile Nautical Limit
- National Historic Site of Canada

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Stantec CEDAR LNG

Project Location
Kitimat,
British Columbia

Project Number 123221301
Prepared by LTRUDELL on 20190717
Discipline Review by USERNAME on 201907XX

Client/Project/Report
Cedar LNG Export Development Ltd
Cedar LNG Project
Detailed Project Description

Figure No.
2

Title
Project-related Marine Shipping Route

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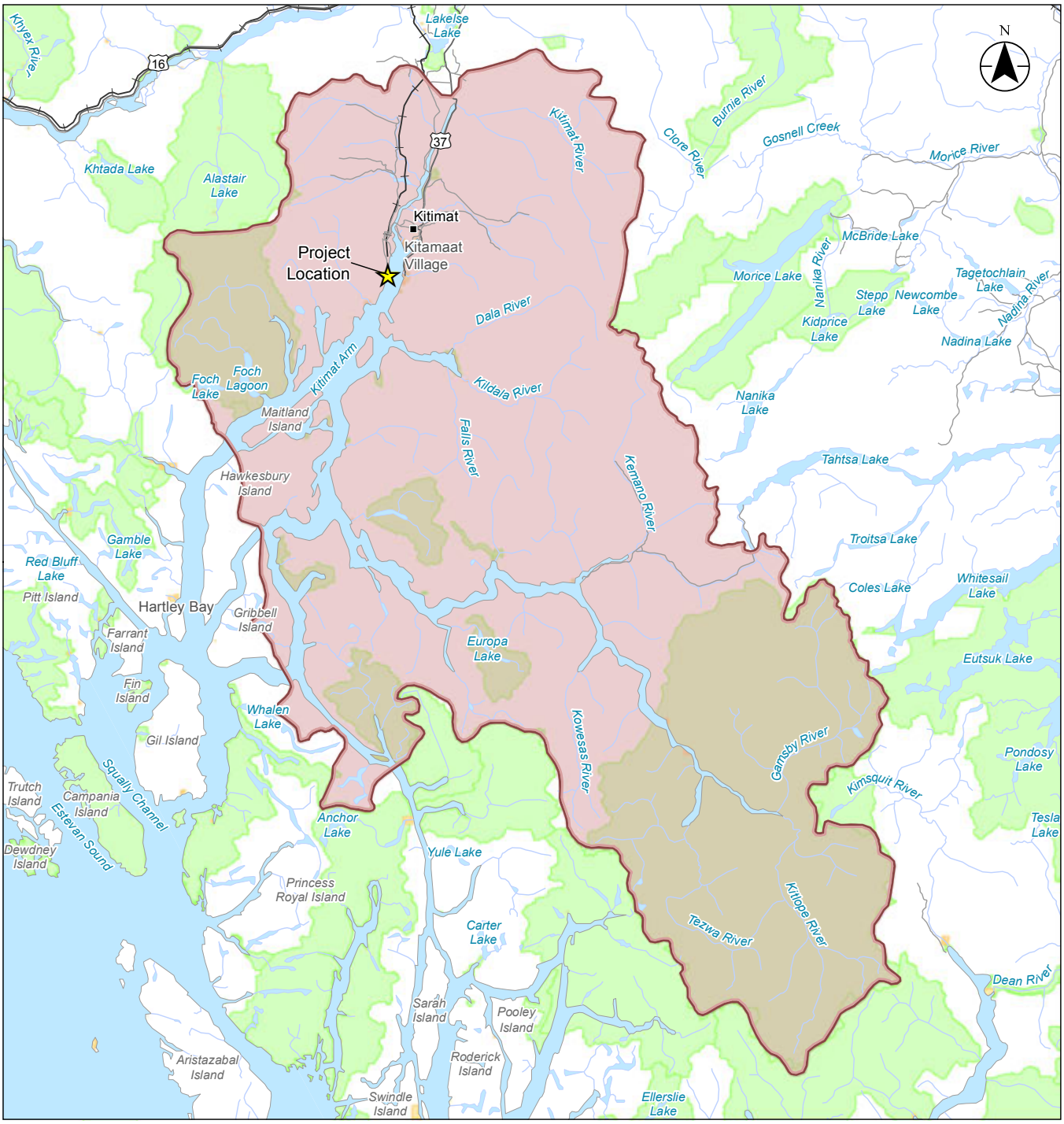

Highway
Road
Railway
Watercourse
Waterbody
First Nations Reserve
Park, Ecological Reserve, Protected Area, or Conservancy Area
Project Location
Haisla Traditional Territory

0 10 20 30 40 50 km
1:1,100,000 (at original document size of 8.5x11)

Stantec
CEDAR LNG

Project Location
Kitimat, British Columbia

Project Number 123221301
Prepared by TCARDINAL on 20190716
Discipline Review by JMUNDY on 20190816

Client/Project/Report
Cedar LNG Export Development Ltd
Cedar LNG Project
Detailed Project Description

Figure No.
3

Title
Haisla Traditional Territory

Notes
1. Coordinate System: NAD 1983 BC Environment Albers
2. Data Sources: DataBC, Government of British Columbia; Natural Resources Canada

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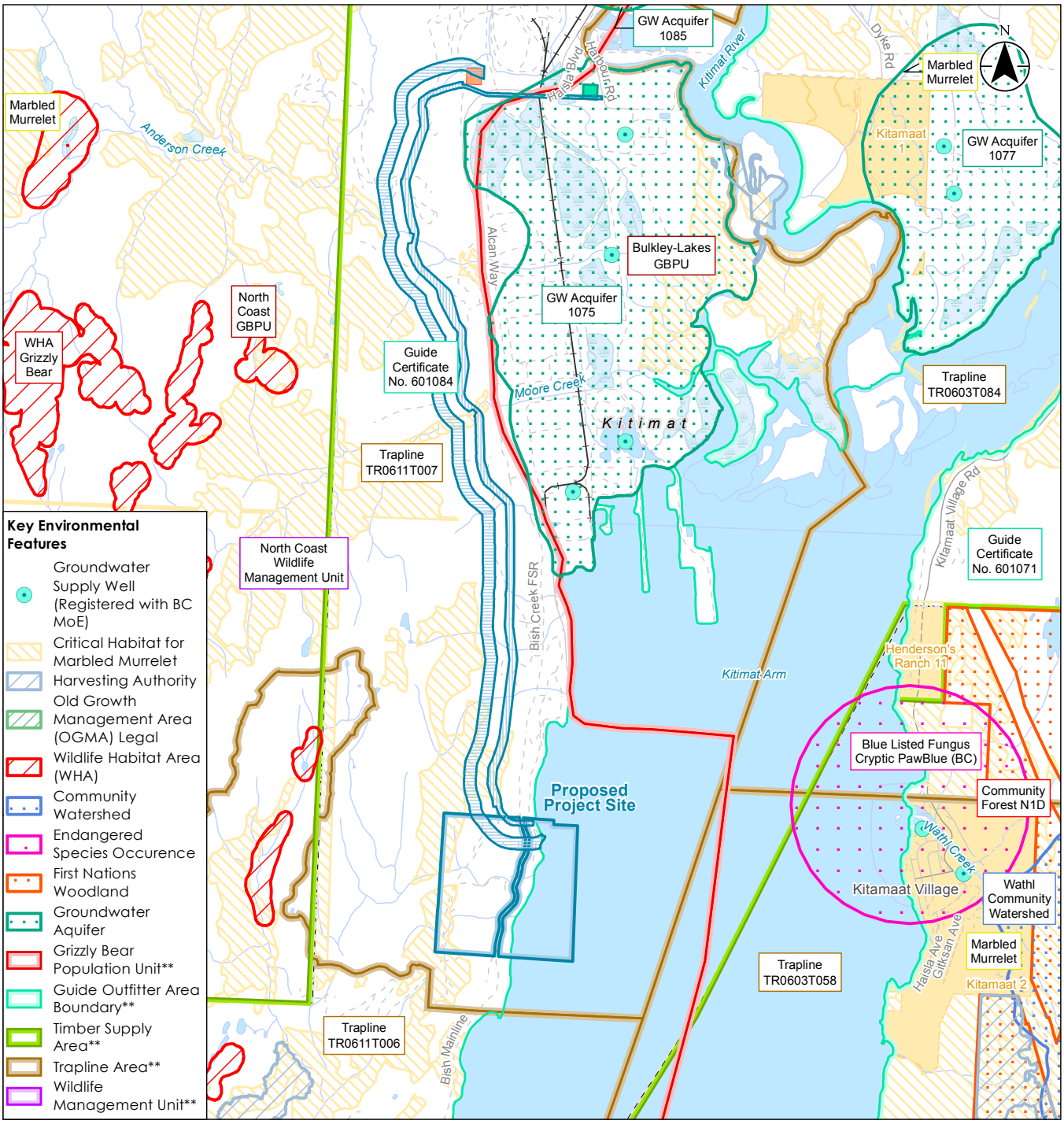

Road
Local Street
Resource Road
Railway
Watercourse
Waterbody
Wetland
First Nations Reserve
Municipal Boundary
Minette Substation

Cedar LNG Project Area*
Pipeline Corridor
Transmission Line Corridor
Proposed Metering Station

0 0.5 1 1.5 2 km
1:50,000 (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
*Approximate Location
**Boundary will not be visible if it is beyond the extent of the data frame.

Stantec CEDAR LNG

Project Location
Kitimat,
British Columbia

Project Number 123221301
Prepared by LTRUDELL on 20191202
Discipline Review by JMUNDY on 20191202

Client/Project/Report
Cedar LNG Export Development Ltd
Cedar LNG Project
Detailed Project Description

Figure No.
4

Title
Key Environmental Features