

PACIFIC NORTHWEST LNG - ADDENDUM TO THE ENVIRONMENTAL IMPACT STATEMENT

Introduction
December 12, 2014

1.0 INTRODUCTION

Pacific NorthWest LNG Limited Partnership (PNW LNG) proposes to construct and operate the Pacific NorthWest LNG Project (the Project), a liquefied natural gas (LNG) facility on Lelu Island, within the District of Port Edward, British Columbia (BC). The Project will be located primarily on federal lands and waters under the jurisdiction of the Prince Rupert Port Authority (PRPA). The Project will convert natural gas into LNG for export to Pacific Rim markets in Asia.

At full build-out (on completion of Phase 2, with three production trains), the facility will receive approximately 3.2 billion standard cubic feet per day (Bcfd), or 9.1×10^7 cubic metres (m^3) per day, of pipeline grade natural gas, and produce up to 19.2 million tonnes per annum (MTPA) of LNG. The natural gas will be transported to the LNG facility by a new pipeline. The pipeline is the Prince Rupert Gas Transmission Project, which is being proposed by a third party (TransCanada Pipelines Ltd.) and is being assessed under a separate regulatory process.

In February 2014 PNW LNG submitted an Environmental Impact Statement (EIS) and Environmental Assessment Certificate Application (Application) to the Canadian Environmental Assessment Agency (CEA Agency) and to the BC Environmental Assessment Office (BC EAO). The BC environmental assessment process is complete and an Environmental Assessment Certificate (EAC) was issued on November 25, 2014. Since the BC process is complete this document will refer solely to the EIS.

PNW LNG is currently proposing design changes to the Project to avoid, and further reduce, the potential effects of the Project on the environment. This includes:

- Redesigning the **marine terminal and relocating the berths** to remove project infrastructure (i.e., piles) on Flora Bank; and eliminate the need for dredging on Agnew Bank and the associated disposal at sea of the dredged materials. Updated LNG carrier routes reflect the change in berth locations. These routes are not fixed, and the pilots are able to exercise discretion for navigation purposes; however, the routes remain within the previously assessed area
- Moving the construction worker accommodation facility (accommodation camps) from the original Lelu Island location and using **third party owned-and-operated worker accommodation camps** on private property in Port Edward or in the Prince Rupert area.

These changes replace the design described in the EIS submitted in February, 2014. Figure 1-1 to Figure 1-5 have been updated from those provided in the EIS to reflect the project changes and any other applicable updates.

1.1 MARINE TERMINAL DESIGN MITIGATION

The objective of the marine terminal design mitigation is to avoid the activities in the marine environment with the greatest potential environmental effects (i.e., effects on marine fish and fish habitat) and to eliminate the need to compensate for potential effects on these resources. Overall, the marine terminal design mitigation addresses key concerns raised by First Nations, government agencies, and the public during the review of the EIS.

PACIFIC NORTHWEST LNG - ADDENDUM TO THE ENVIRONMENTAL IMPACT STATEMENT

Introduction
December 12, 2014

The marine terminal design mitigation will be implemented to mitigate the following effects on the environment:

- Effects of dredging on salmon populations and commercial, recreational and Aboriginal (CRA) fisheries
- Effects of project infrastructure on Flora Bank
- Interference of dredging equipment and barges on marine traffic and fishing
- Perceived health risk from sediment mobilization during dredging
- Effects of disposal at sea on marine resources at Brown Passage.

1.2 CONSTRUCTION WORKER ACCOMMODATION CAMP

The EIS included plans for a construction worker accommodation camp to be built on the southeast end of Lelu Island, in the area of the main flare stack, to accommodate between 3,500 and 4,500 people at peak construction of the LNG facility. The rationale for locating the camp on Lelu Island included reducing the need to transport workers to Lelu Island and the impact of a temporary influx of workers on Port Edward.

Since submission of the EIS, PNW LNG has advanced the project engineering and identified that an accommodation camp on Lelu Island increased potential risks to worker safety and limited space for other construction activities (e.g., peat/overburden storage, laydown areas, batch plant and plant infrastructure). PNW LNG (through their engineering contractors) has also been made aware that third party accommodation camp service providers are working directly with municipalities to plan, construct and operate expandable accommodation camps on private land (appropriately zoned) in Port Edward or in the Prince Rupert area. Port Edward has written to PNW LNG to confirm that they support these accommodation camps in their community. These accommodation camps will not be developed, owned, or operated by PNW LNG. The accommodation camps will be available for use by other projects such as pipelines, Prince Rupert LNG and the Canpotex Potash Terminal Project. They are not for the sole use of the PNW LNG Project.

While the camp will be owned and operated by a third party service provider, PNW LNG has established requirements for housing PNW LNG workers in the accommodation camps (through their Engineering, Procurement, Construction and Commissioning [EPCC] contractor) to ensure the health and well-being of the workforce and to mitigate potential effects to the local communities. The EPCC Contractor must demonstrate to PNW LNG that the camp provider they have selected meets those requirements (see Section 2).

Removing the accommodation camp from Lelu Island will not change the terrestrial project development area on Lelu Island. As described in the EIS, facility infrastructure (the flare stack) was to be located in the area of the temporary camp after it was dismantled (prior to project commissioning).

Because the accommodation camps will no longer be developed, owned or operated by PNW LNG, nor be for the exclusive use of PNW LNG, the CEA Agency has determined that the construction and operations of the camps is not a component of the Project for the purposes of the federal environmental assessment. The CEA Agency has also determined that the transportation of workers to and from the project site is outside of the scope of the Project to be assessed; except for consideration in the cumulative effects assessment for relevant VCs (e.g., air quality and wildlife). Access roads to be developed by PNW LNG within the project site must still be considered in the EIS.

PACIFIC NORTHWEST LNG - ADDENDUM TO THE ENVIRONMENTAL IMPACT STATEMENT

Introduction
December 12, 2014

1.3 OVERVIEW OF THE EIS ADDENDUM

The purpose of this EIS Addendum is to provide the CEA Agency with an update to the effects assessment as well as PNW LNG's responses to the information requested in the CEA Agency's letters of August 14 and September 11, 2014. This EIS Addendum therefore includes:

1. An update to the description and analysis of potential effects on relevant Valued Components (VCs) in areas of federal interest as a result of the project design changes
2. Replacement chapters for the Marine Resources VC (Section 13 of the EIS – see Appendix A of the EIS Addendum), the Current Use of Lands and Resources for Traditional Purposes VC (Section 21 of the EIS - see Appendix B of the EIS Addendum), and the Aboriginal Rights and Related Interests VC (Section 27 of the EIS - see Appendix C of the EIS Addendum)
3. An updated list of all mitigation measures, written as commitments, that clearly describes how they are to be implemented and identifies which technically and economically feasible measures mitigate any significant adverse environmental effects of the Project on areas of federal interest
4. An update to the project schedule, and to the analysis of cumulative effects that depend on the project schedule
5. An update to the views of the public regarding the Project based on public outreach following the announcement of the project design changes
6. Responses to the information requests of August 14 and September 11.

Each section of the EIS Addendum lists the documents submitted by PNW LNG as part of the environmental assessment process to date (applicable to that section) and identifies if information is either *updated by the EIS Addendum*, *superseded*, *not relevant*, or *not affected* by information in the EIS Addendum.

For sections where an update is required, the EIS Addendum includes:

- An update to the project effects assessment as a result of the marine terminal design mitigation
- An updated to the cumulative effects assessment (including effects of the transportation of workers for relevant VCs [e.g., air quality and wildlife])
- Responses to outstanding information requests
- A list of updated mitigation measures
- Conclusions of effects of the Project on the VC, in consideration of the project changes, cumulative effects, and additional information provided in response to the request for outstanding information.

An update to the summary of the assessment is provided in Section 28, which includes a list of technically and economically feasible measures to mitigate any significant adverse environmental effects of the Project on areas of federal interest.

**PACIFIC NORTHWEST LNG - ADDENDUM TO THE
ENVIRONMENTAL IMPACT STATEMENT**

Introduction
December 12, 2014

1.4 FIGURES

Please see the following pages.



- City or Town
- Project Location
- Provincial Road or Highway
- Watercourse
- Waterbody

Pacific NorthWest LNG

Project Location

EIS ADDENDUM

Sources: Government of British Columbia; Government of Canada, Natural Resources Canada, Centre for Topographic Information.

Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.

DATE: 12-NOV-14
 FIGURE ID: 123110537-306
 DRAWN BY: K. POLL

PROJECTION: BC ALBERS
 DATUM: NAD 83
 CHECKED BY: B. BYRD

PREPARED BY:



PREPARED FOR:



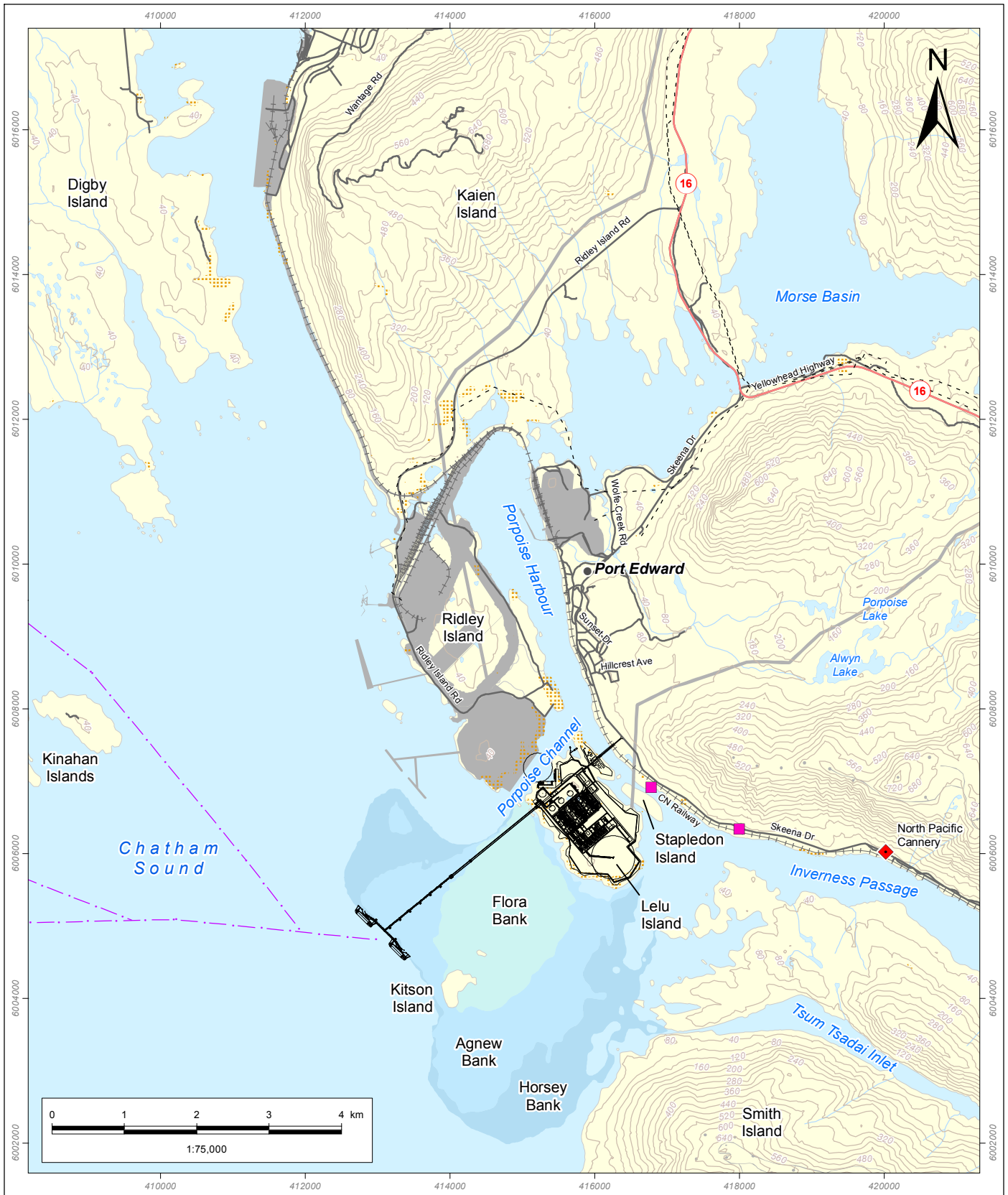
FIGURE NO:

1-1



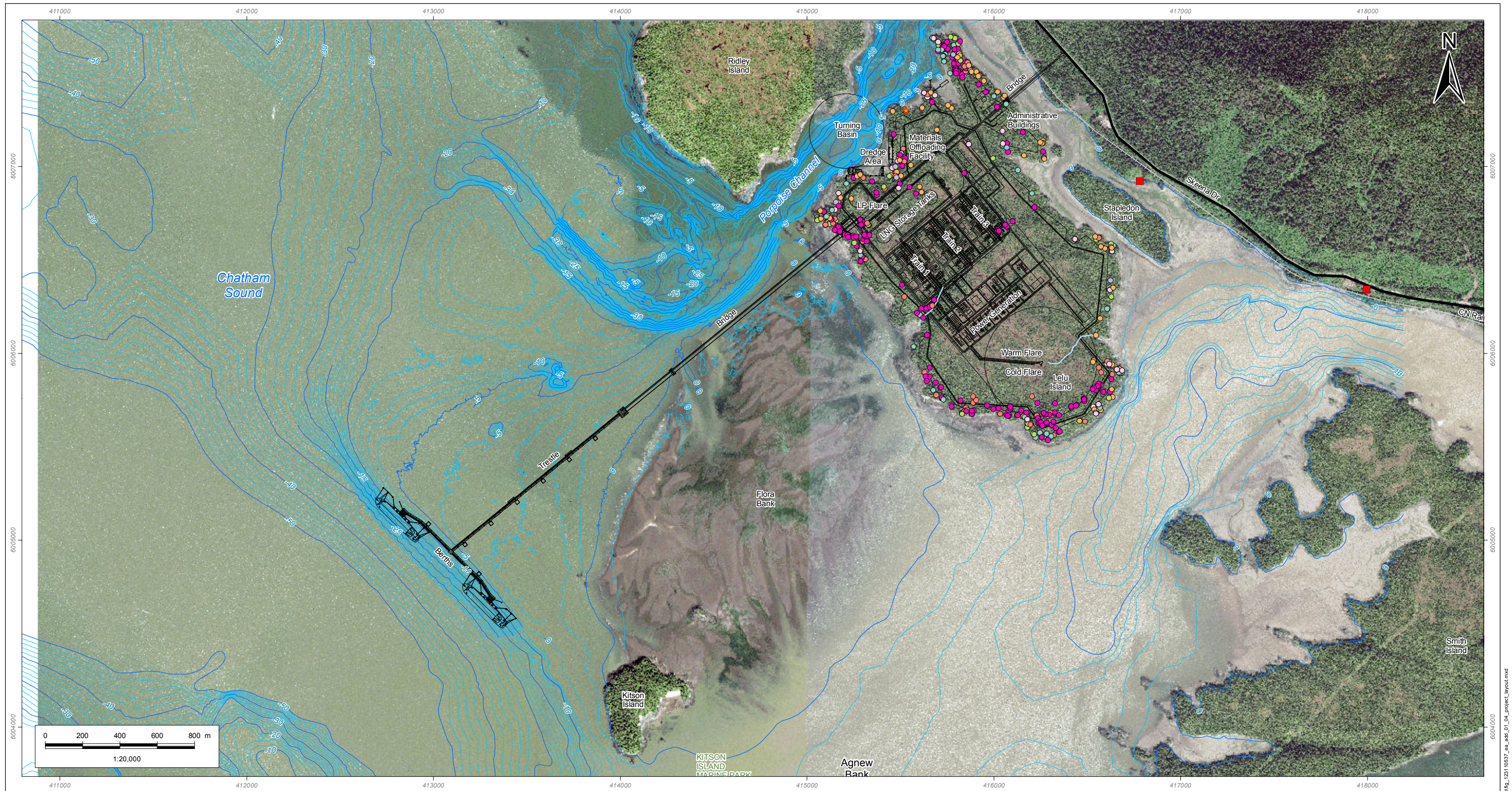
<ul style="list-style-type: none"> Airport Heritage Railway Station Historic Site of Canada Petitioned Heritage Lighthouses Pilotage Station City or Town Electrical Power Transmission Line Highway 	<ul style="list-style-type: none"> International Boundary Potential Shipping Route Railway Watercourse Conservancy Area Ecological Reserve Indian Reserve Lelu Island 	<ul style="list-style-type: none"> Prince Rupert Port Authority Boundary Protected Area United States of America Waterbody 	<p style="text-align: center;">Pacific NorthWest LNG</p> <p style="text-align: center;">Lelu Island and Surrounding Area</p> <p style="text-align: center;"><i>EIS ADDENDUM</i></p> <p><small>Sources: Government of British Columbia; Government of Canada, Natural Resources Canada, Centre for Topographic Information; Progress Energy Canada Ltd.</small></p> <p><small>Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small></p> <p>DATE: 24-NOV-14 FIGURE ID: 123110537-309 DRAWN BY: K. POLL</p> <p>PROJECTION: UTM - ZONE 9 DATUM: NAD 83 CHECKED BY: B. BYRD</p>	<p>PREPARED BY:</p> <p style="text-align: center;"> Stantec</p> <p>PREPARED FOR:</p> <p style="text-align: center;"> Pacific NorthWest LNG</p> <p>FIGURE NO:</p> <p style="text-align: center;">1-2</p>
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<ul style="list-style-type: none"> ◆ Historic Site of Canada ■ Residence — Project Component - - - Potential Shipping Route ■ Proposed or Existing Industrial Development ● City or Town — Contour (m) - - - Electrical Power Transmission Line +++ Railway — Road — Secondary Road — Watercourse ■ Archaeological Site ■ Waterbody Shoals ■ Agnew Bank ■ Flora Bank ■ Horsey Bank 	<p>Pacific NorthWest LNG</p> <p>Project Layout and Surrounding Area</p> <p>EIS ADDENDUM</p> <p><small>Sources: Government of British Columbia; Government of Canada, Natural Resources Canada, Centre for Topographic Information; Canadian Hydrological Service (CHS), 1995.</small></p> <p><small>Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data</small></p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;">DATE: 20-NOV-14</td> <td style="border: none;">PROJECTION: UTM - ZONE 9</td> </tr> <tr> <td style="border: none;">FIGURE ID: 123110537-308</td> <td style="border: none;">DATUM: NAD 83</td> </tr> <tr> <td style="border: none;">DRAWN BY: K. POLL</td> <td style="border: none;">CHECKED BY: B. BYRD</td> </tr> </table>	DATE: 20-NOV-14	PROJECTION: UTM - ZONE 9	FIGURE ID: 123110537-308	DATUM: NAD 83	DRAWN BY: K. POLL	CHECKED BY: B. BYRD	<p>PREPARED BY:</p> <p style="text-align: center;"> Stantec</p> <p>PREPARED FOR:</p> <p style="text-align: center;"> Pacific NorthWest LNG</p> <p>FIGURE NO:</p> <p style="text-align: center; font-size: 24pt; font-weight: bold;">1-3</p>
DATE: 20-NOV-14	PROJECTION: UTM - ZONE 9							
FIGURE ID: 123110537-308	DATUM: NAD 83							
DRAWN BY: K. POLL	CHECKED BY: B. BYRD							



<ul style="list-style-type: none"> ★ Abandoned Cabin ● Culturally Modified Trees <ul style="list-style-type: none"> ● Aboriginally Logged ● Bark-strip, Columnar ● Bark-Strip, Other ● Bark-strip, Rectangular ● Bark-strip, Taper ● Bark-strip, Unknown Morphology ● Other Modified Tree ● Other Modified Tree, Kindling ● Tree with Multiple Features 		<ul style="list-style-type: none"> ■ Residence — Project Component ++++ Railway — Road — Unnamed Mapped Watercourse 		Bathymetry (m) <ul style="list-style-type: none"> — Major Contour — Minor Contour 		<p align="center">Pacific NorthWest LNG</p> <p align="center">Project Layout</p> <p align="center">EIS ADDENDUM</p> <p><small>Sources: Government of British Columbia; Government of Canada, Natural Resources Canada, Centre for Topographic Information; Progress Energy Canada Ltd; WorldView-2 Imagery. Imagery date: 2011.</small></p> <p><small>Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the</small></p>		PREPARED BY: 	
						PREPARED FOR: 			
						FIGURE NO: <p align="center">1-4</p>			
DATE: 27-NOV-14 FIGURE ID: 123110537-307		PROJECTION: UTM - ZONE 9 DATUM: NAD 83		DRAWN BY: K. POLL CHECKED BY: B. BYRD					

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<ul style="list-style-type: none"> Airport City or Town Project Location Electrical Power Transmission Line International Boundary Highway 	<ul style="list-style-type: none"> Railway Indian Reserve Prince Rupert Port Authority Boundary Conservancy Area Protected Area 	<p align="center">Pacific NorthWest LNG</p> <p align="center">Indian Reserves and Protected Areas in North Coast of BC</p> <p align="center"><i>EIS ADDENDUM</i></p> <p><small>Sources: Government of British Columbia; Government of Canada, Natural Resources Canada, Centre for Topographic Information.</small></p> <p><small>Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.</small></p>	<p>PREPARED BY:</p> <p align="center"> Stantec</p> <p>PREPARED FOR:</p> <p align="center"> Pacific NorthWest LNG</p> <p>FIGURE NO:</p> <p align="center">1-5</p>
<p>DATE: 20-NOV-14</p> <p>FIGURE ID: 123110537-310</p> <p>DRAWN BY: K. POLL</p>	<p>PROJECTION: UTM - ZONE 9</p> <p>DATUM: NAD 83</p> <p>CHECKED BY: B. BYRD</p>		

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