TUSAQTAVUT FOR PHASE 2 APPLICATION OF THE MARY RIVER PROJECT

Qikiqtani Inuit Association

June 14, 2019

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Qikiqtani Inuit Association

Qikiqtani Inuit Association's Tusaqtavut for Phase 2 Application of the Mary River Project

FINAL REPORT / June 14, 2019

Qikiqtani Inuit Association

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Thanks and acknowledgements go to Pond Inlet community members, elders, knowledge holders, land users, and to QIA staff, and leadership who contributed. This Report could not have been completed without their support and expert knowledge.

Disclaimer:

The information contained in this Report is based on research conducted by Qikiqtani Inuit Association, with support from Firelight Research Inc., as well as published works and archival research. It reflects the understandings of the authors and is not intended to be a complete depiction of the dynamic and living system of use and knowledge maintained by Inuit. It may be updated, refined, or changed as new information becomes available. All mapped information is based on interviews with Pond Inlet knowledge holders conducted within constraints of time, budget and scope. Base map data originate from the National Topographic System and Natural Resources Canada. The information contained herein should not be construed as to define, limit, or otherwise constrain the Nunavut Agreement rights of Inuit.

EXECUTIVE SUMMARY

The Qikiqtani Inuit Association (QIA) engaged Firelight Research Inc. to support a Tusaqtavut study specific to the proposed Phase 2 of the Mary River Project (the Project) operated by Baffinland on northern Baffin Island. This Report provides non-confidential information about existing and anticipated future impacts, based on knowledge and use data collected about the north Baffin region during interviews with Pond Inlet community members, with a specific focus on the vicinity of the Project, including the marine environments of Eclipse Sound and Navy Board Inlet. The Report includes analysis of 54 mapping interviews (of knowledge and use) conducted with 35 Inuit community members from Pond Inlet during the period of February 4, 2019 to February 8, 2019, and April 26, 2019 to April 30, 2019.

The site-specific data clearly demonstrate that Inuit use or have used the Study Area across multiple generations. A total of 1020 site-specific values were reported in the Study Area (the Footprint, LSA, and RSA). Additionally, the Study Area contains numerous important sites that support harvesting of wild foods including marine mammals (including ringed seal and narwhal), terrestrial mammals (including caribou), fishing and Inuit cultural continuity. These include, but are not limited to:

- High value fish habitat;
- Important water sources, such as springs, rivers, and lakes;
- Important wildlife habitat for supporting hunting and trapping activities, including important calving areas for both narwhal and caribou in the marine and terrestrial environments respectively;
- Important travel routes that are relied upon to access hunting grounds and other communities; and
- Areas relied on for the continuity of Inuit culture, such as teaching areas, campsites and gathering places.

The site-specific data show that the Project is situated in an area that is highly valued and has been used by Inuit for generations. This Report documents the historical, current, and desired future use of Inuit and their ancestors within this area, including the coastlines and interior of Baffin Island and Bylot Island, as well as the marine environment including the sea ice and floe edge.

Through discussion and interviews, study participants identified a set of Valued Components (VCs) relating to Inuit knowledge and use that have been and/or continue to be impacted by the Project. These are: Marine Hunting; Terrestrial Hunting; Fishing and Fresh Water; Travel, Trails, and Habitation; and Cultural Continuity.

Project interactions and impact pathways which impact safe travel inland and on the sea ice, reduced harvesting success, loss and disturbance of hunting areas and cabins, knowledge transmission and sense of place, and marine mammal harvesting that emerged from the Study related to the VC of Marine Hunting are as follows:

- Impacts to marine ice, water and sediment quality primarily from the Milne Port and increased marine shipping;

- Avoidance of areas by marine mammals and harvesters due to the Milne Port and the Northern Shipping Route;
- Impacts to marine species health and impacts to habitat loss and changes in habitat due to the Milne Port and the Northern Shipping Route;
- Acoustic disturbances from the Northern Shipping Route and the Milne Port;
- Risks of mortality from vessel strikes and increased vessel interactions due to the Northern Shipping Route;
- Loss of wildlife habitat, including critical narwhal calving environments due to acoustic disturbance from ship traffic;
- Loss of use or avoidance of preferred areas for hunting due to decreased abundance of preferred species (such as narwhal); and
- Loss of use or avoidance of preferred areas for hunting due to safety concerns and restrictions on access.

Project interactions and impact pathways, including impacts to safety, increasing harvesting effort, and a loss or disturbance of use of hunting areas and camps/cabins with potential impacts to household and community-level subsistence, that emerged from the Study related to the VC of Terrestrial Hunting are as follows:

- Increased dust from the Tote Road;
- Alterations to, and loss of, terrestrial habitat from all aspects of the mine operation;
- Barriers to movement for wildlife from particularly mine-related activities;
- Risk of mortality and morbidity due to truck and trains collisions;
- Impacts to caribou health, including impacts related to sensory disturbance and contamination;
- Loss of use or avoidance of preferred areas for hunting and trapping due to safety concerns and restriction of access; and
- Impacts on the abundance and distribution of wildlife, particularly caribou, due to factors including acoustic disturbance, resulting in reduced harvesting success.

Project interactions and impact pathways that impact fish harvesting and the ability to collect and drink fresh water that emerged from the Study related to the VC of Fishing and Fresh Water are as follows:

- Impacts to quality and quantity from the Tote Road and mine site;
- Impacts to the health and condition of fish (Arctic char) due to changing water quality and impacts from the Milne Port and Northern Shipping Route;
- Habitat loss and alteration in both marine and freshwater environments for Arctic char due to activities related to Milne Port, North Railway, and Tote Road, leading to a decline in fish populations; and

- Species avoidance of areas due to impacts to fish habitat and diminished water quality.

Project interactions and impact pathways which impact increased travel time and harvesting effort that emerged from the Study related to the Travel, Trails, and Habitation VC are as follows:

- Damage to travel equipment due to the Tote Road and dust from the Mine Site;
- Sensory disturbances and impacts to safety;
- Impacts to safe inland travel from mine-related activities;
- The loss of or alteration of traditional caribou trails due to the North Railway;
- Impacts to ground disturbance from the Milne Port and Phase 2 activities;
- Impacts to caribou harvesting and marine mammal harvesting due to Phase 2 activities generally;
- Changes in access to preferred hunting and trapping areas due to disruption from truck and rail traffic; and
- Potential changes to access due to interference with the primary trail to hunting areas and other communities by the North Railway.

Project interactions and impact pathways that impact knowledge transmission and sense of place that emerged from the Study related to the Cultural Continuity VC are as follows:

- Changes in access to and the availability of harvesting resources due to a loss of access, a loss of cabins and camps for hunting, and impacts to the availability of mammals (caribou and narwhal in particular) due to mine-related activities;
- Changes in access to travel corridors, cabins, and camps due to mine-related activities including the Tote Road;
- Loss of archaeological sites due to ground disturbance from the terrestrial mine-related activities; and
- Loss of other culturally important gathering sites, tent rings, and other sites due to ground disturbance from the mine, road, and proposed rail and shipping traffic.

The Study Area is important for Pond Inlet members in the north Baffin region for continued use to maintain their traditional land use and harvesting practices. The current mine activities (and related shipping and road traffic) as well as the proposal for the Phase 2 expansion of the Mary River Project are having, and would potentially have, a direct impact on the ability of Pond Inlet members to use the land for harvesting, travel and camping purposes, and by extension reduce their ability to transmit to future generations their IQ, including cultural knowledge, values and worldview.

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ACRONYMS AND ABBREVIATIONS

Firelight	Firelight Research Inc.
GN	Government of Nunavut
HTO	Hunters and Trappers Organization
IOL	Inuit Owned Lands
IQ	Inuit Qaujimajatuqangit
km	Kilometre
LSA	Local Study Area
NA	Nunavut Agreement
NTI	Nunavut Tunngavik Inc.
NU	Nunavut
NIRB	Nunavut Impact Review Board
The Project	Mary River Project
The Proponent	Baffinland Iron Mines Corporation
QIA	Qikiqtani Inuit Association
RSA	Regional Study Area
Study	QIA Tusaqtavut Study, an Inuit Knowledge and Use Study Specific to the Mary River Project, Phase 2
Study Area	The RSA, LSA, and Footprint combined
VC	Valued Component

1. INTRODUCTION

1.1 OVERVIEW

This Report documents the background, methods, and findings of a Tusaqtavut study (the 'Study') specific to the Mary River Project Phase 2 (the Project) proposed by Baffinland Iron Mines Inc. (the Proponent) on Baffin Island. For the purposes of this Report, the Project refers collectively to mine, road, rail, port, and shipping developments and activities proposed as part of Phase 2. The continuation of effects from the existing Mary River Project is also considered, as are reasonably foreseeable future expansions to the south already permitted for the full Project build out. However, a full cumulative effects assessment is beyond the scope of this Study.

This Report provides information on current conditions and consideration of anticipated Project interactions and impact pathways based on current and available Pond Inlet community IQ data in relation to the traditional lands of the Pond Inlet Inuit and in the vicinity of the Project.

This Report includes non-confidential site-specific (i.e., mapped) and qualitative information related to the Project.

The Report is organised into five sections:

- Section 1 presents an overview of the scope of work and Report and Study limitations;
- Section 2 presents background information regarding the Pond Inlet community and the Project;
- Section 3 presents information on the methods used for the Study;
- Section 4 presents the findings of the Study, including both the site-specific and qualitative data; and
- Section 5 summarises the findings and conclusions of the Study.

The Qikiqtani Inuit Association (QIA) engaged Firelight Research Inc. (Firelight) to support a Tusaqtavut study specific to the Project. As detailed in the January 17, 2019 work plan, this includes:

- Detailed budgeting, scoping, work planning, and project management;
- Data and document review of existing data relating to the Project and the Study Area;
- Meetings with QIA to discuss the purpose of the Study and identify key valued components (VCs) and interests related to the Project;
- Development and tailoring of interview and mapping methodologies for the Study;

- Completion of up to 30 individual mapping interviews with Pond Inlet knowledge holders at a scale of 1:50,000 or finer;
- Analysis of interview results, including transcription, post-processing GIS data, preparing maps, and writing a draft non-confidential report; and
- Final reporting to communities.

The deliverables will include a Tusaqtavut Study non-confidential report that considers likely Project-specific effects on Inuit resources, knowledge, use and values based on Inuit knowledge and land use. Report components include:

- Identification and discussion of key issues relating to traditional resource use and livelihood specifically relating to the Project;
- Identification and assessment of project-related impact pathways on key Inuit values;
- Maps that indicate Inuit key resources in the vicinity of the Project (including fish, animals, migratory birds, water resources, and others);
- A discussion of the importance of key resources related to livelihood practice, the transmission of Inuit Qaujimajatuqangit, and the current status of knowledge transmission relating to areas or resources near the Project;
- An assessment of likely interactions of the Project on resources and areas of importance to QIA and on IQ, knowledge and use, and associated impact pathways; and
- Baseline and assessment methods.

The report does **not** include:

- An assessment of residual effects of the Project on Inuit knowledge and use;
- A comprehensive assessment of the potential for cumulative effects on Inuit knowledge and use from the Project acting in combination with other developments and human-caused changes in the region;
- Recommendations for mitigation of effects;
- A significance determination regarding anticipated residual and cumulative effects of the Project; or
- Recommendations regarding culturally relevant indicators and strategies for monitoring in the vicinity of the Project.

1.2 LIMITATIONS

This Report has a number of limitations and should only be considered a first step in identifying Pond Inlet knowledge and land uses and values that may be impacted by the Project. Limitations of this Report include the following:

- The study was conducted with the community of Pond Inlet, therefore the values, uses, and Project impacts on members of other affected Inuit communities are not included in this report.
- Not all knowledge holders were able to participate in this Study. Efforts were made to include key knowledge holders active within the Study Area, but many Pond Inlet elders, hunters, and community members with important knowledge of the Study Area (i.e., Footprint, LSA, and RSA combined) may have been unable to participate due to time and budget restrictions.
- Data collected for each participant are limited by what the participant was able and willing to report at the time of the interview.
- Some interviews were conducted in Inuktitut using simultaneous translation. Due to time constraints, translated transcription has not taken place. Interview notes indicate when a quote from an interview participant was from the translator at the time of the interview.
- The area demarcated by mapped site-specific use values should be understood to be a small portion of the actual area required for the meaningful practice of a Pond Inlet Inuit way of life. Site-specific mapped values (e.g., cabins and kill-sites) reflect particular instances of use that anchor wider practices of culture, livelihood, and other Inuit rights within a particular landscape. For example, a single fishing site may be mapped with a precise point, but that point does not capture the entire spectrum of related practices and values.
- This Report does not include recommendations on mitigation, monitoring, or compensation measures. Conclusions on monitoring, mitigation, and compensation measures are outside the scope of this Report.
- This Report is based on the understandings and analyses of the authors and is not intended as a complete depiction of the dynamic way of life and living system of use and knowledge maintained by the Pond Inlet community.
- This Report should not be taken as a replacement for other studies that may be required, including but not limited to cumulative effects, socio-economics, diet, IQ studies specific to marine and terrestrial wildlife, and health and wellbeing.

Given the above limitations, this Report can be used as a representational account of only some of the Pond Inlet community's knowledge, land use, and cultural values. It is important to note that the Study does not reflect all current use by Pond Inlet community members in those areas, and **an absence of data does not signify an absence of use or value.**

This Report is non-confidential and is intended for consideration by Inuit, the Nunavut Impact Review Board, agents of the territorial and federal governments, and the Proponent within the Project environmental assessment process. However, all data included in this Report are the property of QIA and may not be used or reproduced outside the Project regulatory process without the written consent of QIA or their delegate. Re-interpretation or analysis of the following results will require input and participation from QIA and the Pond Inlet community.

Nothing in this Report should be construed as to waive, reduce, or otherwise constrain Inuit rights within, or outside of, regulatory processes. This Report should not be relied upon to inform other projects or initiatives without the written consent of the QIA.

2. BACKGROUND

2.1 POND INLET COMMUNITY PROFILE

Pond Inlet is a primarily Inuit community located on northern Baffin Island, Nunavut. The current population of Pond Inlet is 1,617 (Government of Canada 2017). Pond Inlet is situated in an area known as Mittimatalik in Inuktitut, which is translated as 'the place where Mittima is buried' (Hamlet of Pond Inlet 2019).

Inuit have been resident in the north Baffin region for roughly 1,000 years, when the archaeological record indicates that their ancestors, the Thule people, moved into the eastern Arctic and the Qikiqtaaluk, previously occupied by the Dorset culture (known as Tuniit in Inuktitut) (Hamlet of Pond Inlet 2019).

Hunting marine and terrestrial creatures has been central to the human occupants of northern Baffin Island since time immemorial (Bennett and Rowley 2004; Stenton 1991). Hunting terrestrial mammals including caribou, wolverine, fox, Arctic hare, lemmings, and wolves provided food and necessary materials for the construction of clothing needed to withstand the cold climate (Bennett and Rowley 2004; Hallam and Ingold 2016; Stenton 1991). Marine mammals such as small whales, walrus, and seals provided necessary materials for clothing and tools as well as essential food, rich in the fats and nutrients required to support life in an environment where vegetable sources of nutrition are limited (Lee and Wenzel 2004; Bennett and Rowley 2004). Fishing, the collection of plants and berries, camping, and soapstone collection have been part of the Inuit way of life since time immemorial (Bennett and Rowley 2004).The complex and multi-layered culture and body of knowledge comprised of the aforementioned activities and built over generations is encapsulated in the term Inuit Qaujimajtuqangit (IQ) (Tester and Irniq 2008; Wenzel 2004; Karetak et al. 2017).

The seasonal round of harvesting which was traditionally undertaken in the Pond Inlet area, in conjunction with movement between a number of seasonally located camps, began to change in 1921 with the arrival of a Hudson's Bay Company outpost (Matthiasson 1992). While whalers had been travelling and harvesting whales in the region for some decades already, substantial social changes were precipitated by the arrival of the Hudson's Bay Company.

The following decades saw the arrival of missionaries, the Royal Canadian Mounted Police, and agents of the Federal and Territorial governments. Each wave of arrivals and the changes they brought shifted the development of the community of Pond Inlet further towards a settled community and away from the previously seasonally mobile lifeway which the Pond Inlet Inuit had lived (Matthiasson 1992). While the Pond Inlet community was obliged to adapt to these changes in their environment, as well as the introduction of southern-style schooling and participation in the wage economy, harvesting food from the land and travelling on the land remained important and continue to be central to the identities of Pond Inlet community members (Condon et al.1995).

The signing of the Nunavut Agreement (NA) in 1993 and its sister Act, the Nunavut Act, produced the Territory of Nunavut and resulted in the designation of Inuit Owned Lands (IOL) (Henderson 2008). The presence of the iron ore deposit which constitutes the mined material at Mary River on an IOL, alongside an obligation to safeguard the rights of Inuit under the NA, has involved QIA in the NIRB review process for the Project, and precipitated the preparation of this Study.

2.2 THE MARY RIVER PROJECT PHASE 2 PROPOSAL

This section provides background information about the existing Mary River Project and proposed Phase 2 Proposal. Baffinland provided spatial data used in this report on September 11th, 2018.

2.2.1 The Mary River Mine

The Mary River Mine is situated in the northern interior of Baffin Island, roughly halfway between Ikpikitturjuaq (Steensby Inlet) to the south, and Qinngua (Milne Inlet) to the north.

Currently, ore is excavated, crushed, and graded into coarse and fine grades at a facility on site before being trucked via the Tote Road to Milne Port. The Tote Road runs from the mine-site north to Qinngua, largely following Phillips Creek. At a port facility at Qinngua, ore is loaded onto ships that transit out of the loading area, past Bruce Head and northeast around Ragged Island into Eclipse Sound. Ships then transit east between the south shore of Bylot Island and the community of Pond Inlet, into Guys Bight, and subsequently Baffin Bay as they proceed to their final destination.

What eventually became the Mary River Mine property was initially discovered in 1962. The current operations phase began in 2014 when initial approval was received from NIRB to operate the mine, with ore first being shipped to Europe during the summer of 2015 (Baffinland Iron Mines Corporation 2019).

2.2.2 The Mary River Project Phase 2 Proposal

The Proponent has submitted an application to NIRB for a second phase of mining (the Phase 2 Proposal). The Proponent is applying to increase the amount of ore removed from the mine site via the northern Milne Port route, from the current 6.0 million tonnes per annum (mtpa) to 12 mtpa by 2020. To accommodate this increase in production and transportation, the Proponent is also applying to construct an approximate 110-kilometre-long railway (i.e., 'North Railway') which will transport the graded ore to the Milne Port facility (Baffinland Iron Mines Corporation 2018).

The proposed railway routing is largely twinned to the existing Tote Road right of way, with the exception of several sites where topography makes twinning technically difficult. The use of the Tote Road will continue while the railway is constructed. While use of the Tote Road for ore movement is proposed to end in 2021 (the North Railway is proposed to be completed and activated by 2020), it will continue to be used to move personnel, fuel, water, and materials for maintenance of the railway (Baffinland Iron Mines Corporation 2018).

Additionally, the Phase 2 application asks for approval for an increase in the number of ships loading and unloading at the Milne Port facility, and an increase in vessel size of a portion of this fleet (Baffinland Iron Mines Corporation 2018). Phase 2 would also involve the construction of further port infrastructure to facilitate proposed increases in ship traffic, and increased needs for fuel, as well as port and mine staff (Baffinland Iron Mines Corporation 2018).

In summary, the Phase 2 Project will involve the following activities:

Milne Port:

- Construction and operation of a second ore dock capable of berthing Cape-size ore carriers;
- Expansion of ore handling and stockpiling facilities;
- Railway and ore unloading infrastructure;
- A new ore crushing facility that will be indoors to reduce dust;
- An expanded camp and related facilities;
- A landfill;
- Increased shipping activities at the port; and
- Increased shipping through Qinngua.

Mine site:

- Increasing the mining rate to 12 million tonnes per year for transportation to the Milne Port facility via the North Railway;
- Additional rail loading facilities for the North Railway;
- An expanded fuel tank farm; and
- Expanded mine maintenance facilities and support administration buildings / facilities (warehouses, shops, etc.).

Mary River transportation corridor (i.e., Tote Road and North Railway):

- Construction of the railway embankment and railway;
- Construction of water crossings (four bridges and 417 culverts);
- Construction and use of multiple laydown areas (up to 14), shelters and small equipment shops at each laydown;
- Construction and operation of four temporary camp pads and two mobile camps;
- Construction of several level crossings for the Tote Road; and
- Development and closure of up to 40 quarries along the railway corridor.

Shipping:

- Shipping between early July up to November 15 each year; and
- Increased shipping frequency during the yearly open water period.

3. METHODS

3.1 OVERVIEW

Data for this Study were collected from mapping interviews specific to the Project with 35 Pond Inlet community members, conducted between February 4, 2019 and February 8, 2019, and between April 26, 2019 and April 30, 2019. This section details the data collection methodologies used and analyses conducted, including for both quantitative (i.e., mapped) and qualitative data.

3.2 VALUED COMPONENTS

This Report is organised around five valued components (VCs). A VC is defined as an important aspect of the environment that a project has the potential to impact (Hegmann et al. 1999). Valued components may include tangible or biophysical resources (e.g., particular places or species), and may also encompass less tangible social, economic, cultural, health, and knowledge-based values (e.g., place names or IQ regarding a particular area).

For the purpose of this Study, the VCs were chosen to represent the critical conditions or elements that must be present for the continued practice of Pond Inlet Inuit culture and that may be impacted by the Project. As such, VCs can range from the direct presence of traditionally hunted animals and gathered plants, to continued habitation, travel, and cultural activities on the land. Valued components are also designated to include intangible cultural resources, such as the transmission of knowledge across generations. Valued components for this Study are:

- Marine Hunting;
- Terrestrial Hunting and Trapping;
- Fishing and Fresh Water;
- Travel, Trails, and Habitation; and
- Cultural Continuity.

3.3 MAPPING INTERVIEWS

35 Inuit Pond Inlet community members were interviewed in 54 separate mapping interviews for the Study from February 4, 2019 to February 8, 2019, and from April 26, 2019 to April 30, 2019. Interviews were conducted at the Visitors Centre in Pond Inlet, Nunavut. Interview teams prioritised the documentation of values within the Local Study Area (LSA) and those in close proximity to the Project. Verification of the findings of this report was conducted through individual meetings with participants from April 26-30, 2019. A community verification meeting was held on April 30th, 2019. Values within and beyond the Regional Study Area (RSA) were documented where time permitted.

Interview participants were identified and contacted by QIA staff. Participants were chronologically assigned identifier codes in the form of P##. Informed consent was obtained for all interviews (see Consent Form in Appendix 1).

All data included in this Study were collected using the same methodology as described in Sections 3.3.1 and 3.3.2, below. Interviews followed a semi-structured format (see Interview Guide in Appendix 3). Interview and mapping protocols used were based on standard techniques (Tobias 2009; DeRoy 2012).

The Study adheres to the following established best practices for IQ/TK/TLU studies in the regulatory context of a proposed Project (Olson et al. 2016):

- **Methods development:** A semi-structured interview guide should be developed with the community to ensure that all questions are culturally appropriate. Development of TLU codes for mapping should be done with the community to ensure appropriateness.
- **Informed consent:** Each participant should read and sign a consent form that clearly indicates who is conducting the study, its purpose, who will have intellectual property rights over the information shared during the interview, and their rights in the interview process.
- **Semi-structured individual interviews:** To obtain detailed IQ/TK/TLU information, individual interviews should be conducted with a broad cross-section of traditional knowledge holders and land users.
- **Data management:** Recording of participant names, dates of interviews, who conducted the interviews, and how the data are stored is an essential part of IQ/TK/TLU research.
- **Mapping protocols:** Mapping should be conducted with a trained researcher. Mapping codes should be developed with the community before the study begins and used consistently throughout. Proper documentation of sites and attribute data should be collected in a consistent manner. Site-specific mapping should be done at a scale of 1: 50,000 or better.
- **Established spatial boundaries:** The proposed project, local study area, and regional study area should be clearly indicated on maps during all IQ/TK/TLU interviews.
- **Established temporal boundaries:** The temporal boundaries of the IQ/TK/TLU study should include current use (i.e. use in the participant's lifetime), historical use, and future use.
- **Recording of IQ/TK/TLU interviews:** All interviews should be audio recorded with proper attributions.
- **Data analysis:** Recorded interviews should be transcribed and coded according to themes, or valued components. Map data should be analysed using mapping software, such as ESRI ArcGIS, to understand the types and density of use in the proposed project footprint, local study area, and regional study area.

For the Study, 28 interviews were conducted in English and 26 were conducted primarily in Inuktitut. Participants had the option to speak in Inuktitut, either with a QIA staff member or an interpreter. All audio was recorded digitally. Where interpreted material has been used as part of the analysis conducted in the preparation of this Report, this has been indicated.

3.3.1 Site-Specific Data Collection and Analysis

For the purpose of this Report, *site-specific data* are values reported by Pond Inlet community members that are specific, spatially distinct, and that may be mapped (however, exact locations may be treated as confidential).

Site-specific data were mapped and managed using a 'direct-to-digital' process in which Google Earth imagery was projected onto a wall or screen. Points, lines, or polygons, geo-referenced at a scale of 1:50,000 or finer, were used to mark areas of reported use and value. Some lines and polygons denoting trails and hunting areas were mapped at a coarser scale (i.e., greater than 1:50,000). Data collection focused on the Footprint (250m buffer around physical works), Local Study Area (LSA; 5 km of the Footprint, and including the marine environment with a 250m buffer on the shoreline), and Regional Study Area (25km from the mine, railway and Tote Road; also the marine environment with boundaries defined in consultation with QIA staff). See Figure 1 for a map of the Project and the Study Area.

Maps of site-specific values presented in this Report are generated from data mapped during the interviews. Points are randomised within a 250 m radius and then buffered by one kilometre. A one-kilometre buffer is also generated around each line and polygon. Buffering is done to account for a margin of error and to protect information confidentiality (DeRoy 2012).

Site-specific data were mapped according to five 'Activity Class' categories that were designed to capture multiple aspects of the Study VCs:

- Habitation values (including temporary, occasional, seasonal, and permanent camps and cabins);
- Cultural and spiritual values (including burial sites, ceremonial areas, and gathering areas);
- Subsistence values (including harvest and kill sites, plant collection areas, and trapping areas);
- Environmental feature values (including specific, highly valued habitat for caribou, narwhal, ringed seal and char); and
- Transportation values (including trails, water routes, and navigation sites).

The temporal boundaries set for the baseline data collection include past, current, and planned future knowledge and use. For the purpose of this Study:

- A past value refers to an account of knowledge and use prior to living memory, passed down through intergenerational IQ-transfer;
- A current value refers to an account of knowledge and use within living memory; and
- A planned future value refers to anticipated or intended knowledge or use.

3.3.2 Qualitative Data Collection and Analysis

Qualitative data were also collected during the semi-structured interviews. The knowledge and use values of the Pond Inlet community that have been impacted by the Mary River Mine to date were explored, as well as the potential for further effects from the Project. Information relating to additional stressors (other cumulative effects causing agents) was also analysed and incorporated into this Report.

The English portions, including translation, of the audio from the interviews were transcribed. Transcripts were then reviewed, coded thematically, and analysed for issues and concerns identified by Study respondents. These data are summarised in Section 4.

All spellings of Inuktitut words used in this report were either verified during interviews, based on spellings encountered in relevant literature from the northern Qikiqtani, or based on the place names in use by the Inuit Heritage Trust (“Inuit Heritage Trust: Place Names Program” n.d.).

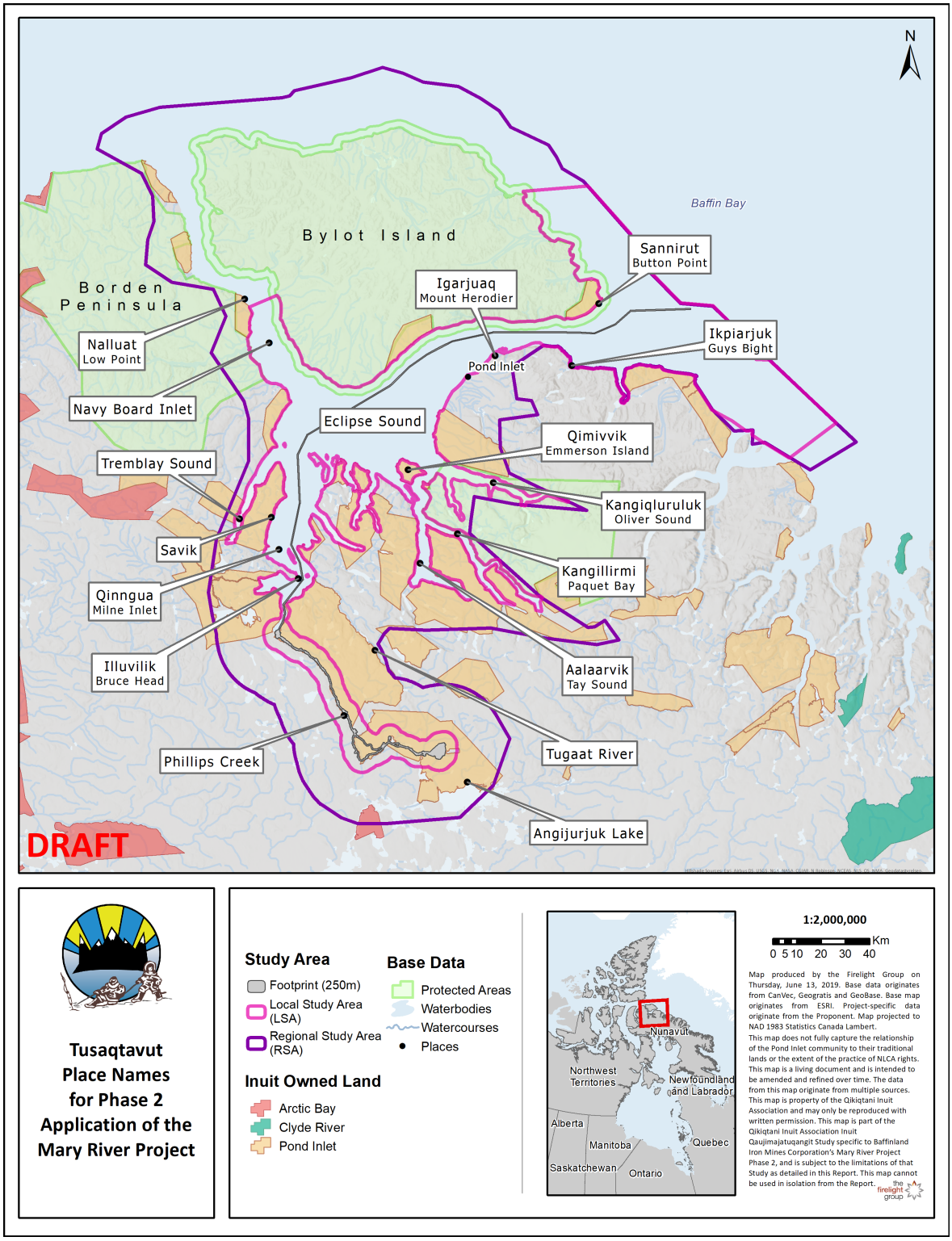

Figure 1: Mary River Project Phase 2 with the Project Footprint, LSA, and RSA and Place Names.

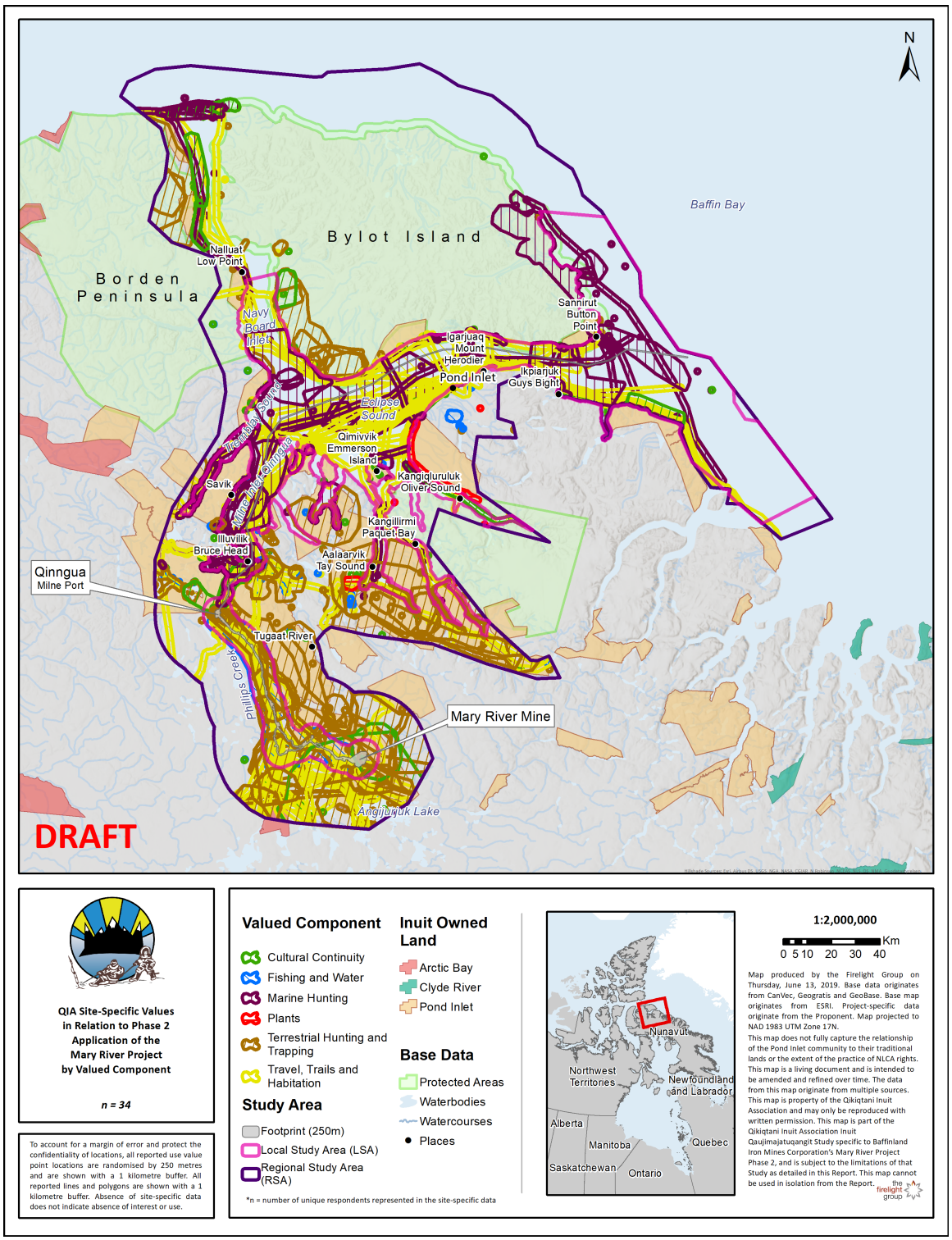

Figure 2: Pond Inlet reported site-specific values by Activity Class within the Project Footprint, LSA, and RSA.

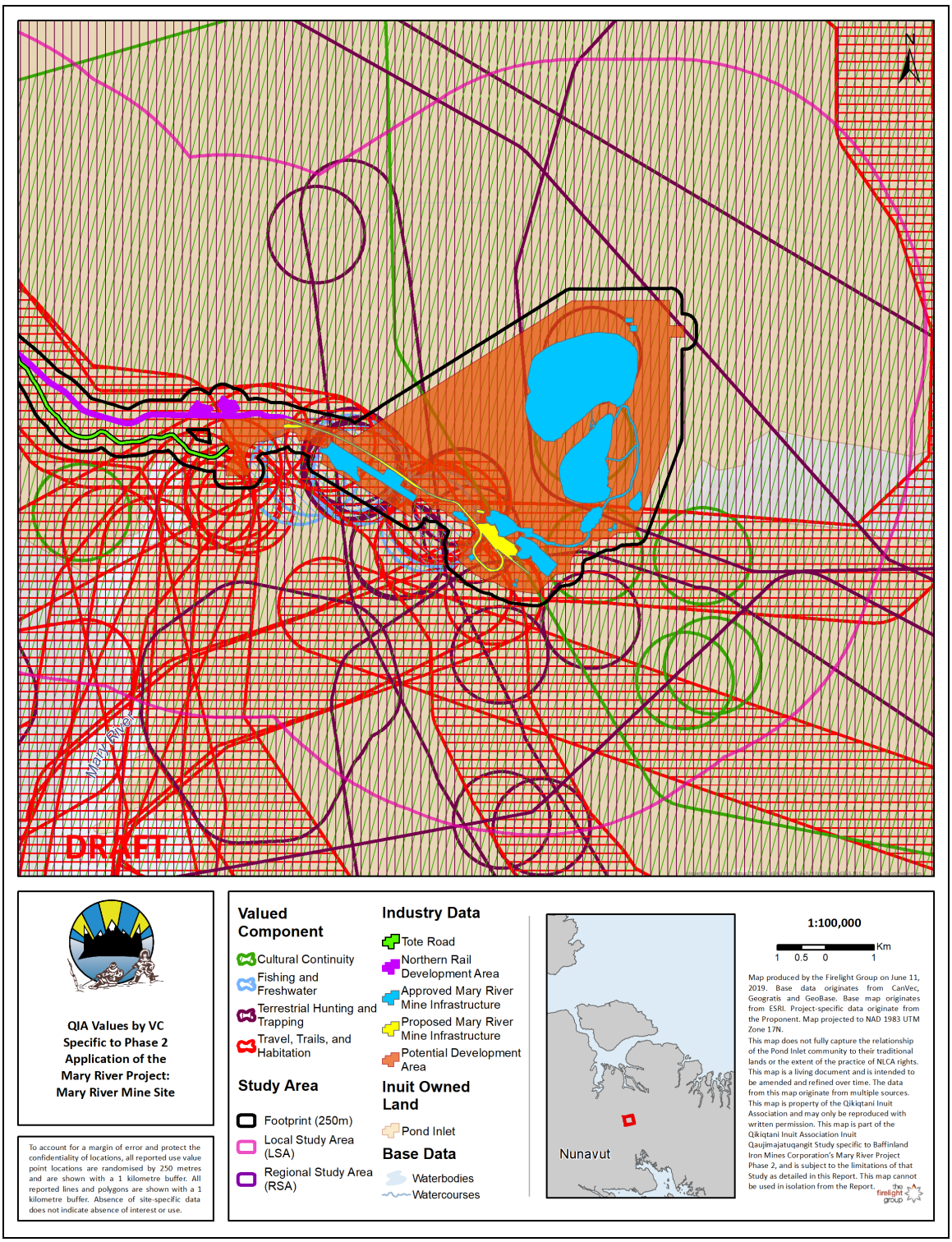

Figure 3: Pond Inlet reported site-specific values by Activity Class within the Project Footprint and LSA, and in the vicinity of the Project mine site.

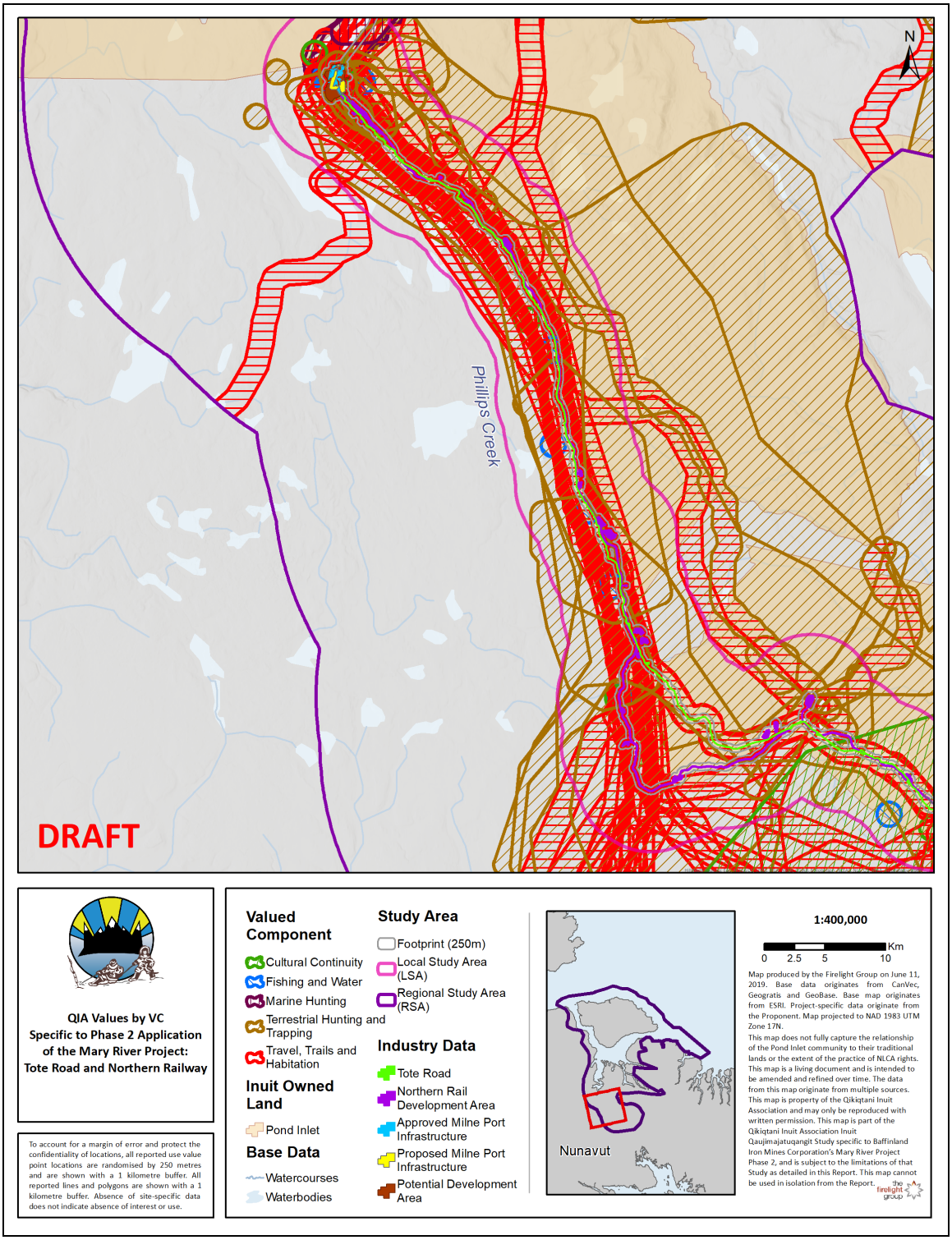

Figure 4: Pond Inlet reported site-specific values by Activity Class within the Project Footprint, LSA, and RSA, and in the vicinity of the Project Tote Road and proposed Northern Railway.

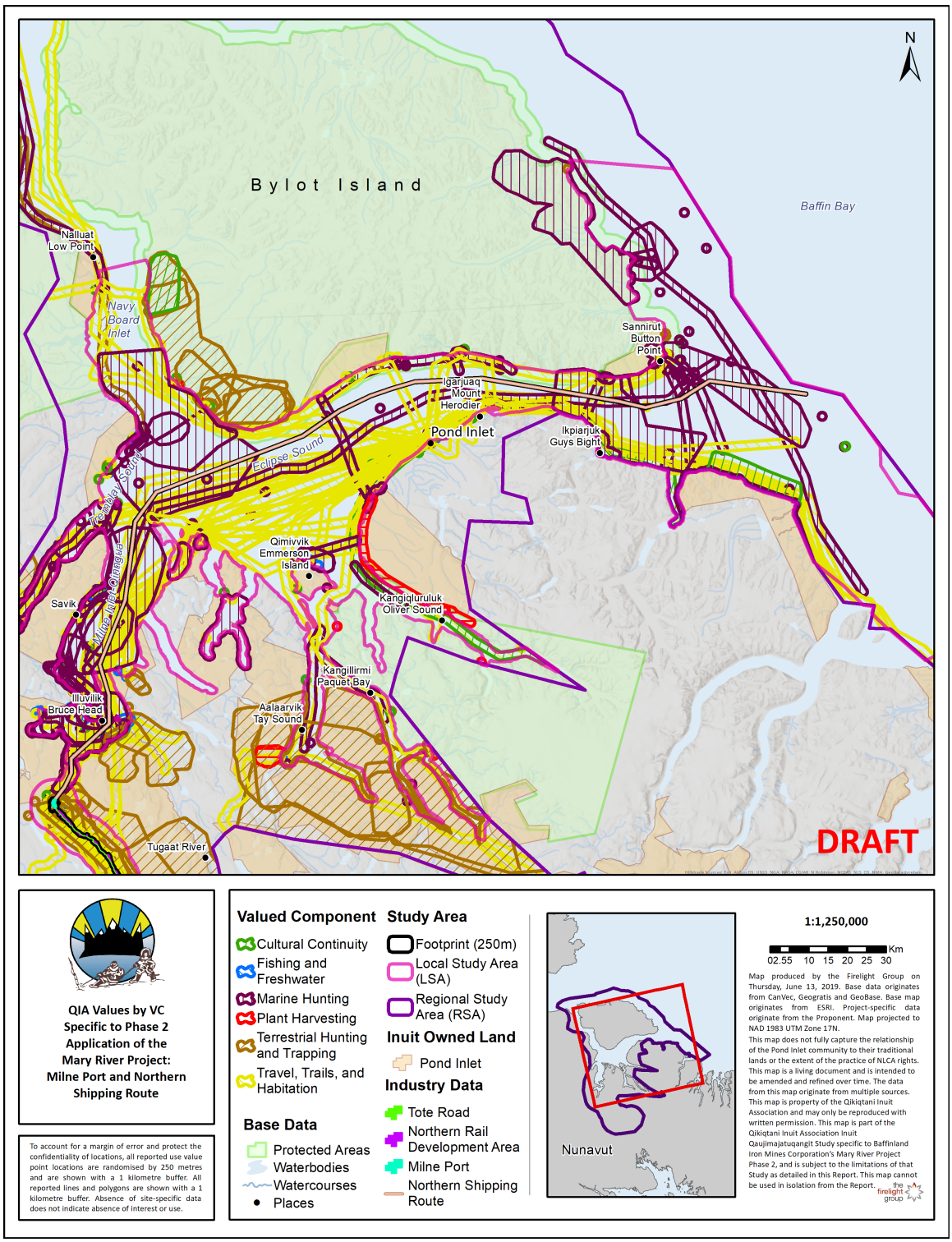

Figure 5: Pond Inlet reported site-specific values by Activity Class within the Project Footprint and LSA, and in the vicinity of the port facility at Qinngua and shipping route.

4. RESULTS

4.1 SITE-SPECIFIC DATA

The site-specific data clearly demonstrate that Inuit use or have used the Study Area across multiple generations. This summarizes the mapped data from the Study. Detailed qualitative information associated with the spatial data regarding the importance, impacted baseline, and potential project interactions are located in Section 4.2-4.6 of this report.

The vicinity of the Mary River Project is integral to Pond Inlet community members' travel and hunting in the Study Area. Prior to the mine's construction, community members would camp at or near the airstrip for weeks at a time while hunting caribou and wolves. To access these campsites, community members would often rely on snowmobile, ATV, and/or dog team trails, sometimes by way of exploration infrastructure, to access desirable campsites in the vicinity of the mine. Numerous community members have used and continue to rely on cabins near the mine site for camping and hunting caribou throughout the year, often staying for weeks at a time during their hunting trips. These camp locations, among other mapped campsites, are often located near important environmental features, such as clean drinking water sources and small lakes where community members' fish for char and collect drinking water. Some community members also collect soapstone near the mine site. This activity often takes place alongside hunting, trapping, and fishing in the Project area.

While many community members have relied on the area in the vicinity of the mine for camping, hunting, fishing, collecting water, and traveling on their territory, the mine's presence has affected their ability to use the area as freely as they had prior to its construction. Char populations, for instance, have been observed to decline in the small lakes near the mine where community members fish. This is in addition to an observed decline in water quality. Many community members will drink from the water provided at the mine site, citing a decreased confidence in suitability of water for drinking near the mine. Community members also reported a decline in caribou in the vicinity since the mine was constructed. While there are reports of impacted use in the vicinity of the mine, community members continue to rely on the mine site and its surrounding areas for hunting caribou, fishing, camping and travelling on the land.

The vicinity of the Tote Road and the proposed North Railway of the Project is an important area for Pond Inlet community members. Specifically, Qinngua and Phillips Creek are especially valued for supporting community members' camping, hunting, fishing, and general travel across the landscape.

- **Qinngua and Port Facility:** Pond Inlet community members have used Qinngua for generations. Mapped data reveal that community members have been traveling from their homes to Qinngua since as early as the 1950s, and as recently as the winter of 2019. In their interviews, community members describe Qinngua as an important place for camping, wherein old tent rings can be still be seen in multiple sites around the inlet. For many, Qinngua is valued for its marine species (such as char and narwhal), as well as being a year-round

access point for reaching terrestrial hunting grounds and Phillips Creek, among other inland freshwater lakes.

- **Phillips Creek along the Tote Road and proposed railway**: Phillips Creek is described by Study participants as being a primary transportation conduit between Qinngua and their traditional inland territory. Phillips Creek, which flows through a chain of small freshwater lakes, is used throughout the year, and particularly in the winter months for traveling via dog sled and snowmobile to reach inland hunting areas for caribou and geese. Having the ability to travel along Phillips Creek is crucial for Pond Inlet community members, as the western banks of the creek are rough terrain and difficult to travel on. The travel route includes the proposed North Railway diversion, and community members stressed the importance of accessing this particular route in order to be able to continue to access their hunting grounds, as well as maintain their connection to other communities. Phillips Creek itself is also regarded as an important source for drinking water. Along the creek, numerous natural spring water sources were identified, including a site called Qaanniqtalik, where the water flows year-round.

The marine environment is heavily relied upon by the community of Pond Inlet for subsistence, travel, habitation, and cultural purposes. Mapped values are found in the Eclipse Sound region between Bylot Island and northern Baffin Island. Particular concentrations of values are to be found in Tremblay Sound, Qinngua and at the floe edge by Button Point. A concentration of narwhal habitat was identified in Tremblay Sound and Qinngua, including in the vicinity of Bruce Head.

The use by the community of Pond Inlet of the shoreline on the Study area includes historic, current and future uses. Historic use is found from the recorded presence of tent rings and old habitation sites. Present use includes cabins for marine hunting and camping with families. Planned and desired future use of the area is shown by stated plans for ongoing cabin use and future cabins in Qinngua for Pond Inlet community members. The Study mapped observed changes to the marine environment that have occurred since marine shipping began, which includes: sites where narwhal hunting has been negatively affected by ship traffic; numerous areas where animal habitats have been negatively affected by ship traffic; areas where community members are reluctant to visit (or continue to use) due to ship traffic and perceived and observed negative impacts from shipping and mining; and areas located away from the mine where ore dust has been seen.

Table 1: Inuit site-specific use values reported within the Footprint, LSA, and RSA of Baffinland's Mary River Project. Numbers are cumulative with increasing spatial scales (i.e., RSA includes LSA and Footprint).

Valued Components	Within 250 m of the Footprint		Within 5 km of the LSA		Within 25 km of the RSA	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Marine Hunting	39	19.6%	250	33.4%	282	27.6%
Terrestrial Hunting and Trapping	43	21.6%	114	15.2%	216	21.2%
Fishing and Water	24	12.1%	57	7.6%	107	10.5%
Travel, Trails, and Habitation	76	38.2%	234	31.3%	276	27.1%
Cultural Continuity	17	8.5%	93	12.4%	139	13.6%
TOTAL[1]	**199**	**100%**	**748**	**100%**	**1,020**	**100%**

4.1.1 Total Reported Site-Specific Values

A total of 1,020 site-specific values were reported in the Study Area (the Footprint, LSA, and RSA combined; see Table 1 and Figure 2).

As noted in Section 1.2 of this Report, **an absence of data does not signify an absence of use or value**. In addition, sampling was limited; not all Inuit or Pond Inlet knowledge holders were able to participate. The above limitation is a necessary consideration when interpreting the geographic distribution and quantity of mapped values. It is likely that new information regarding Inuit knowledge and use will become available in the future and it is highly recommended that new information should continued to be gathered to augment this preliminary study.

4.1.2 Site-Specific Values Reported in the Footprint

Within the Footprint, Pond Inlet community members reported 154 site-specific values. While not every site-specific value recorded includes time information, Inuit use was

[1] In addition to the 1020 site-specific values reported in the Table 2, 14 Plant values were also reported in the Study Area. These 14 values were not included in the calculations (i.e., for the percentages) or the totals reported in Table 2. None of these 14 values were reported in the in the Project Footprint. Eleven of these 14 values were reported in the LSA.

reported from 1952 to current (i.e., 2019) and continued use. Site-specific values reported in the Footprint include:

- **Marine Hunting** values including: numerous hunting areas and kill sites for ringed seals, narwhals, and walruses; an important seal denning area; important narwhal habitats, including narwhal calving areas and a narwhal migration route; an orca feeding area; a polar bear migration route; and an area where orcas have been seen;
- **Terrestrial Hunting and Trapping** values including: important caribou habitats, including numerous calving areas, foraging areas, and migration routes; a geese migration stopover site; a site where ptarmigan were caught; hunting areas and kill sites for geese and wolves; numerous hunting areas, hunting routes, kill sites and butchering sites for caribou; sites where caribou hide is processed; an historic Inuksugait used for corralling caribou; and sites where rabbits and foxes have been seen;
- **Fishing and Water** values including: catch sites for char; and drinking water collection sites, including springs and creeks;
- **Travel, Trails, and Habitation** values including: a water route used to access a seal hunting area; water routes used to access cabins and traditional campsites; trails used to access hunting areas for various species, including caribou, wolf, goose, walrus and seal; a trail used to access the floe edge; trails used to access egg collection sites; trails used for travelling between communities; and numerous cabin sites and campsites used as a base when hunting and traversing the area;
- **Cultural Continuity** values including: sites where sandstone was collected; a site where soapstone is collected; historical gathering places; and place names; and
- **Impacted** values including: areas that have been or are perceived to be negatively affected by mining operations, including caribou habitat areas, caribou hunting areas, goose hunting areas, narwhal hunting areas, drinking water collection sites, char fishing sites, trails, water routes, and a camp site.

4.1.3 Site-Specific Values Reported in the LSA

Within the LSA, Pond Inlet community members reported 748 site-specific values. While not every site-specific value recorded includes time information, Inuit use was reported from the mid-1940s to current (i.e., 2019) and continued use.
In addition to the site-specific values described for the Footprint, Inuit also reported the following site-specific values in the LSA:

- **Marine Hunting** values including: habitat areas for seals, polar bears and walruses, including an important seal denning area and polar bear dens; narwhal habitat, including calving areas, feeding areas and migration routes; narwhal waiting stations; breathing holes; numerous ice leads that are suitable for hunting seal, walrus, and narwhal; hunting areas and kill sites for various species, including narwhal, bearded seal, ringed seal, harp seal and polar bear; a walrus kill site; meat processing sites, including sites where narwhals, polar

bears and seals are butchered; food cache sites; a site where narwhal meat is fermented; a site where walrus meat was fermented; sites where narwhals, orcas, polar bears and walruses have been seen; and teaching areas.

- **Terrestrial Hunting and Trapping** values including: important caribou habitat, including calving areas, mating areas, foraging sites, and a migration corridor; snow goose nesting sites; a site where eggs are collected, including goose eggs and murre eggs; food cache sites; a site where caribou are butchered; sites where caribou hides are dried and prepared; and numerous kill sites for caribou, duck, fox, murre and snow goose.

- **Fishing and Water** values including: a site where an Atlantic salmon was caught; catch sites for char and sculpin; char habitats; and drinking water collections sites.

- **Travel, Trails, and Habitation** values including: trails used for caribou hunting and to access caribou hunting areas; a trail used for goose hunting, seal hunting and collecting eggs; numerous trails used to access fishing sites, the floe edge, polar bear hunting sites and caribou hunting sites; a trail used while undertaking bird surveys; a water route used to access a historic family cabin; boat mooring sites; and numerous cabin sites and campsites used as a base when hunting and traversing the area.

- **Cultural Continuity** values including: a site where feasts were hosted; numerous birth places; grave sites; teaching sites; place names; and soap stone collection sites.

- **Impacted** values including: seal hunting areas where there has been noticeable decline in both hunting success and seal populations that coincide with the commencement of Baffinland's shipping activities; narwhal hunting areas where hunting has been negatively impacted by ship traffic and Baffinland's development; and decreased caribou population that has been attributed to the development of the mine in the area.

4.1.4 Site-Specific Values Reported in the RSA

Within the RSA, Pond Inlet community members reported 1,020 site-specific values. While not every site-specific value recorded includes time information, Inuit use was reported from the early 1940s to current (i.e., 2019) and continued use.

In addition to the site-specific values described for the Footprint and LSA, Inuit participants also reported the following site-specific values in the RSA:

- **Marine Hunting** values including: important habitat areas for char, seals, walrus and narwhal; kill sites and hunting areas for bearded seal, narwhal, polar bear, ringed seal and walrus; a walrus cache site; sites where meat was processed, including walrus and narwhal; locations where the floe edges are accessed; and a traditional fish cache site.

- **Terrestrial Hunting and Trapping** values including: an area described as an important habitat for snowy owls, lemmings and voles; important caribou habitats, including mating areas, migration routes, overwintering areas and summer grounds; varied kill sites and hunting areas for a variety of species including caribou, fox, goose, loon, crane, ptarmigan, rabbit and wolf; sites where caribou are butchered; a site where caribou meat is cached; and sites where eggs are gathered.
- **Fishing and Water** values including: catch sites for char; fish cache sites; and drinking water collection sites, including springs, creeks, and a geyser.
- **Travel, Trails, and Habitation** values including: water routes used to hunt caribou; a trail used to access fishing sites; seasonal trails used to access hunt caribou hunting areas; and numerous cabin sites and campsites used as a base when hunting and traversing the area.
- **Cultural Continuity** values including: a birth place; a family gathering place; numerous place names; teaching sites, where knowledge pertaining to hunting, fishing and gathering are transmitted; and sites where historical structures, including rock formations, are located.
- **Impacted** values including: changing ice conditions that have been attributed to climate change; water collection areas that community members perceive as being negatively affected by shipping activities and mine operations; reported decrease in seal populations around Pond Inlet and the Baffinland shipping lane, and increasing seal populations in other places; and a declining char population. Impacted values including: including a caribou calving area that has been negatively affected by mining operations.

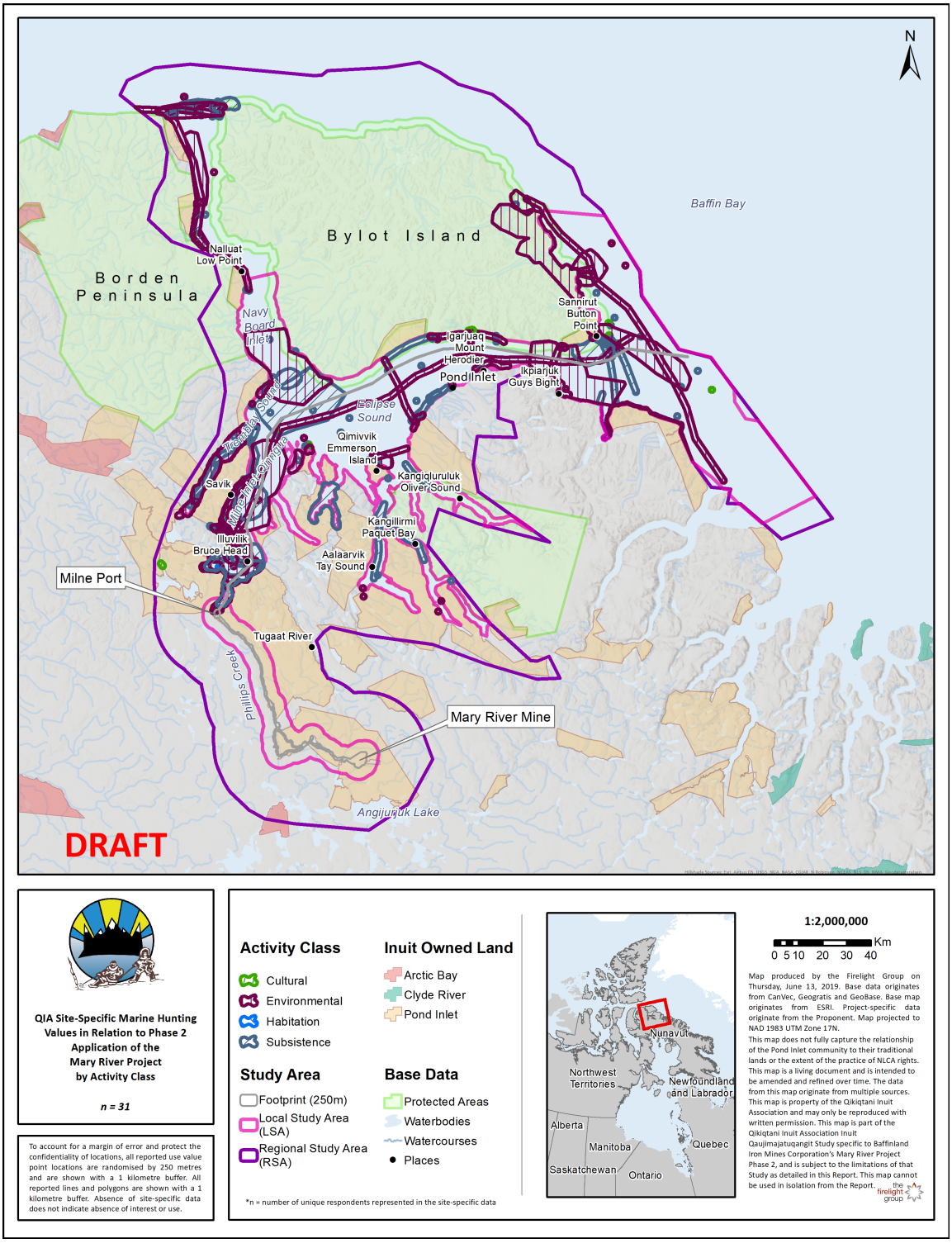

Figure 6: Pond Inlet reported site-specific Marine Hunting values in the Project Footprint, LSA, and RSA.

4.2 MARINE HUNTING

Section 4.2 provides further details on Inuit reported site-specific Marine Hunting values by activity class and location. This section also includes a discussion on the importance of Marine Hunting values, and where possible, the current impacted baseline conditions and change trends. The qualitative data provide additional crucial context for the interpretation of the site-specific data.

4.2.1 Site-Specific Values

Table 2: Site-specific values for the Marine Hunting Valued Component reported within the Project Study Area, by Activity Class.

Activity Class	Footprint, including 250 meter buffer		LSA, including Footprint		RSA, including LSA and Footprint	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Cultural	0	0%	16	6.4%	19	6.7%
Environmental	20	51.3%	84	33.6%	95	33.7%
Habitation	0	0%	7	2.8%	7	2.5%
Subsistence	13	33.3%	118	47.2%	136	48.2%
Impacted	6	15.4%	25	10.0%	25	8.9%
Total	39	100%	250	100%	282	100%

Description of documented Marine Hunting Values

The following Marine Hunting Values were documented in the Project Study Area, and are organized by Activity Class:

- **Environmental** values including**:** a seal migration corridor; a narwhal migration corridor; a polar bear migration corridor; important habitat areas for various species, including seals, polar bears, and walruses; important narwhal habitat, including calving areas, gathering areas, refuge areas (i.e., where narwhal escape from predators) and feeding areas; and locations of dangerous ice conditions;
- **Habitation values including:** narwhal-hunting camps;

- **Subsistence** values including: kill sites for narwhals, bearded seals, harp seals, ringed seals, polar bears, walruses; and sites where narwhal meat is fermented;
- **Cultural** values including: food cache sites; meat processing sites, including sites where polar bears, narwhal, and seals are butchered; and
- **Impacted** values including: sites where narwhal hunting has been negatively affected by ship traffic; numerous areas where animal habitats have been negatively affected by ship traffic; areas where community members are reluctant to visit (or continue to use the area) due to ship traffic and perceived and observed negative impacts from shipping and mining; and areas located away from the mine where ore dust has been seen.

Geographic Distribution of Marine Hunting Values

Mapped Marine Hunting values are found in the Eclipse Sound region between Bylot Island and northern Baffin Island. Particular concentrations of values are to be found in Tremblay Sound, Qinngua and at the floe edge by Button Point. A concentration of narwhal habitat was identified in Tremblay Sound and Qinngua, including in the vicinity of Bruce Head.

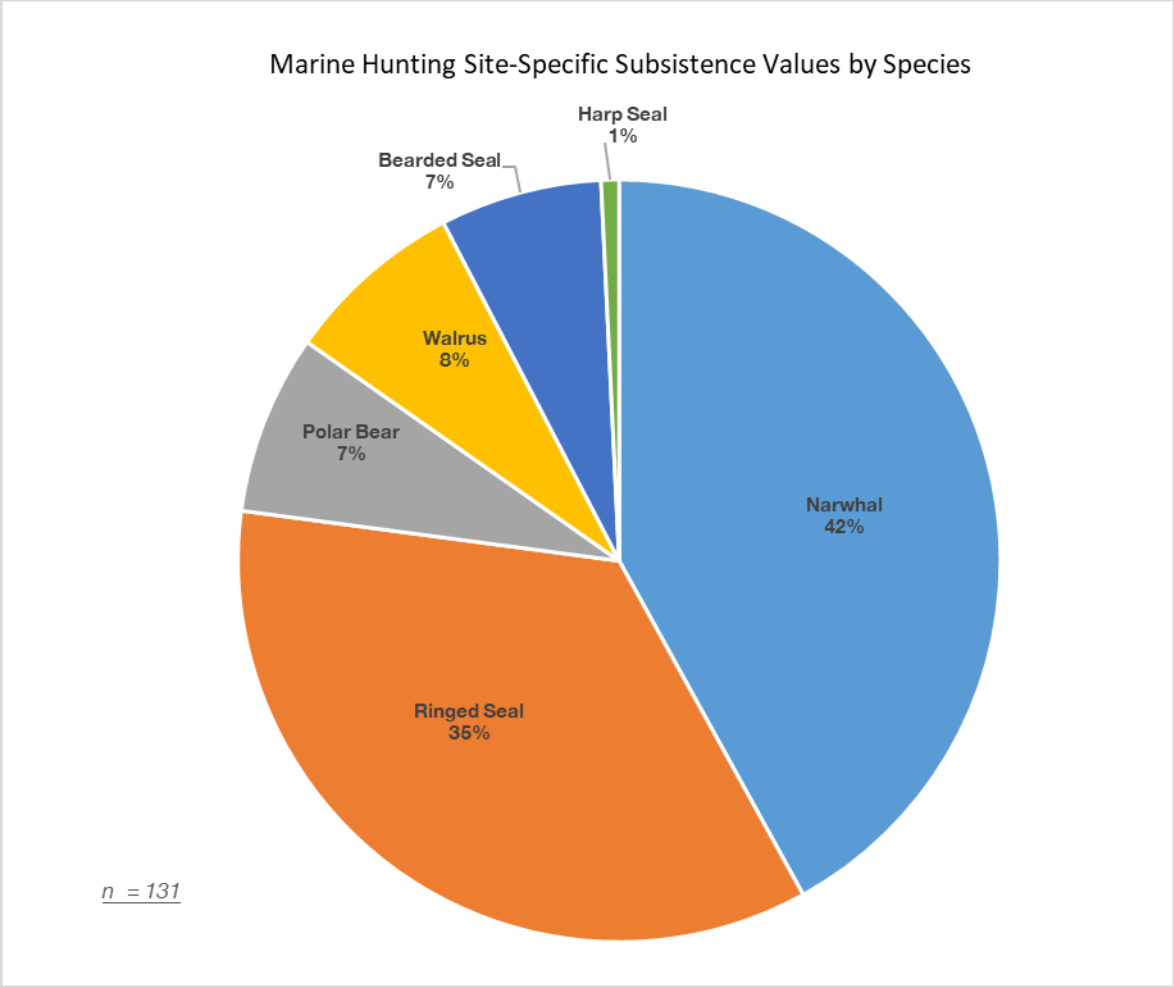

Figure 7: Inuit reported Marine Hunting site-specific values by species type in the Project Study Area; n= 131.

4.2.2 Importance of Marine Hunting

Marine Hunting is central to Pond Inlet residents' ongoing practice of their way of life. Hunting in the marine environment takes place throughout the year; community members travel on the sea-ice via snow machine or dog team, to the floe edge, and also out in boats in summer months to hunt a variety of valued sea mammals. These animals include narwhal, seal, walrus, and polar bear. Interview data clearly show that Pond Inlet community members and their ancestors have harvested these animals for generations.

> *When I was growing up, there used to be narwhals, like thousands of them passing through Pond Inlet and on the Bylot Island side as well and they would go to Milne area and this inlet as well, northwest of Milne area; and all this area we used, and up there too as well at Nalluat, Low Point right here, a traditional camp right there and we've used this area for thousands and thousands of years.* (P13, 06-Feb-19)

> *[Interviewer: And what kind of hunting do you do in that area [Saattut]? Everything. Fish. Narwhals, geese, seals, ring seals, harp seals, turbot fishing.* (P26, 08-Feb-19)

Marine mammals are a critical food source for Pond Inlet families, many of whom hunt seals, narwhal, and polar bears in the Study Area throughout the year. Community members spoke about the practice of hunting seal and narwhal, describing their experiences harvesting these species on the land.

> *We caught five. I caught – me and my father caught five [seals] total. And there was [personal name] and his sons and his grandsons were over there [near the floe edge by Ikpiarjuk], seal hunting for their dog team too. And roughly they caught about 13 or 14 seals. And there was a whole bunch of people who were catching seals over there too.* (P09, 05-Feb-19)

> *I do a lot of seal hunting around that area [floe edge at Sannirut]. And when I go look for polar bear, that's where I usually go too, because there's always a fresh track.* (P09, 05-Feb-19)

> *Along with my two sons, narwhal, we caught almost 20 during the summer, and we didn't always stay there [Nalluat], sometimes we'd go to areas where there were caribou and still hunting narwhal, and the caribou would go there over those mountains.* (P24, 07-Feb-19)

> *That's when he was 12, 13. So that's for the caribou, but he said mainly they lived on mammals when they were there [Nalluat] ... And it was the most – they would see most narwhals then. They'd see them all day. So in those days, they were abundant.* (P12, 05-Feb-19, interpreted from Inuktitut)

> *Our narwhal hunting is floe edge and then Milne Inlet and Tremblay, but we've also come in here, like, Mount Herodier area. We don't often go into Navy Board, but we have. And all of our seal-hunting would take place anywhere from Tremblay, Milne Inlet, in here, all these bodies of water, and all the way to here.* (P27, 27-Apr-19)

As highlighted below, it is common for community members to hunt and kill several species at a time, as there are opportunities to hunt several different animals in similar areas, and on the same hunting trips or travels on the ice and waters.

> *I catch seal around since I started catching seals mainly. That's up to here. There's a snow geese every year, migratory snow geese...Yeah. This area [Bylot Island southwestern plateau]. We go egg picking and geese hunting and seal hunting in this area with the family.* (P32, 28-Apr-19)

> *Yeah. I don't usually just go, you know, caribou hunting. I also go seal hunting all year-round...Narwhal hunting during summer until fall, spring actually to the floe edge and…* (P32, 28-Apr-19)

While hunting marine animals is carried out across the Study Area, interview participants identified several specific areas they return to for hunting seals and walruses. In particular, the denning and pupping areas in Eclipse Sound, Navy Board Inlet, and at the floe edge – especially around Button Point – were identified as important hunting areas.

> *Up to Button Point. He would travel the most once they started living in Pond Inlet. From Pond Inlet to the Button Point ... All the mammals would be around that Button Point area ... So all this area is mostly all the mammals, narwhals, whales, seals, walrus – walrus, bearded seals...* (P12, 05-Feb-19, interpreted from Inuktitut)

> *For spring seal hunting, all this area I have used for seal hunting, Eclipse Sound, Navy Board Inlet going after seal pups and young seals. And in the springtime, the floe edge is usually around in this area by Button Point and I've been going there every year until just recently, going after narwhals and seals. And in the winter, like right now, we go there to go after seals through seal holes.* (P13, 06-Feb-19)

> *This area, springtime, we go seal hunting in this area and there's always abundance of seals. We mainly go for young, younger seals ... Female seals, younger seals, yearlings.* (P32, 28-Apr-19)

> *We stopped at the floe edge. And then we were waiting for seals. Someone caught two seals, one each. Two people. And had a good seal meat and then later on camp at the floe edge, for like overnight, like two days. And then headed back to Pond Inlet.* (P21, 08-Feb-19)

> *So when they lived in Nalluat they would go hunting mammals this way, where there's an island here, there was an abundance of walrus here, in those areas.* (P12, 05-Feb-19, interpreted from Inuktitut)

In addition to relying on marine animals for subsistence, community members also spoke at length about the enjoyment they have from the activity of hunting itself. Described in the quotes below, hunting marine animals is a family and communal activity that enables community members to spend time together on the land and sea.

> *[Interviewer: What's your favourite thing to do?] Seal hunt ... And taking my kids egg picking and goose hunting up inside of Bylot there to the left.* (P05, 04-Feb-19)

> *It's fun. I like to hunt narwhals. And then again, it's really fun especially when you catch the one with the tusk, eh, because you never really know when you first shot one because every – like on the floe it's when you're out hunting they don't really show their tusk when they're going up for breathing air, but once you shot one, "Oh, this one had a tusk." It's like a surprise because they never really show their tusk trying to take – breathing air, yeah.* (P23, 08-Feb-19)

> *That's the first polar bear that I ever caught ... I was very happy…* (P19, 07-Feb-19)

> *Yeah, there's lots of breathing holes, many of them, actually. We'd have to go with other families and many people on a different breathing hole. It's a lot of fun.* (P01, 04-Feb-19)

The notion of hunting being a community, group-oriented practice was consistently relayed during the interviews. Specifically, when narwhals migrate towards Pond Inlet, the entire community is often notified so hunters can organize to go out.

> *And then once I see the narwhals come here, I usually let them pass to the point where they can get to Pond Inlet. And I usually notify the community the narwhals should be almost there. And the other hunters should start to prepare if they want to catch their narwhal close to town.* (P09, 05-Feb-19)

Hunting marine animals requires the hunters to be highly mobile across diverse terrain, ice and seascapes. As a result, community members often cover a large region of land and sea as they pursue marine animals for harvesting, such as in the Eclipse Sound, Pond Inlet, Eric Harbour, Qinngua, and beyond.

> *Yeah, right here in this area, this whole area. Not just one little area here, this whole area and passed it and we look for better hunting areas, things change each winter and the animals shift more towards a certain area depending on the ice conditions and that. But I've used all that area [vicinity of the floe edge by Sannirut] and most of the residents of Pond Inlet do, or hunters like going there, the animals are easier to catch.* (P13, 06-Feb-19)

> *There's a river there to the left and my camp is over here, right there [Upirngivik]. And all the – all the surrounding area, whether it be on water, ice or land, I have hunted all over this place.* (P13, 06-Feb-19)

> *And I have done hunting – well I used to go out with people who were boating and, and all the Eclipse Sound area to – yeah, all this area that I have used in hunting. And when I got older and I was able to hunt myself, I still continued to hunt in this area a lot for caribou; but then I started hunting more bigger games like narwhals and polar bears, bearded seals and ringed seals and I've used all this area. From coming here, from here, from this inlet, Eric Harbour I believe it's called – no, I can't remember the name of it, all the way to the other side of this; all this area to Milne and there's another inlet, and to Navy Board Inlet to the point over there where we usually have the floe edge, the north end of Navy Board Inlet and I have used and hunted all this area. And I've hunted inland all this area around Pond Inlet; and also, I have a cabin over here at Upirngivik right here.* (P13, 06-Feb-19)

Marine hunting patterns and activities are often dictated by the season. Interview participants reported pursuing a range of different species varying due to the availability of light, the stability of the sea-ice platform and the stage of an animal's life cycle. The

spring period is particularly busy as the available daylight hours for hunting increase and marine mammals begin to return to the shallow waters around Pond Inlet to calve and pup. Many hunters described hunting narwhal as they make their way up Eclipse Sound and into their calving areas around Qinngua and Tremblay Sound in the springtime.

> *Yeah, both Tremblay and Milne are, like, usually on a daily basis you'll see narwhal ... You can see anywhere from, like, a pod of fifty to, like, several, several, several pods, which are travelling together, like, I'd say hundreds at a time ... Like, there's been times when water is dead calm, like, mirror, and we see the first few narwhal and then before we know it, it's like, the waves have hit, because there's that many narwhal in the area.* (P27, 27-Apr-19)

> *This could be the route to go, with the narwhals and sent here. From this side, narwhals ... I think some narwhals coming to Arctic Bay, I think some goes through here and some going up to Milne Inlet. But, either way. I mean the narwhals coming from here, like when the ice breaks up like end of June or a week after first week of July when the ice breaks, narwhals usually go by Pond here, coming from the floe edge.* (P23, 28-Apr-19)

> *Like just spring, we always used to catch them [narwhal]. In the springtime we catch them, we cut it up. We come, bring it back to town, put it in the community freezer. And once ice break up, August 1, once in breaks up we go cache it [narwhal].* (P22, 27-Apr-19)

> *At spring time the narwhal passes. The seal pass – the young seals pass right close by there [Nuvuajuruluk]. And when the narwhal come into the area, I think, I believe we caught a walrus there once, that passed by, close by.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *When I was young, when I start, can go hunting by myself and my brother, and we usually go around hunt all the time, around there [Igarjuaq], all the time. And especially in this area, in Button Point area in winter and spring time, yeah, winter and spring time. In the winter just for hunt seal, in this area. And in spring time, just hunt narwhal around here all the time.* (P11, 06-Feb-19)

Many hunters described the seasonal patterns of seal hunting, noting that springtime, particularly between the months of April and July, sees an increase in seal hunting for community members.

> *In the springtime, we mostly use that for seal hunting too, me and my father, just seal hunting in the springtime. In the summertime, we go for an hour hunting there [vicinity of Savik along Qinngua]. We go there beginning, we go there by the middle of July sometimes, end of July and, stay there about a couple of weeks or, one week.* (P03, 04-Feb-19)

> *May-June is very popular for standing along the seal holes, waiting for the seals to come up, to catch them...And they–they're–that's what they're going*

> *after, is the younger seals. They look at adults, they're not white anymore, but they–fresh meat, the skin's very pristine, and it's best time of the year to hunt seals.* (P04, 27-Apr-19, interpreted from Inuktitut)

> *They're waiting in that area in April waiting for the sea ice to break up, and that's what seals do. And when we lived at Guys Bight, they knew that this was the custom of the seals. And once all the ships keep passing through, this area will be devoid of wildlife. So the seals come in to Eclipse Sound to feed and mate. So, they come in from offshore, and he says in March they start coming in to this area, March, April, May and they'll just keep going in to the sounds.* (P08, 05-Feb-19*,* interpreted from Inuktitut)

The spring seal-hunting season is identified as a period of intense activity and long days as hunters take advantage of the hunting opportunities afforded by the extended daylight hours and warming weather.

> *Yes because it's like every springtime it's like 24 hours daylight and you can just hunt narwhals, wait for narwhals until you see one, until you catch one too and then I would maybe go try and sleep. Yeah, that's how fun it is for me.* (P23, 08-Feb-19)

> *I think nowadays it's just maybe mostly important to the old hunters or to the elders, because those are people who can now eat only the meat. Most young people can still eat it too, but only mostly the hunters go to hunt seals now too. But in spring and summer a lot of people go out. Mostly more people start going out ... Hunting in the warmer weather, better temperature to hunt. (*P23, 28-Apr-19)

The disappearance of the sea-ice marks the arrival of summer, a period of light when most marine harvesting is carried out by boat. On occasion late season ice will arrive at the mouth of Eclipse Sound from further north bringing mammals into the area, such as narwhale, seals, and walrus.

> *So when the bunch of ice came in the late and early August, they bring some a lot of sea mammals like seals, walrus and different seals and polar bears.* (P10, 05-Feb-19)

> *They seem to – in the summer months when we hunt, we try to corral them [narwhal] to shallow water where it'd be easier to catch them. When they're out in the deep water, when they dive, they go anywhere, any direction; and I believe there's narwhals that go to different areas, historically they have their own places where they go and the narwhals, the pod that comes to Pond Inlet area, their behaviour is that when they hear – if they're not trying to run away from killer whales, and when they hear a boat, they head out to deeper water right away and when they're out there, they're really hard to catch.* (P13, 06-Feb-19)

Interview participants described the fall period as another crucial time for hunting as marine mammals return back to their wintering locations in Baffin Bay. Fall and freeze-

up is a complex time for Pond Inlet hunters, as the changing conditions of the sea ice require special attention to navigation across the soon-to-be-frozen landscape. As explained below, this time period is also viewed as opportune for hunting narwhal.

> *The freeze up is always different every year. Some years the floe edge is very close, even in December where I can't even get to that area. Like a couple years ago it was like that. By the time the sun started coming back up, it finally froze, then floe edge season was terrible because the ice was so thin, and it was slushy. Then we didn't spend a whole lot of time there that year. And then when it broke off, all that area, then there was a whole of bunch of us who started spending time at the floe edge. Next thing you know it was from right across from Bylot Island, right up through to Baffin, there was everybody, like lots of – lots of hunters, just waiting for that moment to catch, you know?* (P09, 05-Feb-19)

> *And he says in September, there's a narwhal that comes close along the shore trying to get away from killer whales. And it happens this one day per year. (*P08, 05-Feb-19, interpreted from Inuktitut)

> *I usually wait to hunt narwhal on the point here, almost fall season, around September. They usually pass by around Emerson Island.* (P01, 04-Feb-19)

The winter period in Pond Inlet's seasonal cycle is marked by darkness and cold weather. Hunting for seals in particular during this period occurs largely through breathing holes on the ice. In-depth knowledge of the ice and its thickness is required to understand where the best locations for hunting are to be found, including how seals form their breathing holes at sites where the ice is thin. These breathing holes, in turn, become opportune hunting locations for community members.

> *We hunt in the middle of the winter too, like December is dark up here, eh? It's a lot more fun that way because when you follow a frozen crack, hear the breathing seal and start waiting, and even you can see the clear breathing hole, whatever. But we usually put – myself I usually put my harpoon, the end of the harpoon just to point it to try to make it how far from there. And when the seal comes up the water starts – you can hear its movement. And also, even before the water starts movement, just once breathing up, [down with it]. Sometimes they tend to breathe right away; it always makes a difference. So that's how we can kill very gently, take my mitts off and after you [take this], and you shoot.* (P11, 06-Feb-19)

> *Even in the wintertime, seals will be travelling all over the place under the ice...If you see out the – the ice right now, you'll see some ridges. And these are where the cods are, trying to stay away from the seals. They know where to … seals eat the cod. And bearded seals.* (P04, 27-Apr-19, interpreted from Inuktitut)

> *All winter they were seal hunting and then ... Up to the, this is the sealing area. Here, here, all that area [Qinngua] they were seal hunting throughout that time. All winter.* (P30, 08-Feb-19, interpreted from Inuktitut)

Interview participants revealed detailed knowledge of narwhal behavioural and migration patterns, which is essential for successful year-round hunting. Narwhal behaviours are observed to be closely linked to several other environmental factors, such as the char spawning season, calving ground for the whales, and frequently visited protected areas from predators. These patterns were reported to take place across the Study Area, such as Guys Bight, Eclipse Sound, Tremblay Sound, and Qinngua.

> *The whales wouldn't even go by here [into Qinngua] because they always go by the land here because it's very deep in this area here. And every time the ship are passing by there's no narwhals go in there, like even going in and out. This is the area they go through here because there's a lot of fish in it. There's a fish … Arctic chars up in here and which goes up into the lakes through that river.* (P23, 08-Feb-19)

> *There's areas to wait. Because this here [waters along shoreline northwest of Illuvilik] is too shallow. This here is good for narwhal hunting because when the killer whales come in, the narwhals spend time in here.* (P09, 05-Feb-19)

> *They more moving around this area [Eclipse Sound], because of killer whales. Also, regular movement of the seals around here all the time, and moving up there, especially in Eclipse Sound area they, which is part of the, those inlets, Milne and Tremblay Sound at almost every inlet these are seal calving areas. When the ice break up in the middle of the summertime, the young ones are starting to go out through the inlets, some stay there all year round, even the adult seals lives there all the time too, that's a different kind of other seals migration in this area. Some seals live in there all the time.* (P11, 06-Feb-19)

> *Maybe - he's not too sure about the mating habits of narwhal, but he has seen female narwhal giving birth in all these areas. At Guys Bight. And this was in July, he'd seen pregnant females giving birth.* (P08, 05-Feb-19, interpreted from Inuktitut)

In addition to having in-depth knowledge of marine animal habitats, such as calving grounds, interview participants also shared information on particular animal behaviour. Having knowledge of narwhal behaviour, particularly their sensitivity to noise and their swimming patterns, contributes to Pond Inlet community members' ability to successfully hunt these animals.

> *Soon as like – if you're on the ice, wait on the ice-drift, waiting like around here, anywhere on the ice drift. We usually, like put our boat on top of the ice, and then we'll wait for narwhals. We'll make some tea and whatever we need to eat. And when the narwhals are passing by, if you move your feet, they will hear it, then they'll go under water, then they'll just get right past you. So, they're really sensitive to noise, if we're like walking and your foot moving, boats, motors, anything, they just change route right soon as they hear it.* (P09, 05-Feb-19)

> *On the ice you got to be a little more careful because like whatever noise you make on the ice, the narwhal is going to hear it and automatically assume it's a predator that's going after them, and they'll just dive down. But versus when you're on the land…you've got your cover. You're completely covered from the – and that material is the same all around. So, you can move around, make a lot of noise, but narwhal won't see you.* (P09, 05-Feb-19)

> *This is birthing area ... And renewal of skin in that area. They [narwhal] stayed there until they could manage to swim by themselves.* (P10, 05-Feb-19)

> *The narwhals, when they're underwater, before they came up, they're looking up in the cliffs. Like they're looking for anything that's out of the ordinary. And if you move, they're going to skip right past you. Every time. So, we used the natural rocks, like the rocks that are there. There's a whole bunch of flat rocks. Then we make a little station to block us out. Yeah. So, our body – it's just part of our head that shows, but it's better than the whole body showing and whatnot. Then you got your greater chance of catching a narwhal.* (P09, 05-Feb-19)

Processing the meat of hunted marine animals is another critical component of hunting for Pond Inlet community members. Processing a hunted animal requires specific knowledge about the animal, meat preservation and cleaning skills, and typically occurs out on the land in order to preserve the freshness of the meat, particularly during the warmer seasons.

> *Throughout the week, in a single day I'd usually catch seven. Seven ring seals. We'd butcher them all up and prepare them for – if we – depending. Like if we were really successful on that trip, we'd prepare for the local dogs – dog teams to feed them too because they got to stock up too, throughout the year. So, if we were successful, we'd hand them out because soon after catch, we always butcher then and put them in clear bags and try and keep the meat fresh as possible. And they usually – the ladies – they always cleaned the sealskin off, out camping, and soon as we got home, they're already drying off.* (P09, 05-Feb-19)

The quote above details the reliance on marine mammals for Pond Inlet community members' diet as a source of food. Interview participants identified seals and whales as being particularly valuable sources of food for both their health benefits and cultural value. Mammals such as whales are consumed, raw or fermented, as these hunters describe:

> *I usually store about five to six narwhals whole, like cut them up along with their fat. And then I usually have a place to ferment them.* (P09, 05-Feb-19)

> *[Interviewer: Is narwhal good for you?] Yes, it is. Lots of vitamins, I betcha. Better than what do you call those? French fries, yeah. You can cook them*

> *too, like boil them and then when you – once you boil them it's more softer, soft, soft skin. Like you can just bite on it. But when they're – like when you're eating it raw you can just keep chewing it like a gum ... Yeah. And if you cut one like a big chunk of muktuk you can chew it all the way just like a gum, yeah. Nice big chunk of muktuk, like put it in your mouth and just start chewing it.* (P23, 08-Feb-19)

> *Narwhal skin also, the tail part, you just cut them up and put them in the seal skin. Use the seal skin as a bag, put them all in, put them inside a wooden box, cover it, keep it away from the sun, never have the sun shining on it, never and make sure there's enough air circulation in there so it doesn't become poisonous. I make that every year, and when I call my friends to come for igunaq, they're there right away.* (P13, 06-Feb-19)

The interview data reveal the close links between hunting, IQ and important practices within Pond Inlet culture. One hunter who described the common practice of sharing country food with those who need it emphasized the importance of family and community.

> *Because like after catching the seals, it's nice to head home and feed the kids because my kids are always looking forward to having fresh seal. And my in-law, I always drop off fresh seal meat. And then I cut up some more and have people come pick up seal meat. If it's not that big and if it's good eating, then yeah, I'll invite a whole bunch of people to come and eat. And if they want to pick up some meat and they're always available. Yeah. Go on the local radio, go on the VHF, see if anybody wants some seal meat. But if it's a big seal, I'll give it to my son for his dog team. Yeah.* (P09, 05-Feb-19)

Marine animals serve numerous purposes for community members in Pond Inlet, particularly for the subsistence, dietary and cultural values detailed above. Furthermore, marine mammal hides serve a key function in the community for providing clothing. Sealskin and polar bears were described as valued animal hides for making traditional clothing within the community, particularly for their warmth and durability while hunting in cold temperatures.

> *I think it's important for them that they can sew something like sealskin in order to keep their husband or some of their kids to be dressed warm in wintertime. And a man should be more likely be always be maybe be a hunter up here, yeah.* (P23, 08-Feb-19)

> *Bearded seals. Harp seal...Ring seals are most popular for food and – and clothing.* (P04, 27-Apr-19, interpreted from Inuktitut)

> *Mainly during the spring and summer because my kids are a little too young right now, but my son, he's almost a perfect age where I can take him out and I can teach him. He's 5 years old right now. So, I'll give him another year and then I'll start taking him out. I got to catch one more polar bear so my*

son can have proper hunting gear to the point where he won't be cold. (P09, 05-Feb-19)

The quotes above clearly reveal the importance of Marine Hunting values for community members in Pond Inlet. Interview participants detailed the importance of the Study Area for supporting Marine Hunting, specifically around areas such as Pond Inlet, Eclipse Sound, Tremblay Sound, Bruce Head, Button Point and Qinngua (refer to Figure 1).

4.2.3 Impacted Baseline

Over the course of the interviews, community members identified a number of existing impacts to Marine Hunting values within the Study Area. This includes declining numbers of available preferred marine animals (such as seals and narwhals), in addition to reports of low-quality marine animal meat. It is important to note that these existing impacts have been described by interview participants within the context of existing mining operations, particularly from the port facility, and associated marine shipping traffic. When discussing the shipping operations currently moving in and out of Qinngua, several hunters expressed concerns that the current shipping operations are having a negative impact on the narwhal population of Eclipse Sound. In particular, community members reported seeing fewer narwhal in key calving areas such as Qinngua and Tremblay Sound.

There's been a great change since the shipping route has been established in that area. Not as many mammals there. (P12, 05-Feb-19, interpreted from Inuktitut)

Animals have migration patterns of their own, we're not guaranteed a certain number of species every year, they fluctuate. But using the summer of 2018 as an example, we had almost no narwhal, and easy target to point their finger at is all the shipping. People may or may not agree with that, but it's being spoken of in the community. (P27, 27-Apr-19)

There is a great impact already from shipping in that area ... This is – this is the hunters' main route, campers' main route, and they're all affected by shipping. (P12, 05-Feb-19, interpreted from Inuktitut)

I know this, the change of – narwhals. There's usually narwhals around here [mouth of Qinngua]. But since the Baffinland is carrying ships, most of the narwhals are now like away from the area they usually be. Yeah. Like lots of narwhal usually around here ... But one time, I think it was last year, people were noticing the difference too. They started seeing killer whales here instead of narwhals. Yeah. I think the shipping route is the effect of the animals. (P21, 08-Feb-19)

When they started shipping, the narwhal's behaviour was, I think they were scared of the ships in the beginning, but after a while they weren't really scared of them anymore, well they were still scared but not as much and I

hear last year there was hardly any narwhals out on this area, especially around here and other parts close to Qikiqtaaluk, I think because of the ships. In spring time and summer last year, when I see they were parked just outside Baffin Bay, when the ice started to melt and when it melted, there was maybe three or four ships over here waiting. (P17, 07-Feb-19)

...because due to more increased shipping I've seen less and less narwhal each year ... Previous couple years there was a guy who counted narwhals. He said there was around 12,000 narwhals. And this year, there was a couple hundred ... So, nobody was stocking up for the winter. Yeah. Everybody wanted muktuq. You go out narwhal hunting, you catch a narwhal, then you want to ferment some for winter, but you can't because it's there wasn't enough to ferment and bring home. (P09, 05-Feb-19)

A guy who was a full-time hunter lives here, he's spent early summer breaking ice a couple of years and he was watching narwhals how they react to the shipping lines. The ships he said the numbers are decreasing coming in and they're going over to Cambridge [Bay]…area and now we can see in the fish, they're getting big in that area because they're not coming in to our area anymore. (P07, 05-Feb-19)

The decline in narwhals within the Study Area was a central concern of interview participants. A number of interviewees reported observing a decline in narwhal numbers as recent as the last several years, particularly around Qinngua and the Bruce Head region.

He thinks it could be the ship traffic that's causing them [narwhal] to leave the area ... There's somewhere they were the least fewest number of narwhal ever ... And if the following summer's like that again, then you'll know that the narwhal were scared off by the ship traffic. (P16, 06-Feb-19, interpreted from Inuktitut)

Like every year, and for the ship activity, people from generations to generations people used to hunt narwhals in this area … Along this coast here, because they're migrating in and then they would spend lots of times just going back and forth because they're calving ... And feeding off the char here ... Right – just last year, there was only one time a group of – or a pod of about 50 went by and that was about it. Never saw any more caribou or narwhals. The whole time. (P15, 29-Apr-19)

Last year, there were more ship activity than previous years … There were too much iron ore carriers and supply ships and both – both ships, and cruise ships … There was one ship, a National Geographic ship travelled here, turned around, and went back out. And that frustrated a lot of hunters in that area because the ship just turned around and just went back out. Sort of like disturbing the harvesting ... The sound. Like there was – Ocean's North did some studies and they submerged monitors. And we could hear the sound, like the monitors would be in this area. Zoom out. We could hear the ship here ... All the way, when it's closer to here, like they travel here.

You could hear the propeller ... And the narwhals, when the narwhals, when the ships comes in this area, narwhals are quiet. You don't see or hear narwhals. (P15, 29-Apr-19)

They intend to go shores, run away. And then they would – like if the ship was travelling this way, narwhals would go this way. And when the ship comes, they sometimes, they go out. But two years ago, I noticed when we were hunting narwhals here, ships would slow down. And because – because it's their calving grounds, I've noticed that narwhals were going back and forth. Moved the ship around. Like that was weird. But we don't – we didn't have no hydrophone at that time. So, every ship that travels here, you can hear the propeller. Like it's – noise. Even that monitor was there, we could hear boats going by, because the hunters. But the ship, you know, that propeller and the generator, the motor or the engine, you can hear it. (P15, 29-Apr-19)

And every time the boat gets loaded, one of them just goes there and there was always three or four boats over here, I think they're disturbing the narwhals and the seals, because last year there was hardly any narwhals, I think they all moved. (P17, 07-Feb-19)

In 2013 I started working for Baffinland, we had a camp up here and we did monitoring on narwhals because it's a passage to breeding area close to Bruce Head. There used to be a whole lot of narwhals there before all the ships started coming. (P17, 07-Feb-19)

Because there used to be so many of them [narwhals] going to Bruce Head and all the other parts that people used to go narwhal hunting. There was hardly any last year, they were saying...I saw some, but not very many. (P17, 30-Apr-19)

Again with this area [Bruce Head] it's a caching place too for narwhals. Last year there were hardly any caches because there were very few [narwhals] that went through here. (P33, 30-Apr-19)

But last summer they saw the least number of whales ... More than 50% less. Much more than half what they used to see ... They don't go up to Milne as much anymore, because their route, the fjord is always full of ships now ... He knows that in Arctic Bay area, they're seeing a lot more narwhals, and less in this area. (P12, 05-Feb-19, interpreted from Inuktitut)

Community members identified narwhal as highly sensitive to acoustic disturbance. One participant described recent construction efforts towards a small craft harbour in Pond Inlet as one potential reason why narwhal are seen less in the area.

In the summer we do this work on our new offshore thing out there [Pond Inlet harbour expansion], and since there was construction there, the narwhal could hear the rocks being dumped into the ocean from the dock, and for that reason, the narwhal didn't come by the community. (P08, 05-

Feb-19, interpreted from Inuktitut)

The decline in narwhal quantities has, in turn, made it difficult for Pond Inlet community members to hunt the animals due to less availability in known and preferred harvesting areas. These hunting challenges were reported to be particularly difficult in the vicinity of concentrated shipping traffic.

> *They used to hunt on that part for narwhal, but since Baffinland had so many ships passing through, they don't hunt narwhal anymore because the narwhal just flee-fled away from that area, from this area.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *In the past lots of people will go up to [overlapping discussion, Inuktitut spoken – 2:02:01.7] Milne just-just to, just to spend their vacation and to catch caribou and narwhal and char, lots of people would be camped there, and they would have like racks of fish drying, people would be out hunting narwhal and out hunting caribou. It wasn't just for one main purpose that they were-they were there. But once Baffinland started coming into there, there were too many ships and traffic in the area to be able to hunt successfully.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *The reason why they disapprove of the Eclipse Sound route that is now used is because in – up here in the Arctic, the lifestyle, Inuit are different from the southern population in terms of their sole dependence on food with mammals and fish and terrestrial animals – caribou and whatnot. They've, they knew at the time and they did say after three or four years, the animals or mammals around the Eclipse Sound area will disperse away from there, and because of the terrestrial area with caribou, they will be able to come back and forth, but not so much with the mammals because after three or four years of production, they figured that they would go away and how would they be able to feed themselves when they could no longer get the animals from the ocean.* (P08, 29-Apr-19, interpreted from Inuktitut)

Numerous community members expressed concerns that the shipping associated with the mine was having a negative impact on the seal population of Eclipse Sound. During their interviews, hunters reported seeing far fewer seals in the Eclipse Sound area, and expressed their observations that noise from shipping was likely causing seals to move away.

> *What I noticed about seals is they were close more than, before the Baffinland mine started. They were more close to this, shore. Also what I noticed was there were hardly any seals around that area, when we traveled going to the floe edge way up here, lots of seals ... Hardly any seals in this area.* (P26, 08-Feb-19)

> *And ever since Baffinland started their activities, there are less, fewer seals up there, ringed seals up there ... But he's noticed the seal population has lessened in Eclipse Sound. He doesn't really go now to the floe edge.* (P16, 06-Feb-19, interpreted from Inuktitut)

The seals were up there. At the beginning of March, they start migrating into this area. And summertime they'll migrate up into these sounds where the char are. So – so he thinks the situation is still the same, but once the seals start seeing all these ships passing by, they'll go somewhere else. They'll go places where they won't be comfortable and have food, so his vision for the future is that there will be no more narwhal or seals. (P08, 05-Feb-19, interpreted from Inuktitut)

Yeah, some people aren't pleased that they'll be creating a railway. And they used to live that more old way. And they would use their dog teams to come here, and they made – the seals would start laying on the sea ice between - once he got a skidoo, nothing changed for three years, but then on the fourth year, the habits of the seals changed. And in May there were no longer seals laying on the sea ice. And when they opened up the mine site, he thought maybe they'll after three years, our wildlife would change their habits, and they have. And three years have passed, people are saying they're now much more scarcer now, along with the char. (P08, 05-Feb-19, interpreted from Inuktitut)

So they now know that as – as long as there's shipping activity around that, that they have noticed that the seals are in less numbers, and he thinks it's attributed to – to the busyness of that area. By shipping. How they come to that conclusion is that there used to be more seals here, not so much here. Now there are more seals here and not much here. So they've come to a conclusion that that's where they went, I guess. (P04, 27-Apr-19, interpreted from Inuktitut)

Since 20–2012, they notice whenever the–the shipping activity is happening, that there's not as much seals at all. And usually in the fall, when the ice is forming around here, they–the–they–there's an abundance of seals and they do come back once the shipping activity stops. (P04, 27-Apr-19, interpreted from Inuktitut)

Since the full production started shipping, in 2016 area, they noticed that they now have to go much farther to those fjords to catch the seals, even though it's farther from where they used to have to go to catch seals, they go there because they – they need to catch the seals. So they have to adapt to that...In the summer they used to just go down here, along here to catch the seals. (P04, 27-Apr-19, interpreted from Inuktitut)

Several participants noticed that in recent years, there have been an increased number of seals being caught that are abnormal or sick, which hunters do not wish to eat for fear of contamination.

[Interviewer: [He] was just saying that over the years he's noticed the seal, the liver of the seals has more of these yellowish parts to it.] ... We don't eat it. We leave it right away. We just don't. We don't want to take the chance of

> *catching a sickness ... We bring the meat back because it's just the liver that's no good.* (P09, 05-Feb-19)

One participant in particular observed that the decline in seal health is linked to the presence of marine shipping traffic.

> *Yeah I would think so because you never used to get that many [ship traffic] and the hunters are observing changes in patterns and more sicknesses in seals.* (P05, 04-Feb-19)

Over the course of the interviews, community members reported widely on the decline in key marine species in the Study Area, such as seals and narwhals. The decline in species has increased Study participants' difficulty in successfully hunting these animals. In addition to existing impacts from shipping traffic, one interview participant observed that dust from the ore loading at the Milne Port facility was being dispersed out onto the sea-ice.

> *The dust from the ore now extends that far. The sea ice, on top of the sea ice ... And it almost reached the top of the mountains.* (P16, 06-Feb-19, interpreted from Inuktitut)

The data reveal clear links between past mining activity (such as port expansions and marine shipping traffic) and declines in narwhal and seal populations in the Study Area. Despite these exiting impacts, the Study Area is still used and valued by Pond Inlet community members for Marine Hunting values.

4.2.4 Project Interactions

Section 4.2.3 details the existing impacted baseline on Marine Animals that Pond Inlet community members largely attribute to the existing mine operations. The Project's proposal to expand the Port Facility expansion and increase shipping traffic has community members concerned about the increased impacts on marine animals in the Study Area, and consequently community members' ability to hunt them.

The proposed expansion of the port facility and associated shipping traffic through the Qinngua area were a central concern for interview participants. Since hunters and community members have already observed declines in marine mammal populations in the Study Area, there is concern that increased shipping in the Study Area would intensify these changes.

> *[Interviewer: And then, do you have any concerns about the proposed increase in shipping?] Yes, animals, small mammals will be hard to come in here, when they first start, they just close by they can come back ... Or they might – or they might disappear forever.* (P26, 08-Feb-19)

> *Before the sea ice forms, it's okay if there are ships here, as long as their numbers don't increase. But you hear that the ship traffic may increase during the summer. It'd be better – I would appreciate better that ship traffic did not increase. So that our wildlife will stay in the area.* (P20, 07-Feb-19, interpreted from Inuktitut)

The impacts of shipping on marine mammal populations referenced above were of concern for the community of Pond Inlet throughout the interviews. These concerns were often expressed in the context of ensuring community members have the ability to continue to hunt freely and safely in the marine environment, which community members perceive to be negatively impacted by increases in shipping traffic.

> *Yeah, it's a great concern. Because when hunters are hunting, they don't want any obstacles around anywhere, particularly ships nearby, because they have to shoot and, you know, and things like that. Particularly around that area. And Nalluat area as well. Everywhere. They are affected and they are very conscious of them. Because they want to be hunting freely without conscious of anything else, other than what they're hunting.* (P12, 05-Feb-19, interpreted from Inuktitut)

> *She's concerned about the men who work very hard do not know where all the seals are buried, have no seals and if they're telling the truth, the men that don't want too many ships, she feels defensive of them now too. And that there be less ship activity pass – going through there ... Yup, she's concerned about the ocean hunters.* (P18, 06-Feb-19, interpreted from Inuktitut)

> *And on our way back to the point along the shoreline, and we didn't see one single seal at all and this was after the ship traffic had begun traveling*

through there. I think the area – seals have left the area [Qinngua]. This used to be very rich in ringed seals. I myself won't see that many numbers today, and I know that. (P24, 07-Feb-19, interpreted from Inuktitut)
This area [Qinngua] used to be rich in seals. What happened to all the seals? And he said, he was told that the ships had all scared the seals off ... They were probably scared off by the ships, and we knew that the seals left due to the noise pollution by the ships, the ships. (P24, 07-Feb-19, interpreted from Inuktitut)

There's danger with [shipping traffic]– if there's a noise that the animals – mammals are hearing, and they may travel into the areas where there's no seal breathing holes, and they might – they might die, because trying to get away from where the noise is, leaving their breathing holes. So it can be dangerous that way too. (P04, 27-Apr-19, interpreted from Inuktitut)

I don't know what's going to happen with Baffinland's increased shipping...Too many ships...They're playing with our lives. (P22, 27-Apr-19)

Noise disturbance from marine shipping traffic was another concern raised by community members. The increased noise levels that could be generated from the ships are anticipated to have a negative acoustic influence on marine mammals, which are characterized as being highly sensitive to noise. Study participants detailed how they are taught to modify their behaviours around the shoreline in order to not disturb narwhal calving areas.

That's why the, you know, the people, many people, prefer not to have ships because when the newborns, even when the people in the camps are walking along the shore making noise on the rocks, the newborns will start to follow them and so ... And he himself even tells the kids not to walk around on, along the shore because they'll attract them, and confuse them I guess. Just imagine what the ships would do. (P10, 05-Feb-19, interpreted from Inuktitut)

When they loading the ore, when they come back through here, they make a lot of vibrating. So you could not hear them, but you can feel it in your sides...when they passing through here, down, every cups and every small things on–on the tables and they vibrating. (P10, 27-Apr-19)

If there were too much shipping like there were ships going in or ships staying way out here waiting to be going in, that would cause a lot of noise and disturbance because the narwhals tend to go in when there's a breakup because that's their feeding grounds. (P15, 07-Feb-19)

They're [narwhal] very sensitive [to sound]. I usually bring a hydrophone with me to the floe edge every year to see how far the narwhals are. And I can hear snowmobile from about a couple miles out, even before it's showing – from the hydrophone. Yeah. So, they're very sensitive to noise. (P09, 05-Feb-19)

> *So in the Eclipse Sound area, in the main area, in the larger area there…the animals hear a lot of activity...They will go, animals will go, narwhals and seals will go here and they'll try and quickly go to this area, because it's not as noisy and they stay in that area.* (P28, 29-Apr-19, interpreted from Inuktitut)

> *Yeah, like July 15th I would recommend that, to have a shipping season if that ever happens, but July 1st is a little early because a lot of hunters that wants narwhal meat that hasn't had narwhal meat, that's a good time to catch one because they're either close and it's easier now because they're coming, but with the shipping going across it would disturb the narwhals and the hunters because they might ... like going across the broken ice would be harder for the hunters and we might miss out on the narwhals too. Yeah because I have ... Canada Day at the floe edge, yeah it's a very good time to spend there because there's lots of narwhals going up and down, up and down and they go through cracks as well before going closer.* (P33, 30-Apr-19)

Interview data reveals the potential for the Project to impact and interact with Pond Inlet community member's Marine Hunting values. In summary, the IQ-identified Project Interactions for Marine Hunting include:

- Impacts to marine ice, water and sediment quality primarily from the Milne Port but also from increased shipping activity;
- Avoidance of areas by marine mammals and harvesters due to the Milne Port and the Northern Shipping Route;
- Impacts to marine species health and impacts to habitat loss and changes in habitat due to the Milne Port and the Northern Shipping Route;
- Acoustic disturbances from the Northern Shipping Route and the Milne Port;
- Risks of mortality from vessel strikes and increased vessel interactions due to the Northern Shipping Route;
- Loss of wildlife habitat, including critical narwhal calving environments, due to acoustic disturbance from ship traffic;
- Loss of use or avoidance of preferred areas for hunting due to decreased abundance of preferred species (such as narwhal); and
- Loss of use or avoidance of preferred areas for hunting due to safety concerns and restrictions on access.

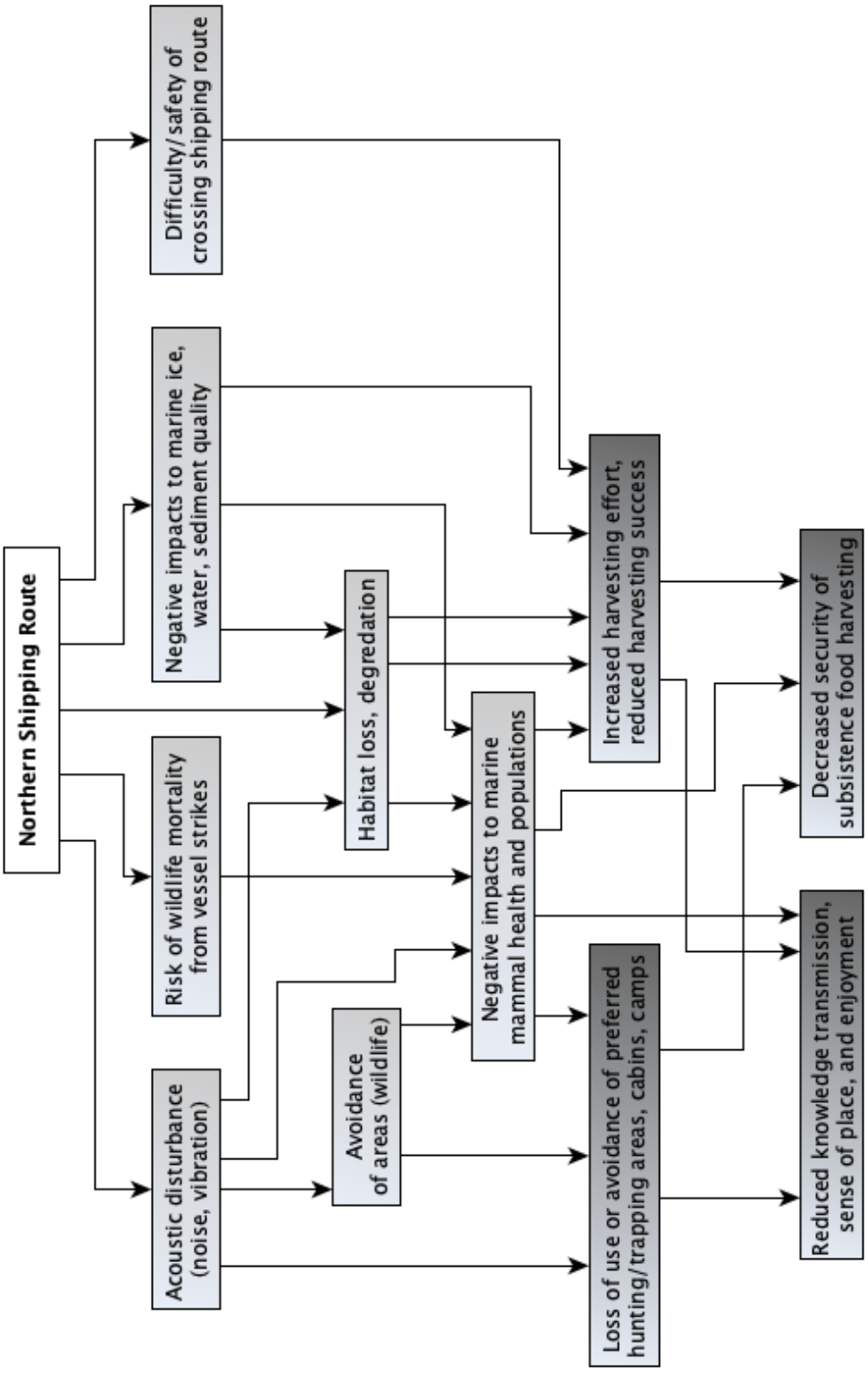

Figure 8: Potential Project interactions with reference to the Northern Shipping Route with Pond Inlet Marine Hunting values.

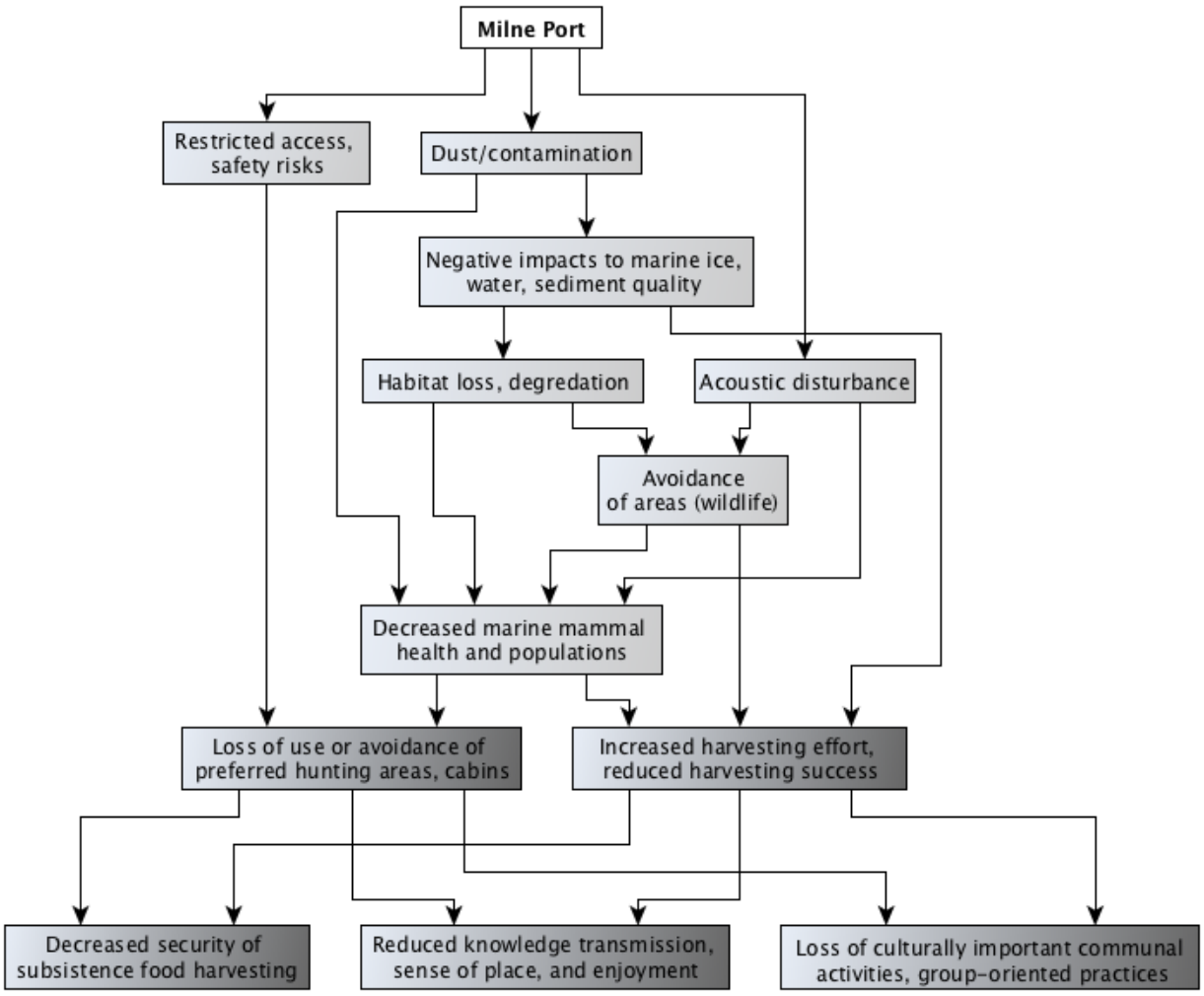

Figure 9: Potential Project interactions with reference to the Milne Port with Pond Inlet Marine Hunting values

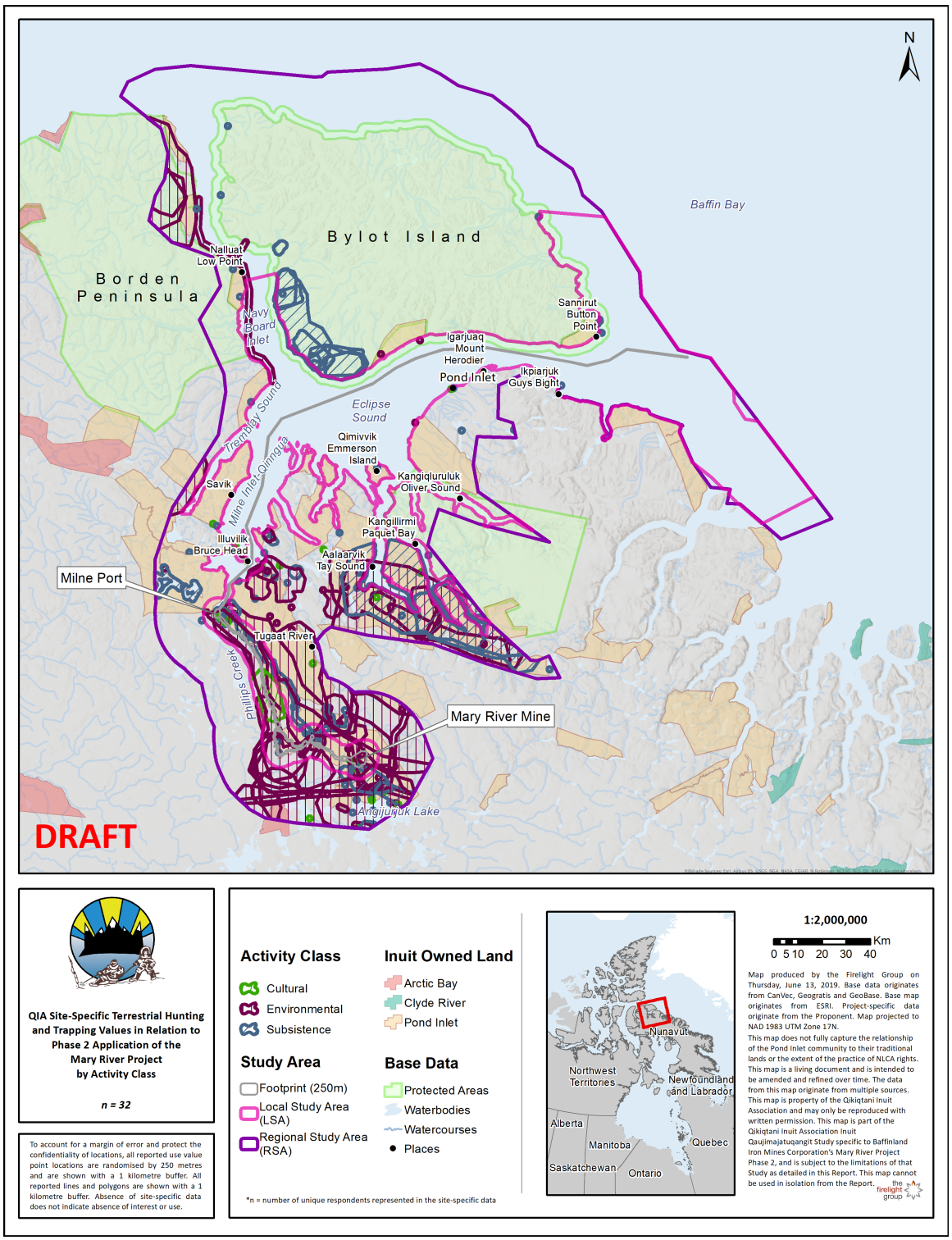

Figure 10: Pond Inlet reported site-specific Terrestrial Hunting and Trapping values in the Project Footprint, LSA, and RSA.

4.3 TERRESTRIAL HUNTING AND TRAPPING

Section 4.3 provides further details on Inuit-reported site-specific Terrestrial Hunting and Trapping values by activity class and location. This section also includes a discussion on the importance of Terrestrial Hunting and Trapping values, and where possible, the current impacted baseline conditions and change trends. The qualitative data provide additional crucial context for the interpretation of the site-specific data.

4.3.1 Site-Specific Values

Table 3: Site-specific values for the Terrestrial Hunting and Trapping Valued Components reported within the Project Study Area, by Activity Class.

Activity Class	Footprint, including 250 meter buffer		LSA, including Footprint		RSA, including LSA and Footprint	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Cultural	5	11.6%	12	10.5%	23	10.6%
Environmental	15	34.9%	32	28.1%	71	32.9%
Subsistence	17	39.5%	55	48.2%	104	48.1%
Impacted	6	14.0%	15	13.2%	18	8.3%
TOTAL	43	100%	114	100%	216	100%

Description of documented Terrestrial Hunting and Trapping Values

The following Terrestrial Hunting and Trapping values were documented in the Project Study Area, organized by Activity Class:

- **Environmental** values including: Known habitat for caribou, wolf, goose, snowy owl, lemmings, and voles; caribou calving grounds; a caribou migration route; and visual sightings of wolf, snowy owls, caribou, and a raven nest;
- **Subsistence** values including: Kill sites for caribou, ducks, geese, ptarmigan, wolves, loons, cranes, murre, rabbits; fox trapping for commercial fur trade; and collection sites for snow geese eggs and murre eggs;
- **Cultural** values including**:** Food storage and cache sites; heritage resources; processing sites for caribou; and

- **Impacted** values including**:** Caribou and wolf habitat and caribou calving grounds

Geographic Distribution of Terrestrial Hunting and Trapping Values

Terrestrial Hunting and Trapping Values are found on both Bylot Island and Baffin Island. On Bylot Island, Terrestrial Hunting and Trapping sites are primarily located on the southwestern plain. Terrestrial Hunting and Trapping values were also mapped along the Borden Peninsula on the western shore of Navy Board Inlet, as well as towards the head of Qinngua, inland along Phillips Creek to Mary River, and on the Tay Sound and Tugaat River uplands.

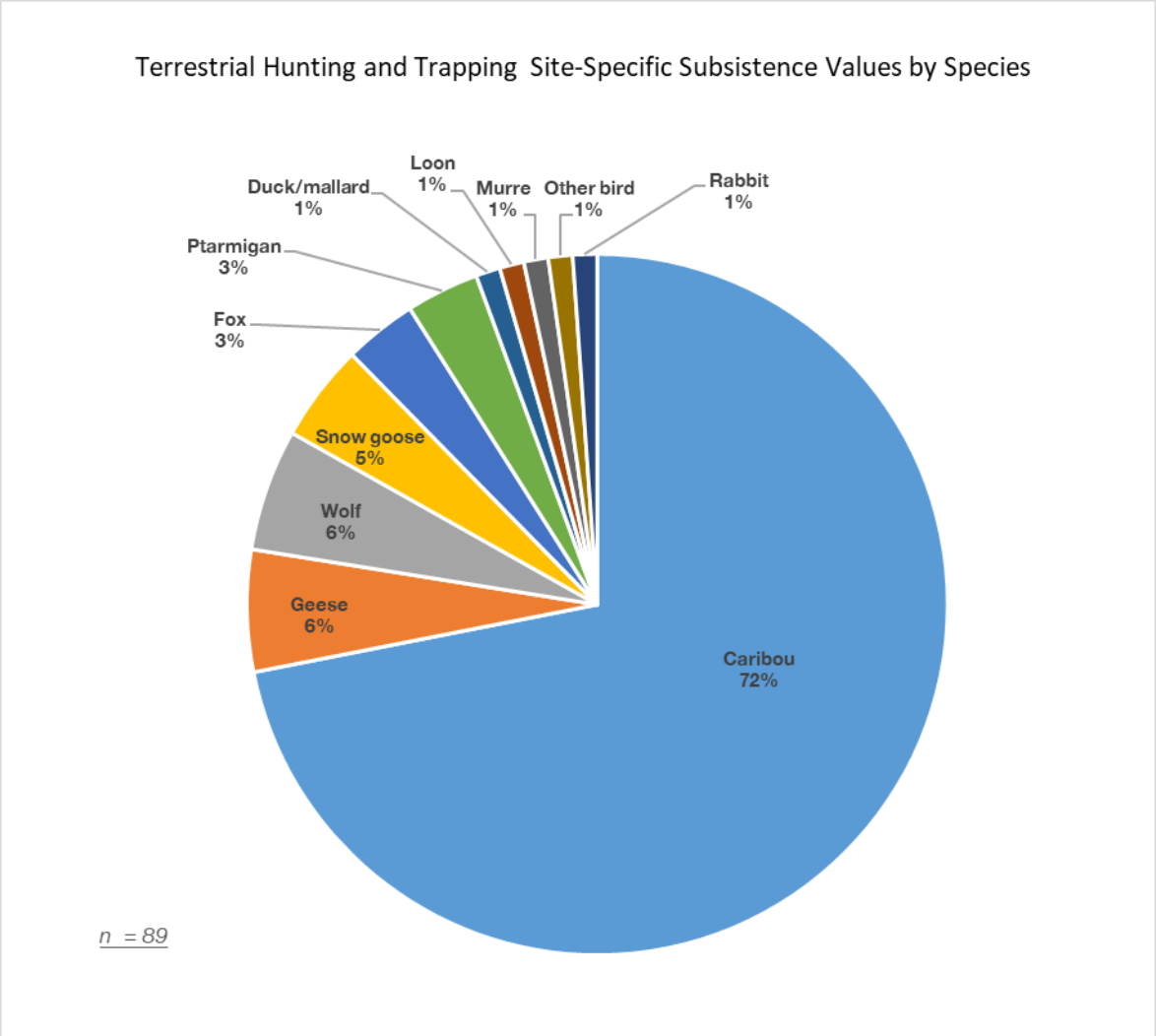

Figure 11: Inuit reported subsistence Terrestrial Hunting and Trapping site-specific Subsistence values by species type in the Project Study Area; n = 89.

4.3.2 Importance

Alongside marine mammal harvesting, terrestrial hunting is an important part of the Inuit way of life. Pond Inlet community members harvest a range of species in the terrestrial environment (Figure 11) including geese (and their eggs), wolves, ptarmigan, Arctic hare (referred to by some hunters as rabbits), sandhill cranes and loons, and caribou. As noted above, caribou is a large part of terrestrial hunting and subsistence for Pond Inlet community members.

> *And I have hunted on Bylot Island for caribou, ptarmigan, rabbits all my life.* (P13, 06-Feb-19)

> *Oh, sandhill crane, loons, cranes, up in Milne area ... Birds, different kinds of birds ... Down in the lowland area are the loons and cranes.* (P12, 05-Feb-19, interpreted from Inuktitut)

Not only does hunting help to provide basic necessities like food and materials for clothing and other tools, but it is also an activity that supports hunters' identities and their sense of independence (see Section 4.6).

The interior of Baffin Island, and in particular the Angajurjualuk Lake area were identified as important caribou habitat, including migration corridors and calving grounds, as well as being areas where Pond Inlet community members have traditionally gone to gather caribou in the summer and fall. Study participants noted the Mary River area has long been and continues to be a hunting ground where they would harvest caribou meat and hides. Pond Inlet community members spoke at length about travelling to Mary River to hunt caribou throughout their lives, and the lives of their parents and grandparents. This continuity of use was identified as being of upmost importance to the Pond Inlet community.

> *We went up there [Mary River] in May during early spring and September we went back, because someone came picked us up, and that was in 1957. So, I would notice that young caribou, the fur was good enough to be used for clothing, being caught there.* (P24, 07-Feb-19, interpreted from Inuktitut)

> *By dog team they would – every year they would go to Mary River to hunt caribou. Cause they were always able to catch caribou in the Mary River area.* (P30, 08-Feb-19, interpreted from Inuktitut)

> *Somebody caught a caribou in the Mary River and from the other day was invited [to share the meat at the hunter's house] and that made her feel great. Apparently, that was near the Mary River.* (P06, 05-Feb-19, interpreted from Inuktitut)

During interviews, a number of participants highlighted the hilly and mountainous landscapes around Mary River and the mine site as caribou calving grounds. These comments were based on IQ and described through personal observations, having previously seen and caught caribou in these mountainous environments.

> *But they, once, once they, once the mother cows give birth to the calves then they spread out to these areas [tundra surrounding Angajurjualuk Lake] to feed their calves 'cause they get more bigger and stronger, stronger …* (P04, 04-Feb-19, interpreted from Inuktitut)
>
> *That whole area is a calving ground for females, all the way into the highland, high mountains*. (P04, 04-Feb-19, interpreted from Inuktitut)
>
> *That's his caribou hunting area ... That whole area, yeah. Up to that mountain. That time [the 1970s] there were a lot of caribou.* (P28, 08-Feb-19, interpreted from Inuktitut)
>
> *They [caribou] migrate and they follow the lakes and the rivers ... and I think they use the hilly area for calving.* (P05, 04-Feb-19)

Some mountains and hills are also beneficial to caribou, according to Study participants, because the elevation, wind, and exposure can decrease the risk from mosquitos and wolf predation. For these reasons, as some hunters explained, local mountains can operate as a refuge for vulnerable calves and caribou during calving periods.

> *According to IQ, I understand they're calving on the top of the, every mountains, because try to keep away from the wolves and mosquitoes in the cooler area. So, that's the reason why they on the top, they calving on the top, so.* (P11, 06-Feb-19)
>
> *The caribou breed in the higher elevation, and in this area is–is one of those ... The reason why they have their–they breed in the higher elevation is because in the valleys in the lower levels, that's where the wolves roam ... They would be staying away from wolves, up in the higher elevations.* (P04, 27-Apr-19, interpreted from Inuktitut)
>
> *When spring is approaching the caribou go back up to the high areas to birth – give birth to their calves ... And they are probably trying to get away from the mosquitoes.* (P04, 07-Feb-19, interpreted from Inuktitut)
>
> *That's in the spring. That's where the caribou will be going. So, from the, from the long fjord, [Inuktitut place name 0:02:07:0] and all the way down to where he pointed to where there railway diagram is, is they will travel from there and all the way to there to have their calves and then further up [Inuktitut 0:02:30:0] after the birthing? That's birthing area. And he suspects the higher grounds are where they, the birthing grounds, are in the summer time, particularly. And then they will travel a long way. They will spend time there in the fall … So, from – after birthing, they will go up to this area sometimes here and then they will go onto the mainland from there.* (P24, 26-Apr-19, interpreted from Inuktitut)

Because they go up into the high places during the summer, especially the caribou with calves, fleeing from mosquitos, and the high areas don't have as much … mosquitoes. (P04, 04-Feb-19, interpreted from Inuktitut)

He knows that all winter the caribou have their fetus. They will stay there all winter. When it is time to birth, they will go through there and up. You can see that mountain from where you are. They will walk there and they will have their birth in that area. They go there so that they are away from the wolves...To keep away from the wolves they would have their young along the higher elevations and they would be up in the higher elevations keeping away from the wolves. After they have their young there, once they can run around, they will roam around there. All the young ones will roam around. That's how he has seen it. The higher elevations are where the young ones are. Maybe from where they have their fetus, and all that. From their regular caribou hunting, they know that fact over time. (P30, 08-Feb-19, interpreted from Inuktitut)

The congregation of caribou in the Mary River area is accompanied by linked caribou trails and migration routes, which were identified by participants throughout the interior of Baffin Island. (See Figure 12 for a map of caribou-specific map data in relation to the Mary River Mine site). Spring in particular was identified as an important time during which caribou would move to the Mary River region.

*They, the caribou use that trail. They follow the river and lake system and head up ... And caribou spend the fall there (around Angajurjualuk Lake). When we start heading into fall the caribou move into that area ... And early spring all this area (around Nulujaak and Kanajjuu is loaded with caribou. It is just loaded to the brim. (*P04, 07-Feb-19, interpreted from Inuktitut)

I've gone through Mary River and past it during the spring to go caribou hunting, but November to February, that area – there would not be very many caribou during those months. That was only after March that they'd sort of go back into that Mary River area and that was how I experienced it, and the caribou would be coming up that was and going onto the sea coast, along that, every year there's a stone quarry there, every year we would go there to forage stone and every year caribou would pass through here, especially through there, and all this area would have caribou, and I experienced that annually, some of the caribou would pass through Mary River and right across the air strip up on to the mountains ... (P24, 07-Feb-19, interpreted from Inuktitut)

And this area he is saying is where all the females congregate, female caribou congregate ... And so, there is a huge highway that the caribou use to get into that collection area, convention area [Iqpiarjuk, Erichsen Lake]. And this is early spring ... And there is other caribou coming from down island and they are all collecting in that spot. (P04, 07-Feb-19, interpreted from Inuktitut)

The spring migration route, we knew that the area, the mountains around Mary River are used for calving so the caribou would come into the area, come into the high areas to calve… probably not only those hills or mountains. (P24, 07-Feb-19, interpreted from Inuktitut)

You can see the exactly same as the caribou trails, and every valleys, like a valleys you can see, some of them in here, or here. In this area [Mary River area], every valley you can – if you looking at the – looking for the trails you can see it...Some of them very old, some of them kind of fresh... (P10, 27-Apr-19)

When they were – like an old IQ, one or two caribou that travel to an area, if it stayed, caribou will follow. If the caribou returned, that means we'll have to go there … You know what I mean? … Under IQ … Inuit knowledge. There was one time that when I went fishing, like I think I spoke about this, at Tugaat Lake ... And then I spotted caribou here ... Did you catch them? And I was asked by an elder. Yeah, I caught one of them. Well, at least you caught one of them. No one will go back and – because they communicate by their – I don't know. The animals communicate – if they were to communicate, it's not a good spot to be there might be – like they have a fear because their instinct is to be safe. If I have to catch one – both of them, that could have – because they know that there's caribou travelling there. And then all the group could follow. If the caribous returned, the caribou might go elsewhere. (P15, 29-Apr-19)

...they would travel closer to Pond Inlet, just beside the glaciers where they spent their summers as well. So in the summer time, you know how fast the glacier is melting? Right after the glacier melt along the edge, it would be barren, but shortly afterwards plants would start growing – plants that are slightly different than today's vegetation that the caribou seemed to prefer to eat. So that's why they – all along, these sides of the glaciers. They would stay there the whole summer, along the edges of the glaciers. And for some reason in the evenings they would go towards the sea, and he thinks that they go down to get, to drink salty water, and then after they get their salt water they would go up the hills again for the day. They would rush up the hills to the mountains before it gets too warm from the sun. It was – they would watch them going faster and faster up the hills and they would try to follow them, but it was frustrating because they would run up the hill so fast. (P30, 29-Apr-19, interpreted from Inuktitut)

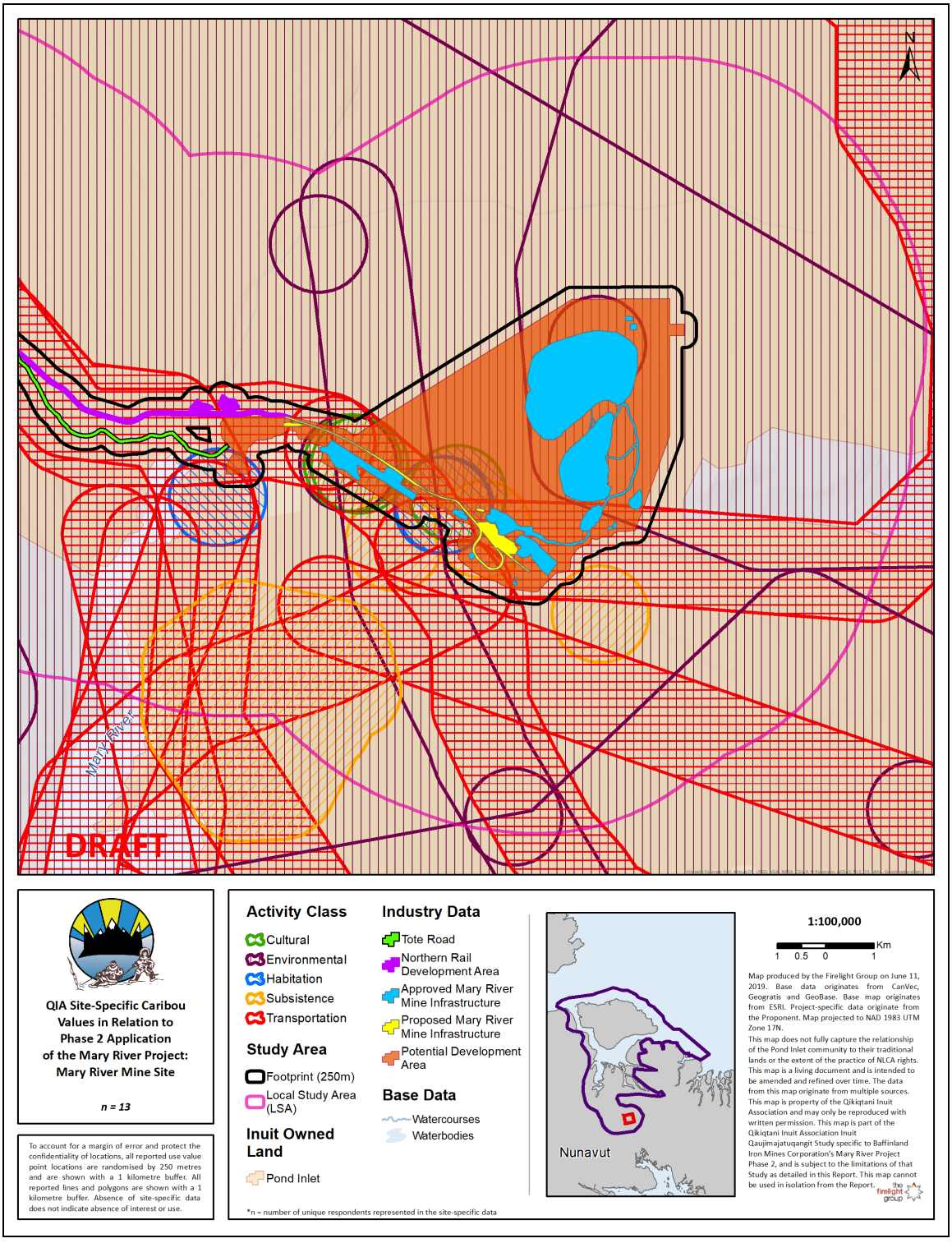

Figure 12: Site-Specific Caribou values in relation to the Mary River Mine site

The camps established for this purpose further display the importance of the Mary River area for caribou hunting. Interviewees discussed how caribou would pass through and by their camps, thus describing at the abundance of caribou and the close relationship between camp siting and resource availability (see also Section 4.6).

> *The men would catch caribou every time – basically every time they went hunting and sometimes caribou would pass through their camp, pass by their camp [in the Mary River area]. And she thinks it was quite a lot of caribou back then [1950s].* (P18, 06-Feb-19, interpreted from Inuktitut)

> *Where they set up their tents in the summertime, because they walk. Because they walked every summer where the caribous are calving, and bulls … This used to be the area where they're calving … You can still see their trails back then.* (P15, 29-Apr-19)

> *The area called Pinngimajuq where he just pointed has historically been known to have caribou there and they do find them there … And this is the area where people coming in from Igloolik and Pond Inlet would meet in the summer where they have gone inland to hunt and gather. Pinngimajuq ... Yeah, around there in the spring by snow machine ... Four years ago in May. Three or four years ago in May when Mary River was just starting to be populated.* (P24, 26-Apr-19, interpreted from Inuktitut)

> *They would probably stay at camp for two weeks [during the late 1980s], and when they were landing into the Mary River airstrip, you could–she could see bunch of caribou lying by the road, or on the road, so it was like a really nice welcome. 'Specially when you're caribou hunting. She just saw that one caribou lying on the road or by the road ... She also caught a caribou there at Mary River...And caribou would just show up apparently, from out of nowhere when they were camped there.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *…he was on his mother's back carrying. That was his first time that Caleb walked to Mary River … So they walked from there through there, there, and all the way to Mary River area. So they went that way and through the little, where he was at Mary River, they went downhill and stayed there, they stayed there for a couple of months. They started going back, they were walking along the snow, it was the fall and it started to freeze up. Then when they got there, they spent several days looking for caribou and they followed the same route they came…* (P30, 29-Apr-19, interpreted from Inuktitut)

In addition to the Mary River, the Tugaat River and surrounding areas were also identified as important for hunting caribou, particularly in the summer months. Study participants once again emphasised the mountains as a key feature for caribou and highlighted how hunting is often associated with other land uses, such as collecting soap stone (see above) or fishing.

> *Around there is Tugaat fishing, caribou hunting around there, around and around Iqaluit Lake*. (P05, 04-Feb-19)

> *They would go up there during the summer and they would also catch caribou in those areas [Tugaat River plateau].* (P02, 04-Feb-19, interpreted from Inuktitut)

> *So, they follow the Tugaat River up into the mountains there. And they hunt caribou there.* (P04, 07-Feb-19, interpreted from Inuktitut)

Qinngua is similarly recognised by the Pond Inlet community as good caribou habitat, e.g., as a breeding ground. Several hunters also indicated they had been able to catch caribou on the beach at the mouth of Phillips Creek at the head of Qinngua.

> *Canoe this with a boat motor to this area for driving along slowly and looking for caribou down the beach [at head of Qinngua]. Sometime I will get a caribou walking down the beach. Yeah, lots of caribou long time ago. Right now, this giving caribou a breeding ground.* (P04, 05-Feb-19, interpreted from Inuktitut)

> *Yeah around the Milne [Inlet]. Lots of caribou all around there ... This was a real caribou habitat, that area.* (P28, 08-Feb-19, interpreted from Inuktitut)

> *They would be [overlapping discussion, Inuktitut spoken - 0:50:25] camped at Milne. But she never actually went inland with the hunters, but the men would catch caribou right near the Milne area.* (P02, 04-Feb-19, interpreted from Inuktitut)

Besides the Mary River, Tugaat River, and Qinngua areas, Pond Inlet hunters also emphasised other locations in the Study Area as being important for caribou hunting. These include (but are not limited to): Emerson Island, Bylot Island, Kanajjuk Lake, and Button Point. In some cases, hunters identified these as locations with high-quality forage or being close to caribou calving areas, making them good for hunting.

> *Grandparents were saying that there used to be caribous around here, and they used to track them down and kill it with a rope around his neck. They started calling it Qimivvik [Emerson Island].* (P01, 04-Feb-19)

> *One time I went hunting too in Bylot Island in wintertime. That would be in this area here. Like we had to go through Button Point that time. This was like in wintertime. Like maybe after we had no more caribous in this area where we used to go hunt for caribous in here, in the area around the bays.* [P23, 08-Feb-19)

> *That lake is called Kanajjuk ... There is always caribou. Even in the winter. Mostly female caribou there, even in the winter*. (P04, 05-Feb-19, interpreted from Inuktitut)

> *Since there was – since we couldn't find any of those caribous around here, one time I went with the hunters. We went to the Button Point in wintertime and then … And we went around in here in this area.* (P23, 08-Feb-19)

> *He just learnt recently that in the areas of mineral deposits there is more vegetation for caribou to eat. That's why there is a lot of caribou there [Mary River area] because the particular type of food they eat grows there is more abundance in mineral deposit areas.* (P30, 08-Feb-19, interpreted from Inuktitut)

Hunters from the community have developed a familiarity with the land and migration patterns of caribou in the region, knowledge which is often passed between generations.

> *He knows quite a bit this area. Before he died, he taught me quite a bit about the caribou hunting area. So there was not much caribous around, and he tell me I can go this area. And you – you can see the big river here ... You can see the caribous around this area. Some caribous stay there the whole year-round.* (P10, 27-Apr-19)

As is clear from the above, Pond Inlet community members have developed a rich body of knowledge related to caribou, built from generations of use and dependence on these animals, especially for food and clothing. Many types of clothes are fashioned from caribou hides. The late summer and fall hunt in particular are important for clothing production.

> *We lived here in spring, about a whole month of June in spring time, we'd move here, by dog team and spend summer, some two summers we went up to the mainland for hunt caribou for clothing for the winter.* (P11, 06-Feb-19)

> *Her husband caught a bunch more [caribou] after that, perhaps around 10 at that time, in that two week period, and the skins were very nice, like summer skins and hides, well, they were good for clothing. And at that time of the year, like that month, that seasons [summer] … the caribou furs were very good for clothing.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *So they normally would harvest more than five because they needed clothing, that was the only source of clothing for the winter, not just the family but the extended family as well, so they needed more than five caribou to clothe themselves. So they would, when they go back, they knew they were going to be asked how many caribou they harvested and they all agreed that they would say five. But they needed more than five and they caught more than five, otherwise they would, yeah they would have frozen to death ... So his parents, his father and the men spent more time hunting in that area, and harvesting them for clothing.* (P30, 29-Apr-19, interpreted from Inuktitut)

The ability to craft clothing from caribou first depends on there being enough animals with skins of sufficient quality to be harvested. Both require specific knowledge about where caribou can be found and when skins are best suited for use in clothing manufacture. Moreover, skins need to be treated, e.g., dried, in preparation for use.

> *Well we would dry out the hides at Mary River. The sun would dry the hides when they were laid out on the ground, and once they were dried then we would carefully roll them up.* (P02, 04-Feb-19*, interpreted from Inuktitut*)

Importantly, hunters reported that particular areas were used when hunting for clothing. Additionally, specific animals may also be targeted for a given item of clothing that is to be made. For instance, one interviewee stated that the skins from newborn calves are used for hats.

> *In all this area (Mary River area], all this area used to be hunted by people who were looking for clothing, because in the past, before there were southerners, we only used animal, animal furs for clothing. And they would all come in, well, the ones in this area would come in here to hunt caribou.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *That's a lake too. It is called Nasaksaqtalik. Place with hat materials ... And so, called because new born calves' skin would be used as hats and hoods.* (P04, 07-Feb-19, interpreted from Inuktitut)

A wide variety of goods are crafted from caribou hides, not only hats and boots, but also bedding and sleds. Other caribou parts would also be used in addition to the skins.

> *Yeah, they would hunt caribou for clothing, bedding. and so they would hunt during the summers.* (P08, 05-Feb-19, interpreted from Inuktitut)

> *So, that they came up here [where?] by walking throughout the summer and they lived there, catching fish and caribou. So, here when they were living – they built their snow house ... They had a snow house there and because they didn't have their sleds, they built their sleds out of caribou skins. Took it back to Pond ... they would put the skin under the – in the water in the lake to wet it for a period ... Maybe overnight to completely saturate the skin and then the next day they would lay it flat on the snow and that's when they would ... So, the rolled it and then they would stamp on it to make it like thinner – compact. To make it into a sled ... the crossbar that what they were making out of antler and caribou bones.* (P30, 08-Feb-19, interpreted from Inuktitut)

The hunting and use of caribou for clothing and other goods thus depends on animal abundances, quality, life stage, season, location, and knowledge transmission. Not all animals, locations, places, and times are equal, knowledge of which has been passed on from generation to generation.

Caribou were, and continue to be, a principal source of food for the Pond Inlet community, and contribute to the food security of hunters and their families.

> *Am I going to live off the prime ribs off the shelf at the Northern Store? That's a big difference between that and caribou meat that I eat and survive ever since I grew up. And if they were to take all the caribou away, some*

> *parts of maybe my soul would be crying for caribou. Like elders right now, they're craving for certain animals that they don't catch anymore. Like when you have an abundance of caribou everybody is happy. Everybody is healthy. They're eating well. But when you minimize the caribou, people are going to wonder where are they? And they're going to try and get it, no matter what the distance is because it's part of their health.* (P15, 29-Apr-19)

Study participants recalled depending on caribou in times of scarcity, and also harvesting dozens of animals in a single season.

> *We almost ran out of food. But we did catch caribou, so we didn't go hungry. But the caribou would be just enough for the summer.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *Some years would be lots [of caribou], some years would be not so good. Maybe because of the migration of the caribou. There was one summer that I recall that we caught 29 caribous.* (P15, 07-Feb-19, interpreted from Inuktitut)

> *At that time, there was also a lot of caribou. They caught caribou just so that they have food, but there were many. They only caught what they needed for that travel … Close to 1980s … And caught a caribou, but just, but there were a lot of caribou along that they saw, but they only needed to kill one to feed themselves.* (P24, 26-Apr-19, interpreted from Inuktitut)

> *And we're allowed to go hunting for elders who aren't able to – who don't have dependence much or widow. So, I usually try and go [caribou hunting around Mary River] at least three times every wintertime. Three times a year.* (P32, 28-Apr-19)

As previously described, the choice of where, when, and what caribou are harvested for clothing can hinge on the purpose of use. Similarly, the choice of what and where caribou are hunted for food may also be determined by specific desired qualities, like taste. One hunter, explaining the caribou of Baffin Island as being two separate herds, identified them as distinguishable by their taste characteristics.

> *South side and north side [of Baffin Island], because when we used to live here in this area [southern Baffin Island], we used to catch caribou, it's a lot better taste than caribou here in this area [northern Baffin Island], very good, and nicely smelling caribou. I know Iqaluit and Pangnirtung and Igloolik and this are it's a less, smaller for a different, little bit of different taste too.* (P11, 06-Feb-19)

Interviewees described the common practice of caching caribou (as well as fish) during times of abundance to ensure a supply of food during leaner months. Caches are often re-used and constitute important sites that may be carried through generations of hunters.

And they would cache their meat for winter, for retrieval for winter. To get the meat–well, they would take the hides home right away, but they would cache the meat. (P02, 04-Feb-19, interpreted from Inuktitut)

Between 20 to 30 [caribou caught] per summer and they would cache the meat...They would need to catch that many because in those days they need the skins for caribou parkas and pants. And footwear too. (P04, 05-Feb-19, interpreted from Inuktitut)

This is the area [Mary River area] where they would cache the caribou they would catch in the summertime so they could hunt them in the winter. (P10, 05-Feb-19, interpreted from Inuktitut)

And on our way back, right near close to Milne, we caught - we saw two caribou and I caught them both, and I cached them … (P20, 07-Feb-19, interpreted from Inuktitut)

And these areas, well these were lowlands, people would use for caches, to cache their caribou and fish, and all the areas marked with those inuksuks, those road signs, those Inuk road signs, and they're everywhere in that area [Mary River area]. (P04, 04-Feb-19, interpreted from Inuktitut)

Because Inuit knowledge, like this area, this is where they used to have the bulls … Yeah. In this area. That's where they could catch bulls, with the most fat. And people used to walk from the shore to here, in this area, to catch their food and cache so that they could pick up their food and cache in the wintertime by dog team. (P15, 29-Apr-19)

Because it was in the wintertime when he caught them. And then they were in depth about five feet, or six feet in the snow. I think apparently, he had caught more than nine. And the only load that he could take back was that much. And then we went out and grabbed the rest of what he caught. It was deep in the snow with a tarp, and all the meat was wrapped up very well and then covered with snow ... But in the summertime it would be totally different. It would have to be on top of the ground, rocks piled up ... It has to be covered in a certain way with rocks. Like at first, we have to have a good – like high ridge part. You have to be on top. Not in a valley. Because that's going to affect the meat. When you're on a high ridge, you have to have pebbles, rocks, first on the ground. And then bigger rocks, like in a circle. And then put the meat, like ribs first, and then the meat, all the good meat on top of the ribs. And then you have to have – well, it was to be covered well with certain ventilation going through the holes. And there's a certain time of month in the winter you can go pick it up. But it doesn't have to be more than a year. Because when the warm hits again, it's going to – you're going to ruin the meat. (P15, 29-Apr-19)

While the majority of caribou hunting occurs outside the winter months, caribou are in fact harvested throughout the year.

> *And then it was wintertime and like in the wintertime there it's like almost dark, dark, dark. We had to rush during the daylight time. We were rushing looking for caribou during daylight and we did found one, yeah…* (P23, 08-Feb-19)

> *We just went through this way [through Qinngua, on the winter trail to Mary River] to go caribou hunting, wintertime.* (P21, 08-Feb-19)

It is clear from the available qualitative and mapped information that caribou are core to the hunting practices of Pond Inlet Hunters, and community members' way of life more generally. Disturbance to caribou herds are thus concerning to the Pond Inlet community. Some Study participants noted the propensity of certain caribou to sound disturbances and human activity.

> *There's an area where caribous are very, very cautious. If they hear a snow machine, even without seeing the snow machine, they take off. Now beyond the Navy Board Inlet, east side – west side of Navy Board Inlet that's where they are. The caribou there, it's really hard getting them, and they take off if they hear a snow machine, they don't even wait around to see.* (P13, 06-Feb-19)

> *… It's very limited… This way and that way. We call this Igloolik caribou. … They're very sensitive like even they're very far and you can see them as a little spot, they're gone already. There's too many activities.* (P15, 07-Feb-19)

Although caribou are a key species for the Pond Inlet community, other animals are also sought, particularly fowl and their eggs, as well as wolves and foxes. Goose hunting and the collection of eggs are common spring and summer activities for hunters and their families in the Eclipse Sound area. Bylot Island, and in particular the southwestern plain of the Island which is characterised by a combination of wet tundra and upland habitat preferred by geese, is an important area for this activity.

> *There's a concentration of snow geese...right here [Bylot Island]. That's where we camp, but we collect eggs all this area.* (P13, 06-Feb-19)

> *Before that seal hunting, we would get back to our camp, go out for a walk or go for an egg – pick up egg, some goose eggs, and go hunt some eggs. And go hunt some goose.* (P21, 08-Feb-19)

> *Geese?...the last week of May they usually start migrating to that area [southwest plain of Bylot Island]. Even in that Tugaat Lake area up there, they have lots of geese up there. We go anywhere around here, anyplace where they lay an egg and even in their flattened area in the little pond…* (P11, 08-Feb-19)

> *Yeah. Middle of June. … the geese, usually lay their eggs, so we try and go there [Bylot Island southwestern plateau]. There's always a lot of family,*

> *different families, it's always packed up in there...With tents like at least ten families go there to go egg hunting, you know?* (P32, 28-Apr-19)

Murre eggs are also collected at key nesting sites on Bylot Island. Murre eggs are a preferred food for some Pond Inlet hunters, who have an understanding of how to collect their eggs in order to provoke continued egg laying.

> *Normally what happens is that when they first start laying eggs, people go there and collect them and they just leave one so they don't fly away, they stay there; and then they produce more eggs, fresh eggs and then you collect them. The more you collect them, they start getting smaller and smaller. After having those murre eggs and having store bought chicken eggs, they [the chicken eggs] taste like paper.* (P13, 06-Feb-19)

Pond Inlet Inuit also hunt for canids, specifically wolves and fox. One hunter identified the Mary River region as a location for quarrying soapstone, as well as for hunting caribou and wolves, again emphasising the area as important for a variety of values.

> *From 1990 to around 2000. Every year I went more than once to go up in to this area [Nulujaak] to quarry soapstone. Perhaps three of four years we quarried soapstone, and we returned, so I knew that sometimes when we were in Mary River we would hunt caribou in those areas and return to base camp. Oh, and I hunt wolves in this area, and more than once I've found antlers while we were hunting wolves in this area, but I doubt there's not as many caribou during the fall as there used to be.* (P24, 07-Feb-19, interpreted from Inuktitut)

Alongside hunting, the Pond Inlet community has traditionally trapped foxes for their furs.

> *Those stones were gathered to use for traditional fox trapping-what do you call it? Yeah, you pile them up and then you leave a little hole with some bait. And then when the fox goes in, it's not able to come back out. So you just pile all those rocks up into almost this little, not a cage, but just an entrance where then they can't escape.* (P15, 07-Feb-19, interpreted from Inuktitut)

> *They always hunted seals and fox. The fox was traded in the wintertime. All over, they were fox trapping to trade at the Hudson's Bay Company*. (P30, 08-Feb-19, interpreted from Inuktitut)

> *They mainly hunt fox around that area [Mary River area] ... That's where they caught his first seal up there [head of Qinngua]. Along – between that point and further down is where they hunted fox ... If you are going to trap foxes here [Mary River area], this is where they would camp while they are fox trapping here.* (P30, 08-Feb-19, interpreted from Inuktitut)

> *Every time they go fox trapping, they would always go to that area [Qinngua] to get seals as well. It was part of the trip each time, cause that's where they*

> *would get their dog food and oil for the kudlik, lamp.* (P30, 08-Feb-19, interpreted from Inuktitut)

The presented data illustrate hunting as a central cultural activity of the Pond Inlet community, providing food, clothing, and tools. Moreover, according to one interviewee, hunting is important for the health of the community and for food security, while also promoting physical and psychological health.

> *I don't know where I would be without hunting. There isn't much to do, like in smaller communities besides like hunting a bunch of areas that our elders talk about. Then you go on – you want to go out and explore it, but once you're in town, there's – like it's there's an old saying, "It's easier to do bad than good." Then there's like the crime rates just start coming up because the people at home, they're not – their minds are not into books. They're not physically working out, or mentally working out themselves, challenging themselves, then that's when they start to feel angry and start to do bad things. That's the way I see it. Like idle hand is the work of the devil. That's the way I see it. You either have to physically keep your mind busy or physically keep your body busy too.* (P09, 05-Feb-19)

For many Study participants, hunting is a part of who they are and a part of growing up as an Inuk. For example, two interviewees discussed hunting in their teenage years, both independently and with family.

> *Hunting when I was around 14 years old. Ever since then when I became independent, well especially my dog team, doing that, hunting independently since 14*. (P24, 07-Feb-19, interpreted from Inuktitut)

> *Lot of caribou used to be – the first time I caught caribous when I was 15, my father and I caught one and we got a caribou in one day in that area [Mary River area].* (P22, 07-Feb-19)

It is through experience and exposure from a young age that Pond Inlet hunters gain the knowledge and nuances that facilitate their success in hunting. For instance, this may include unique features of caribou behaviour and patterns of movement and environmental change (see also Section 4.6).

> *The younger ones are very easy to fool, just like that. You make caribou noises, grunting like a caribou and you don't go straight to them, you walk sideways, kind of almost away from them and they will follow you. But the bulls, they're pretty smart cookies and you don't fool them that easily. And also females with calves, they don't stick around, they see you, they're off, they take off right away.* (P13, 06-Feb-19)

> *They spread around quite far apart. When they are herding, the male bulls will go on their own and then the females will stay closer together. So, the male and the females will be quite a distance apart for a while. When it starts to get dark in the fall, they used to use birds as a gauge for ... That's when the birds start to gather in the fall. So, the elders, his parents would say once*

> *they see the birds coming in to flock together to get ready to go south, then they will say that it is time for the caribou to start gathering together again. After being away from the female for a while. In the fall.* (P30, 08-Feb-19, interpreted from Inuktitut)

Also important are codes of conduct and norms that define what it means to be a hunter in the Pond Inlet community. A prominent example is the learned importance of sharing food from a successful hunt, which can bind members of the community and ensure food security across families.

> *I gave one whole caribou to my common-law and, one whole caribou to my parents and, one whole caribou to me...Yeah. I always share my meat with my family.* (P03, 04-Feb-19)

> *Like ever since I can remember, as a kid. The way of life, living in the Iqaluit, whatever you catch, if you catch a caribou out hunting, then those who are hunting, if they don't catch them, then you can share your catch with them, for them to bring it home. That's the way I was raised over there.* (P09, 05-Feb-19)

Hunting and trapping of terrestrial animals in the Study Area continue to be fundamental to the culture of the Pond Inlet community. The information collected suggests ongoing reliance on terrestrial wildlife for food and furs/hides. The same wildlife also supports a range of intangible community values, including knowledge transmission and cultural principles (see also Section 4.6).

4.3.3 Impacted Baseline

During the Study interviews, Pond Inlet community members noted how their hunting activities and targeted species have experienced negative changes. One of the most common observations in this regard was the general decline in the caribou population.

> *This area [Qinngua] is mostly used for hunting now, not for caribou hunting because, there's no more, not much of caribou now...We would just mostly go for narwhal hunting and fishing.* (P03, 04-Feb-19)

> *This area [Mary River area] used to have caribou. They would go up there to hunt caribou, and the men would drive their ATVs to go look for caribou. There used to be caribou there during the summer. This area used to have caribou along with that area [areas of tundra and hills in the vicinity of Mary River], during the summer. Nowadays caribou don't go there anymore. This area too, people could catch caribou also. And they would drive there and you'd see caribou once in awhile along the [road] – but that's not like that today*. (P02, 04-Feb-19, interpreted from Inuktitut)

Study participants furthermore identified key locations within the Study Area where declines in caribou have also been observed, including in and around the Mary River, Qinngua, and Tugaat Lake areas. Despite the decline in caribou, Pond Inlet community

members are still actively using the Mary River area, including using it as a base to travel further south to hunt caribou.

> *After early – must have been 2005 to 2000 – we stopped hunting around that area [Tugaat River] around 2010 or '11. And then throughout the time, some people looked for caribou around that area, but haven't had any success. So, we started going past Mary River instead. Like some people spend the night at Mary River or spend a couple nights. Like spend a day out hunting, and then go spend a night at Mary River again.* (P09, 05-Feb-19)

> *We didn't see much [caribou] while I was working there [at Mary River] and people say they're moving away, there's less coming now.* (P05, 04-Feb-19)

> *We'll go to Mary River site where he caught caribou. When the caribou are coming down from this area through here, going up, they would, around here they would make – they would pick out the best fat, caribou with fat. There were so many that they could actually choose from. So, they would only look and choose one they want with most fat around there. Before Mary River, the caribous would go – this is the lake that they would stop by as well and they would be around here.* (P24, 26-Apr-19, interpreted from Inuktitut)

> *Mostly wintertime, people go caribou hunting around here [Qinngua]...Yeah. And then they – some people go there for caribou and then they will go there. They would at least find tracks or at least catch one or two caribou...But nowadays, it's like getting harder to find the tracks and animals.* (P21, 08-Feb-19)

> *...there's Tugaat Lake right here. Last year the hunters saw fresh caribou tracks in this mountain area [by Krag Mountain], this is a big mountain, in this area. I know that 30 was caught two or three years ago in that area. But this year I haven't heard any, somebody, from there foot tracks around there.* (P11, 06-Feb-19)

Alongside declines in caribou, study participants also noted a decrease in wolf populations in northern Baffin Island (including the Mary River).

> *Back when there were caribou in here [Mary River area] and there would be wolves in the area too ... But nowadays there's not any caribou out there anymore so there are no more wolves up there.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *It's amazing that whole area [Mary River], not one wolf sighting in so many years, phew. No more caribou, no more wolves, or less caribou, no more wolves, yeah.* (P05, 04-Feb-19)

Interviews with the Pond Inlet community suggest that the development of the Mary River mine may also be a contributing factor to the declines in caribou in the Study

Area. Interviewed Pond Inlet hunters described how hunting activities and changes over time, including reference to the establishment of the mine.

> *Before the mine ... we used to catch caribou around here before the mine.* (P26, 08-Feb-19)

> *Maybe when caribou was abundant before Mary River project began. I used to go hunting here, mainly up here and here in this area [Mary River area]. I used to find caribou here.* (P15, 07-Feb-19)

> *Every year people go hunting caribou up here and they find less and less caribou ever since Mary River was occupied. Sometimes they don't even catch caribou at all, the people who come upon caribou in that area, so it's obvious that the caribou have fled the area. The ones that used to be there were there with activity and it's obvious they're further away in this area.* (P24, 07-Feb-19*, interpreted from Inuktitut*)

> *He knows for sure [the caribou population has declined since Mary River was built], he knows for sure that is the case. He is saying either from what they hear or from the blastings and activities around there … Yes, he says there's much fewer, much fewer. They hear the blasting. They're very sensitive to the noise of blasting, he thinks. In fact, can you go into the Mill Inlet area? Even the caribou in that are – People that were fishing in this area could hear the blast that was happening here. People complain. The fisher – the people that were fishing around here complained when they got back and said that they could hear the blasting and he thinks it was the blasting was around here at the time.* (P24, 26-Apr-19, interpreted from Inuktitut)

> *The reason why he says that is can you imagine the humans that are fishing that could feel the blast from that distance, can you imagine the animals that are more glued to the ground per say, how they feel and feel the blastings. So, he thinks it's much more intense for animals than what humans. He thinks that's why there is less caribou around Mary River area from blastings and the motor vehicles along the road and the noise.* (P24, 26-Apr-19, interpreted from Inuktitut)

More specifically, interviewed hunters noted that the mine has contributed to disturbed movement and migration patterns in caribou herds. For example, one interviewee described how caribou are now moving farther north to avoid noise from mining-related activities.

> *Because the migration route from Igloolik area, they go towards Mary River. And down in between this area, due to the noise that they've been avoiding. They go up further north now...According to the hunters, with their stories. In between Pond and Arctic Bay, that's what they're saying.* (P19, 07-Feb-19)

Pond Inlet hunters also expressed concerns that mining activities (e.g., noise) had displaced caribou from important calving grounds; in particular, Study participants

identified the hills and mountains around the Mary River and the long-term effects of this change.

> *So that area [Nulujaak and Kanajjuuk], the calves that are born there, they return to that same spot, the individual calves will return there because they were born there. But because of the mining activity, there's been far less calving in that area. They just don't return there anymore. They remember and return but now you don't have any that-because they're not born there, the site is just not used anymore by the caribou and the mine has something to do with that. Too much noise and they don't want to pass through there anymore in order to reach that calving ground.* (P15, 07-Feb-19)

> *All this area is a calving area but near this area [Nulujaak] there's no more calving anymore. It used to be a calving area, but once mining set up, the caribou left the area. And all the way down to Milne there's some more caribou, all this area [Phillips Creek] used to be calving area for caribou*. (P04, 05-Feb-19, interpreted from Inuktitut)

Dust and noise from the Tote Road associated with the Mary River Mine were linked to adverse effects to hunted wildlife. Several Pond Inlet hunters indicated seeing animals discoloured by dust, while others indicated that the presence of dust, traffic, and noise discouraged caribou foraging and use in nearby areas.

> *There's ore dust all along here. And this area here is all dust throughout the whole summer. Nothing but dust from B-trains [i.e., trucks]. I've rode [B-trains] for about a year. And every – every day, throughout the whole spring and summer, when the spring, like – when everything is thawed out and starts drying up, it's just constant dust all the way, all day, 24/7.* (P09, 05-Feb-19)

> *Like the road from the mine Milne to Mary River, that's like where there's usually caribou...Yeah. And the caribou are not there anymore...Maybe because of the trucks and the noise.* (P21, 08-Feb-19)

> *Following the road you can tell the vegetation is getting less and less by dust, there's more dust than ... sand, yeah. Yeah and you can tell with old pictures there's a big difference, there's less vegetation near the roads, and watching caribous, they say – the older ones stay away from the road, the young ones eat near the road...They know the dust, they know the taste because they're foraging ... and there's more activity now, more helicopters, more vehicles.* (P05, 04-Feb-19)

> *Yeah, up the other side of the road and you can see the dust all the way from Mary River right up through to Milne. [Interviewer: Do you think that affects caribou?] I do. Because back in the early 2000s we were able to do caribou hunting around here...And caribou hunting was always good around that area.* (P09, 05-Feb-19)

Geese, ptarmigan, and hares have also been affected by dust, according to Study participants. In some cases, this dust contamination, alongside noise and traffic (and human activity more generally), has resulted in avoidance by hunters and lost hunting opportunities.

> *I know there's hunters in the Mary area that avoid the coloured geese now. Geese are getting up with red dust.* (P05, 04-Feb-19)

> *She heard that when hunters go out into the Milne area they can't drink from the river and she said that the wildlife there, the artic hare and ptarmigan are becoming like coloured red from the dust, I guess.* (P06, 05-Feb-19, interpreted from Inuktitut)

> *We heard all the concern about that last year. We hired a couple of consultants to train people from here and I was their secretary. Yeah they [hunters from Pond Inlet] avoid all the coloured animals now for the dust. It's harder to hunt in that area because of all the activity. There's less snow where they used to go.* (P05, 04-Feb-19)

> *Nobody catches caribou along the Tote Road anymore.* (P16, 06-Feb-19, interpreted from Inuktitut)

The opportunity for Pond Inlet hunters to harvest caribou around Qinngua has also declined according to one interviewee, while noting a general reduction in the caribou population from the Mary River mine site to Qinngua.

> *[Interviewer: Does he think the mine affects the caribou?] Since 2008, around there, when the mine started. From the mine site to Milne there is very little. There is hardly any caribou now. In the past they would catch caribou right where the Milne area is.* (P04, 05-Feb-19, interpreted from Inuktitut)

Another consequence of reduced caribou numbers around the Mary River has been a necessary adaptation by some Pond Inlet hunters to travel farther to find caribou.

> *People would catch caribou from these areas, from these hills ... And today it seems like you have to go past Mary River to get any caribou ... And his grandchild, grandson, goes caribou hunting every summer and that's where they're catching caribou now.* (P16, interpreted from Inuktitut, 06-Feb-19)

The need to travel farther increases costs for Pond Inlet hunters in time as well as money (e.g., cost of gasoline). As one hunter explained, the cost of gas is already a barrier to their ability to hunt on a regular basis, as by giving his father gas for a longer journey (a January 2019 caribou hunt in the interior of Baffin Island) he had now found himself without enough gas to complete the seal hunting he had planned close to Pond Inlet.

> *I need gas though. That's the thing. I'm shortage on gas. I was just helping out with my father. He was out caribou hunting, past Mary River. He just got*

> *back yesterday. And a bunch of people. There was 28 tags available, so there was quite a few people who went.* (P09, 05-Feb-19)

One Study participant elaborated that the effects of the Mary River mine would drive away caribou, with consequences for the Inuit ability to hunt caribou, make clothing and access caches.

> *Like right now today, there's enough problems. They [Baffinland] took away our hunting grounds, they took away our animals in that area that we'd been hunting for years, caribou, to make proper clothing and to go back in the winter time to get our cache. In that area is going to be affected with contamination. And animals that grew up in that area will no longer be coming back because there's so much activity, so much noise.* (P15, 07-Feb-19)

The aforementioned effects from the first phase of the Mary River mine on Pond Inlet hunting values are also occurring in the context of an existing quota on caribou in northern Baffin Island (Nunavut, Department of Environment 2018). In addition to restricting the number of caribou that can be harvested, at least one community member perceived the requirement to only harvest males as inappropriate as there is a cultural preference for young or female caribou.

> *At the time [Autumn of 1952] they didn't catch as much as they would like because the RCMP restricted the number of caribou they could catch.* (P30, 08-Feb-19, interpreted from Inuktitut)

> *Because us elders can tell from the outside of the caribou how fat it is, yeah. Every time they put a quota on caribou and [polar] bears they want you to get males only. Yuck, we don't eat males, either young ones or females.* (P07, 05-Feb-19)

Interviews with Pond Inlet community members has revealed a distinct pattern of effects on community hunting values including a general decline in caribou and wolves, resulting in lost opportunities and abilities to successfully hunt these animals in the Study Area.

4.3.4 Project Interactions

Ongoing effects from the development and operation of the Mary River Project's first phase, as described in Section 4.3.3 above, are likely to continue or be exacerbated by the proposed Phase 2 expansion.

For instance, caribou populations in the Study Area may worsen as Study participants noted that caribou would be dispersed by the amount of human activity and noise from the mine.

> *In that area [vicinity of the Mine Site] is going to be affected with contamination. And animals that grew up in that area will no longer be*

> *coming back because there's so much activity, so much noise.* (P15, 07-Feb-19)
>
> *She doesn't hunt up there but it is immediately obvious that there will be a lot of noise pollution that will scare off the caribou.* (P06, 05-Feb-19, interpreted from Inuktitut)
>
> *I believe if the mine continue going on the future around here, the caribou will start migrating this area future in southern area.* (P11, 06-Feb-19)

One Study participant further explained that sounds from the mine can carry long distances, and that mining could cause caribou to migrate away from the area. The participant also indicated that the noise disturbance from the mine activities might also cause caribou to avoid certain areas, thus altering their use of preferred routes and potentially impacting their movements, or as the participant explained, "blocking" their passage.

> *I'm predicting that I want to go down to that lake again but due to that bombing [blasting]. We were doing a … walking towards Steensby every day for a week. And you can hear that bomb 30 miles ... Yeah, the caribou you can hear it no problem, many more miles away. I'm predicting the caribou want to go down this way {towards Ikpikitturajuaq] but they're blocking it. (P07,* 05-Feb-19)

In addition to activities and disturbances associated with the Mary River mine site itself, a primary concern among Pond Inlet community members are the potential effects on caribou from the development and operation of the proposed railway and continued (and temporary increase in) activity on the Tote Road. For instance, as in the preceding quote, another Study participant voiced concern about disturbances to caribou movement, but as a result of Project-related increases in traffic.

> *So the only concern that I would have is with the increased traffic if the project land two [Phase 2] is approved, that it might somehow interfere with the animal migration routes.* (P13, 06-Feb-19)
>
> *And like I always go back to that pipeline in [Taktiaktuk 00:03:37] and watching those caribou migrating. And then crossing the roads and the pipeline. How are they adapting? How is the caribou adapting there? Are they getting enough vegetation that they need? ... And if the railroad was to be built, most of the vegetation was going to be gone, the area is going to be totally different from what they knew, especially for the caribou. I don't know. It's kind of a sad story, but that's the reality.* (P15, 29-Apr-19)
>
> *The difference between what the southerners will say because of climate change, the patterns where animals go is changing, whereas people who lived up here all their lives know that it's the developments and the noise that is changing their route. Not the climate change, he said.* (P08, 29-Apr-19, interpreted from Inuktitut)

A number of Pond Inlet community members also expressed concern that the proposed railway route, linking the mine site and the Qinngua port facility, would be in close proximity to caribou calving grounds.

> *This area's [Qanniqtalik Lake] a caribou calving area. I don't want them using that area. I know that the intended railway sites, they have drilled into the holes like down south to create railway ties. (*P24, 07-Feb-19, interpreted from Inuktitut)

> *That was a calving area and the railway was going to be too close to that calving site.* (P04, 07-Feb-19, interpreted from Inuktitut)

Study participants also identified caribou hunting grounds, which are often associated with caribou habitat features, as being at risk from the development of the railway. One participant specifically identified the location of the planned railway diversion from the Tote Road as a hunting area, while another noted that the planned railway route would traverse hunting and fishing locations occupied by campsites.

> *This is the area where they, when they're hunting, it won't be as bad of a concern if that doesn't happen, even though people in Pond Inlet are somewhat concerned about it, but they will be more concerned about this new curve. This is the route of the river, and that's where the caribous are. They always go in that area for hunting caribou.* (P25, 08-Feb-19, interpreted from Inuktitut)

> *Intended railway route may run through areas where we'd lived there, for example for hunting, for fishing, or just because they thought it was some nice place to stay there for the winter. For example, where people would go inland to hunt caribou, where there's – where their campsites would be at Mary River.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *And the [railway] will be interfering with the migration route. For sure. We will keep seeing decline of the caribou. And as of right now, and for the past couple of years that Baffinland has been using Mary as – the migration route already affected caribou.* (P19, 27-Apr-19)

> *Particularly this area he knows, yeah he says definitely so because once the railway is in operation, they've been told that the train would pass through there a certain number of times a day. So … Yeah, he's been told that the embankment would be as high as three meters or more. He feels that the caribou should be able to cross because they're climbers. They, they climb up in the mountains and things ... But he, but he expects that there will be caribou accidents. Caribou being killed by the train and he seems – he foresees that happening.* (P24, 26-Apr-19, interpreted from Inuktitut)

> *Animals are always my concern [with the railway] … Like I know there are certain areas that they might travel through here to up. But they might travel through here and up. But how are they going to cross? Because this is the area that they normally vegetate ... For a number of years now when they*

> *built that tote road there, there's no activities, like caribou going across ... Because there's so much dust in that area and so much noise. Too much – too much human activity.* (P15, 29-Apr-19)

Pond Inlet community members expect that disturbance of caribou and hunting areas from the railway would result in adverse impacts to household and community subsistence and the ability of hunters to catch game.

> *He says the railway will be detrimental to our food source. Resource may not change immediately, but he says it's obvious that the wildlife will change their habits in Mary River.* (P08, 05-Feb-19, interpreted from Inuktitut)

> *Yeah, the opinion of the elders here is that once the railway is up and running, it will become even more harder for game and for the people hunting those game.* (P08, 05-Feb-19, interpreted from Inuktitut)

> *What if the railroad derailed? Or do they have enough money to compensate the hunters to fix the problem with the railroads? Do they have enough equipment to fix it? What if the mine closed tomorrow? Are they going to leave all that railroad there? And what still worries me is the blasting that they do here. I know in some areas they're going to be blasting. And that's going to cause the animals to move away.* (P15, 29-Apr-19)

> *We like country food. Like we were born to be a human and to eat meat. But this mining, it's affecting a lot of animals.* (P35, 30-Apr-19)

> *I've heard a lot of times the hunters say, like, caribou are starting to come back. We're not needing to travel as far, but we're also not at a point where we're guaranteed a caribou when we go caribou-hunting. So some hunters are thinking – elders and hunters are thinking maybe in a few years, like, they'll be around and …But with the mine and the way they're operating and the entire area from Milne Inlet to Steensby, that entire area is a concentration area for caribou. With the activity that's going on with the mine, I don't know. Like, right now, there's not that many caribou in the area, with the caribou coming back. And if they do come back to the area, I guess they can kind of figure their way around what's going on. But I think the fear that some people have is that maybe it will keep them away, and that's going to be a very scary thought – it's a scary thought, because we've already come into our time of people buying, selling caribou, people risking their lives for caribou. Like, country food is a major part of our lifestyle, not just our diet, but our lifestyle. And when you eliminate – when one factor is eliminated from the whole picture, that affects everything else.* (P27, 27-Apr-19)

For one Study participant, relocating elsewhere to hunt for caribou is not an alternative. When asked whether they would still spend time in the region if the mine gets bigger, the interviewee replied:

> *Yes, they have no choice ... Because there is more abundance of caribou there. They will always have to go there. They have no choice ... That's where the hunt the caribou.* (P04, 05-Feb-19, interpreted from Inuktitut)

In addition to the expected disturbance to caribou habitat and hunting regions, Study participants discussed potential impacts to other harvesting sites, such as for snow geese.

> *I'm sure we'll be affected as well, with the snow geese. Because this area [south of Mary River] is a migration route for – with the snow geese...When they go to Bylot Island they land to this area first, and then go to Bylot Island to lay eggs and spend summer over there. And when they try to go back to – in the fall, and they also go in through this area. Because with that iron – all that dust will be covered with their red all over in this area after – after several years later.* (P11, 26-Apr-19)

In summary, Project interactions and impact pathways, including impacts to safety, increasing harvesting effort/decreased harvesting success, and a loss or disturbance of use of hunting areas and camps/cabins with potential impacts to household and community-level subsistence, that emerged from the Study related to VC of Terrestrial Hunting are as follows:

- Increased dust from the Tote Road;
- Alterations to, and loss of, habitat from all aspects of the mine operation;
- Barriers to movement from mine-related activities;
- Risk of wildlife mortality due to truck and train collisions;
- Impacts to caribou health, including impacts related to sensory disturbance and contamination;
- Loss of use or avoidance of preferred areas for hunting and trapping due to safety concerns and restriction of access; and
- Impacts on the abundance of wildlife, particularly caribou, due to factors including acoustic disturbance.

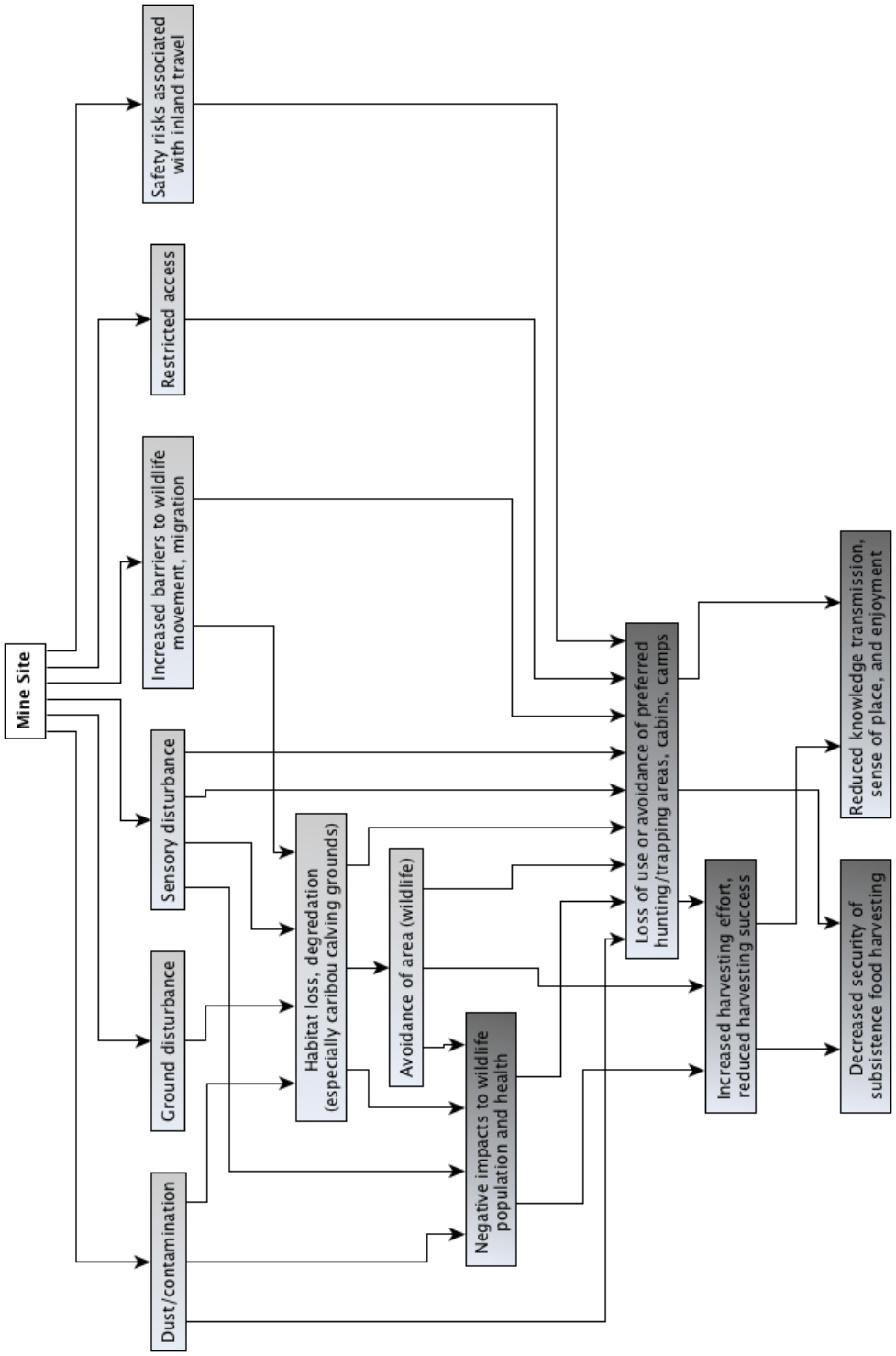

Figure 13: Potential Project interactions in relation to the Mine site with Pond Inlet Terrestrial Hunting and Trapping values.

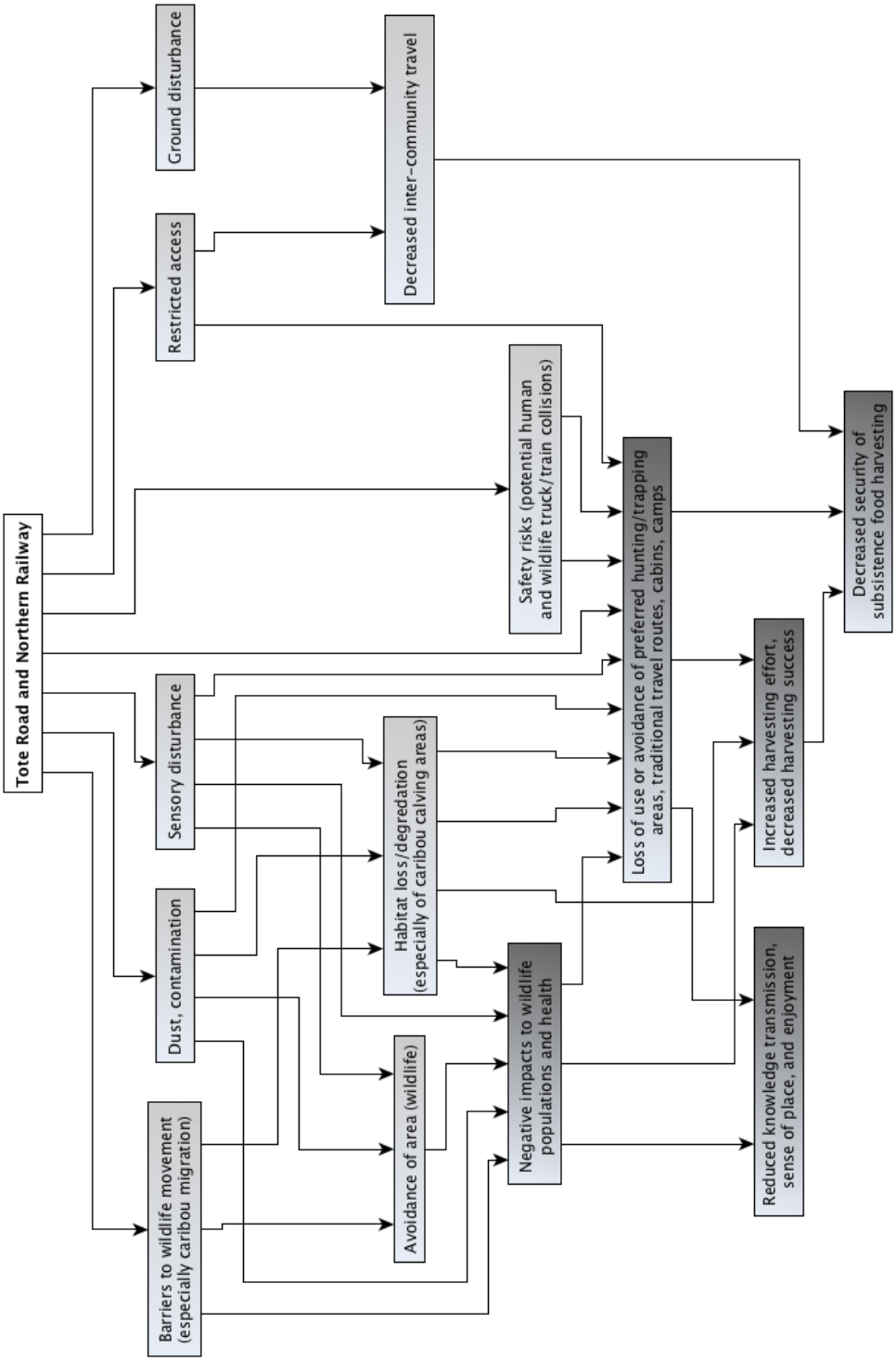

Figure 14: Potential Project interactions in relation to the North Railway with Pond Inlet Terrestrial Hunting and Trapping values.

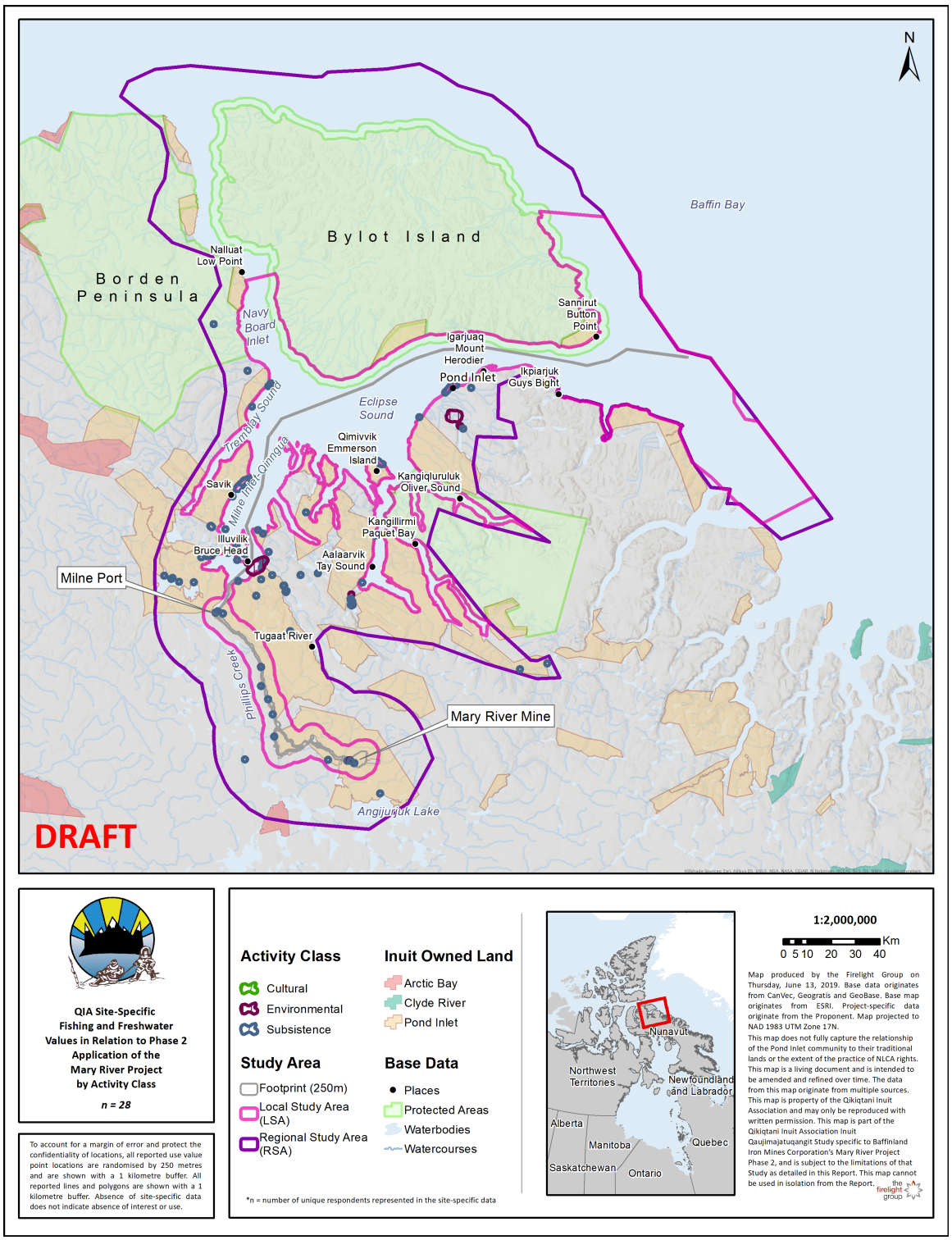

Figure 15: Pond Inlet reported site-specific Fishing and Fresh Water values in the Project Footprint, LSA, and RSA.

4.4 FISHING AND FRESH WATER

This section (Section 4.4) discusses the importance of, impacted baseline, and Project-related impacts to, the Fishing and Fresh Water VC within the Study Area. It draws primarily from data collected during semi-structured interviews.

4.4.1 Site-Specific Values

Table 4: Site-specific values for Fishing and Fresh Water Valued Components reported within the Project Study Area, by Activity Class.

Activity Class	Footprint, including 250 metre buffer		LSA, including Footprint		RSA, including LSA and Footprint	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Cultural	0	0%	0	0%	1	0.9%
Environmental	2	8.3%	5	8.8%	8	7.5%
Subsistence	14	58.3%	42	73.7%	85	79.4%
Impacted	8	33.3%	10	17.5%	13	12.1%
Total	24	100%	57	100%	107	100%

Description of Documented Fishing and Fresh Water Values

The following Fishing and Fresh Water values were mapped in the Project Study Area, and are organized by Activity Class. Mapped data specific to the Fishing and Fresh Water VC include:

- **Cultural** values including: a fish cache;
- **Environmental** values including: several habitat locations for char in both lake and river sites;
- **Subsistence** values including: numerous locations for fishing char, both in saltwater and freshwater locations; locations for fishing other fish species, such as salmon and sculpin; and a number of locations relied on for collecting drinking water, such as streams, lakes, and springs; and

- **Impacted** values including: areas that are too noisy to fish in; areas that have a decreased abundance of char available to fish; and specific locations that are no longer fished in because of the mine's presence.

4.4.2 Importance

Fishing

In addition to the marine fishing activities described in detail in Section 4.2, freshwater fishing is an essential component of Pond Inlet community members' way of life. Through the interviews, participants identified the importance of fishing in the Study Area, particularly for char in the areas of Lake Qurluqtuuq and Tuugat Lake (which are accessed from Qinngua), and in the small lakes and rivers of the Phillips Creek and Mary River watersheds. While char are anadromous and are occasionally caught in saltwater, a large portion of the fishing conducted by Pond Inlet community members also takes place in bodies of fresh water throughout the north Baffin region.

Interview data reveal community members' practice of catching char year-round in the Study area. A number of community members described their reliance on rivers, such as the Mary River, for fishing char when they return to the area to spawn.

> *They found it was absolutely wonderful because even though they would get wet from the [Mary] River they would only get clean and no salt. The most beautiful area ... In that point, there is great abundance of char. Every time you cast you will always catch one. You don't have to cast more than once to catch a fish. That's how many there were.* (P04, 05-Feb-19, interpreted from Inuktitut)

> *Every time they go through there [Mary River], they would catch fish as well. When they wish to eat fish, they would fish there.* (P04, 05-Feb-19, interpreted from Inuktitut)

> *'Cause basically during the summer, they were in Eclipse Sound and all the Sounds and everywhere else there's char.* (P02, 04-Feb-19, interpreted from Inuktitut)

Interview participants reported fishing at numerous locations within the Study Area. In addition to Mary River being valued for fishing char, Study participants also discussed areas such as Tugaat Lake, Qinngua, Tremblay Inlet and the surrounding areas as being abundant and valued fishing locations.

> *Like, the ice melts and breaks up faster than surrounding lakes in that area [Mary River area]. And apparently it's like so much fish, as soon as you drop your hook in, you're catching one.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *At Tugaat Lake was I was saying the fish tastes like sweet taste and the skin is thin. At Tugaat lake, I was saying this to, its even better, you can eat it but you don't have heart burn, if you eat too much you get heart burn. But*

> *Tugaat Lake you can eat it day after day, day after day and you don't get heartburn.* (P07, 05-Feb-19)

> *We wanted to have a, get a lot of seal, but according to the weather, and sometimes we go to fishing in Tremblay Inlet there, like in the evening after when we seal hunt, can come back all the time here.* (P11, 06-Feb-19)

> *And hunters used to come to our – Bruce Head, hunting for narwhal. And one of the hunters to take me to over here and over here [locations at the head of Qinngua] for fishing with their nets. And I was using a rod. The one [Arctic char] I caught was a little bit above my waist.* (P19, 07-Feb-19)

As noted in the quotes above, many community members prefer to return to the same fishing locations. As a result, many fishing sites are intimately connected to camps and dwelling locations, where large groups of community members would gather to fish.

> *And a whole bunch of people would be camped out at Qurluqtuq Bay, all fishing*. (P02, 04-Feb-19, interpreted from Inuktitut)

> *Before Mary River. Fishing place in the summertime right there through the river up to here [Phillips Creek]. That's the falls. Right there is where they – that's where they would camp out when the fish are going up stream. That is a very famous fishing spot.* (P04, 05-Feb-19, interpreted from Inuktitut)

> *But when they lived–when they were camped at Tugaat they would have like gill nets out in the ocean, they would catch lots of fish there.* (P02, 04-Feb-19, interpreted from Inuktitut)

Throughout the interviews, a number of interview participants described the importance of fishing techniques that are relied on for successful harvests of fish. A range of fishing technologies and techniques have been employed by Pond Inlet fishers over time to catch and preserve fish, including fish caches, weirs, spears, sticks, jigging, and gill nets, many of which continue to be used today.

> *They would do that in the fall when they won't get spoiled. So, there is a number of caches there [at head of Qinngua] – like you can see the round stone formations and they would use that in the fall so that they could use the fish in the winter time. And when you do it in the fall they do not start to rot.* (P04, 05-Feb-19, interpreted from Inuktitut)

> *This area [by Avaliqqurjuaq] they have stone weirs built in, and there's a whole bunch of weirs that extend for a long ways, and the traditional Inuit would hike up into the hills and fish off the weirs ... So when the fish were migrating back up to the lake, the people would use those weirs to catch the fish.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *Apparently there's like a reef area right near there [Tinujjivik], and the fish can get stranded there, so they would beat them with sticks or whatever.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *Well, when the sea ice froze up, we would go jigging, because we didn't have gill nets.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *They had gill nets back then, so they would fish for char.* (P18, 06-Feb-19, interpreted from Inuktitut)

In addition to the fishing tools described above, community members spoke about some of the traditional fishing instruments they used and made from animal parts. This includes the construction of traditional fishing implements made from walrus and narwhal tusks.

> *And so in the past when Inuit didn't have all these things like wood and plastic and whatever, they would only have like walrus and narwhal tusks to be able to hunt the char with during all these low season tides*. (P04, 04-Feb-19, interpreted from Inuktitut)

Fresh Water

Freshwater collection sites were described by participants as being important as many community members continue to rely on freshwater sources for drinking water, cooking, and making tea when out on the land. Numerous participants observed fresh water found in springs, creeks, and rivers to be a healthy and clean source of water that they collect throughout the year. In particular, participants described freshwater springs located in the Project footprint and LSA.

> *Inuit usually use creeks, running water sources for their potable water. During the summer they will only use like creek or river water for drinking water, and cooking.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *When you drink tea, you don't get full because it is just water right. But if you use that spring water [on the Mary River] it makes you feel like you had a healthy hearty meal.* (P04, 07-Feb-19, interpreted from Inuktitut)

Interview participants explained how rivers that flow year-round are particularly important for collecting clean and fresh water. Specifically, water-gathering locations along the Mary River, Tote Road, and along the proposed Railway were described as a preferred source of drinking water for community members.

> *There's two rivers that are always flowing year-round. And there's one that comes from underneath the ground. Yeah. It's like real fresh water. It's clean, real clean, even though it's along the Tote Road.* (P09, 05-Feb-19)

> *There is always an open area of water there [close to Ikiqtuuq Lake] where you can check for fish and people have their tea there ... Winter time when you are travelling that route it is very cold outside you hear creek water running, river water running.* (P04, 07-Feb-19, interpreted from Inuktitut)

The quotes listed above highlight the importance and value of freshwater collection locations to community members. Because of water's connectedness to everyday life, having knowledge of where clean and accessible running water sources are is critical. Some community members described how they often camp next to valued water sources specifically so they had easy access to clean drinking water.

> *I usually camp out near the fresh water, like where it's always flowing because rather than having to pluck out my…like this, I just got to go to the river and just fill up my teapot.* (P09, 05-Feb-19)

Rivers, springs, and creeks are a few of the freshwater sources community members rely on for survival. Throughout the interviews, participants also discussed the importance of snow, glaciers, and icebergs as freshwater sources, particularly for potable water. A number of participants described these frozen and mobile aquatic features as preferred sources of high quality, desirable water.

> *...there's an underwater water source, around here [area south of Mt. Herodier]. It's underground and it comes from the mountain ... Yeah very good water. I think it's all the melt...I used to get ice there.* (P05, 04-Feb-19)

> *The water that comes down is like really crystal clear, it's just like clear, clear, clear. Like very fresh, coming off the glacier, you know it. It's just like one of the best waters I've had.* (P09, 05-Feb-19)

> *But if we zoom out the whole area, the whole marine area it's used for hunting and now everything. And also for fresh water gathering the icebergs, yeah the current is changing now but if you zoom out this whole area you'll get icebergs and that's the number [one] water source for people from here.* (P05, 04-Feb-19)

> *Our ancestors lived on them [icebergs] and so it's their livelihood, their life. Anyone will tell you the taste [of iceberg meltwater] is the best and purest and don't want it contaminated.* (P05, 04-Feb-19)

> *We have lots of icebergs up here [Eclipse Sound] … like their water from icebergs, and creek, and creek water is like next, is like second best to us for water. So they're not going to collect water from lakes or ponds, they're going to get their water from moving sources. If they can't get iceberg water they're going to get running water*. (P02, 04-Feb-19, interpreted from Inuktitut)

Icebergs and glaciers were continuously referred to as a preferential source of drinking water throughout the interviews. One participant explained how they often seek out pieces of broken-off icebergs along shorelines, observing how this is a desirable source of fresh water for drinking and making tea.

> *Is that Inuit culture that they get water from creeks more? Yep. But if there's ice water, like iceberg water along the shoreline, then we'll take that first. And when icebergs split up, and the iceberg pieces wash up onshore, it's*

> *always like, to them it's the best source of – best quality of water for them, that they prefer. And if there's any icebergs here people will collect them and use them for tea and stuff ... We have so much glaciers and icebergs up here that we're fussy about where we get our water from.* (P02, 04-Feb-19, interpreted from Inuktitut)

> *I do collect it [drinking water] out on the land. I mostly go for ice...If I'm inland I would just get snow...Yes. Collect ice – piece of ice. And we drink tea, coffee out of it.* (P01, 26-Apr-19)

> *Melting ice and the snow. The ice seems to make more water. So, they would try to stop where the water is, or where the ice is...Yeah. Sea ice, we'd go travel and try to stop on the iceberg for fresh water, yeah.* (P07, 26-Apr-19)

For the Fishing and Fresh Water VC, many Study participants detailed the importance of harvesting and collecting these important resources, and the conditions that are needed in order to continue to use them in the Study area.

4.4.3 Impacted Baseline

Over the course of the interviews, a number of participants identified existing impacts from mining operations to Fishing and Fresh Water values within the Study Area. In particular, interview participants have observed declines in preferred fish species, such as char, and a decreased quality of fresh water in the Study Area. Specially, participants have observed a decrease in available char near the existing mine site and Tugaat River, as well as a decline in fish counts and quality of fresh water along the Tote Road and Mary River.

Existing mine operations were reported by interview participants as being loud and disruptive, thus affecting community members' ability to peacefully carry out fishing activities. One interview participant in particular described hearing explosions from the mine site while they were out tending to their fishnets.

> *[Personal name] could hear an explosion while tending to fish nets here and can hear the explosion almost like ice rumbling and then off in the distance.* (P15, 07-Feb-19, interpreted from Inuktitut)

In addition to the disruption of peaceful fishing practices, the quantities of available fish species have been observed to be in decline in the past decade. One participant highlighted how in the past, char used to be in greater abundance. The declines in char remain noticeable today.

> *Right now there's not too many fish in this lake [Uttuuk Lake] anymore, so you'd be lucky if you get two or three overnight. There used to be just an amazing number of fish... and they would just use the gill nets along the beach [in front of Pond Inlet] and just scoop the fish.* (P13, 06-Feb-19)

> *Yes, she has noticed it she said, a big decline in char.* (P06, 05-Feb-19, interpreted from Inuktitut)

Reports of the decline in available char were concurrent among several interview participants. Valued fishing locations, such as the Mary River and Tugaat River, were specifically observed to have fewer fish than in the past.

> *He knows the way to Mary River very well, he's travelled it quite a few times. And they used to have a lot of fish, and they say - people are saying that the fish, that char, aren't there anymore*. (P08, 05-Feb-19, interpreted from Inuktitut)

> *Growing up, we used to go there [Tugaat River] every summer for, we used do that every summer for caribou hunting, there used to be plenty and lots of fish, now there's nothing.* (P17, 07-Feb-19)

In addition to declining numbers of fish, participants also expressed concerns about water contamination in the Study Area. One interview participant explained that since they have been advised to not drink fresh water within the vicinity of the Mary River mine site, they will only collect water from a filtered tap located at the mine when travelling on the land.

> *Like this day, if we're travelling home, we collect our water from the [tap at the] mine and bring it with us by a thermos. And if we're travelling from the [Pond Inlet] towards Mary River, same thing, we do the same thing because we cannot collect any water in that [Tote Road] area as well. So we always fill up our thermoses in those both sites before we travel back and forth.* (P15, 07-Feb-19)

> *We are told not to collect any type of water in these lakes [along the Tote Road]. Any lakes near Mary River because they [Baffinland staff] say it's contaminated. So we've been collecting our water from the mine [tap].* (P15, 07-Feb-19)

One reason stated for not drinking fresh water near the mine site is the rising observance of sediment in the water. Community members explained that hunters have been advised against drinking water directly from Mary River, all the way down to Qinngua.

> *There are – hunters were even asked not to drink it down near Mary [River] ... Baffinland told them not to drink it ... [Personal name] and his family. Yeah lots of sediment down from Mary [River] to Milne [Inlet].* (P05, 04-Feb-19)

> *He is definitely worried because this lake – these two lakes flow this way, not towards the ocean. They flow the other direction, but this, these lakes flow towards the Milne Inlet area and they have been told by Baffinland people that not to drink unpurified water from this area. It has to be purified, so they have been warned not to drink it ... And he thinks it's the minerals in the water ... Yeah, before it was the main water source when they're in that area*

> *and they were greatly concerned when they were told about the fact that they shouldn't be drinking it. Where he is pointing towards the inlet ... In the summer time, they, a lot of people would hunt. In the summer time, that's the area where they would be getting their water source because there were a lot of caribou hunting in that area ... Yeah, all the way from there Phillips Creek through down to Milne.* (P24, 26-Apr-19, interpreted from Inuktitut)

One community member noted the impact of increased iron ore on the collection of fresh drinking water, particularly when accumulated on icebergs.

> *All that iron ore sitting at the coast around here – is that – yeah … All that – all this area here all iron ore, reddish dust everywhere … Even the iceberg that I collected – because I need water when I go the hunter's cabin, that area was red … So, when the wind blows this way, all that red stuff, or the iron ore is accumulating in this area ... From [Kugluktu 00:10:55] Bay area, and this way. Like when we had the meetings the previous year or years, we had – well, I had encouraged Baffinland to come up with a building to shelter the iron ore dust that's being collected before in spreads everywhere. But it's too late now, so it's pretty much all over the place.* (P15, 29-Apr-19)

> *If I've seen that red, no, I don't think I would...Like in wintertime, in wintertime we use snow. Just collect up the snow into the bowl or kettle, melt it. And only in winter, yeah. I wouldn't want to sip tea from that coloured white snow covered with the dust from the ore.* (P23, 28-Apr-19)

The decline in water quality near the existing mine site has raised concerns about the quality of water within Pond Inlet. One interview participant described how even through a home filtration system, the clarity of the water has declined and rendered its potability questionable.

> *Like locally here in the community, when you pour your water into a Brita Filter watering system and when you make tea, it's nicely clear. It doesn't get dark enough but when you use the regular faucet water to make hot water and then when you make tea, it turns dark right away. It's the same thing. Even filtered water that they have, it turns dark right away. I don't know, something is wrong there.* (P15, 07-Feb-19*)*

Although participants report a decline in the availability of fish and clean freshwater sources in the Study Area, the area remains important for Pond Inlet community members' to harvest fish. The loss of freshwater resources is noted, and several Study participants made clear the impact that this loss has on hunting and travelling on the land.

4.4.4 Project Interactions

Interview participants discussed their concerns about the potential for the proposed Project to further affect Fishing and Fresh Water values within the Study Area. Concerns about further declines in fish populations, as well as reduced water quality, were identified as potential Project impacts.

The continuation of dust from the Project was a particular concern for Study participants, especially when considering how dust may negatively affect fish, as well as fresh water resources, in nearby waterbodies. The potential for more dust to be introduced to fish-bearing locations may cause fish to move out of the area, as explained in the quote below:

> *And I don't know if that [dust from the Project] is safe or not. That's my question. If it's not safe then we're going to lose fish. I'm afraid we're going to lose fish in that area, they're going to move somewhere else. They're not going to die, they're just going to move out. Because we used to have a nice fish, big Arctic char, red meat, here not too long ago and a guy from Greenland, hey guys, we got your fish. So my dad told me before animals travel regardless what they are birds, lemmings, fox whatever you name it, they move.* (P07, 05-Feb-19, interpreted from Inuktitut)

The potential for dust from increased activities at the mine site was also identified as a concern with respect to water quality. One community member explained that the increase in, and continuance of, Project activities in and around the Tote Road area may negatively affect their ability to collect and drink fresh water.

> *It's much warmer over there [Mary River area, Baffin Island interior], so things dry up quick. And if there's an area where that needs to be worked on, they always put on fresh new material, crushed material, fine material, depending on what they need. I'm very skeptical about – like I don't want to drink water from around that Tote Road area.* (P09, 05-Feb-19)

In summary, interview data reveal the potential for the Project to negatively affect Fishing and Fresh Water values for Pond Inlet community members, in addition to the existing impacts previously described in Section 4.4.3.

Project interactions and impact pathways, impacting fish harvesting and the ability to collect and drink fresh water, that emerged from the Study related to VC of Fishing and Fresh Water are as follows:

- Decreasing water, and impacts to quality and quantity from the Tote Road and mine site;
- Impacts to the health and condition of fish (Arctic char) due to changing water quality and impacts from the Milne Port and Northern Shipping Route;
- Habitat loss and alteration in both marine and freshwater environments for Arctic char due to Milne Port and North Railway and Tote Road related activities, leading to a decline in fish populations; and

- Species avoidance of areas due to impacts to fish habitat and diminished water quality.

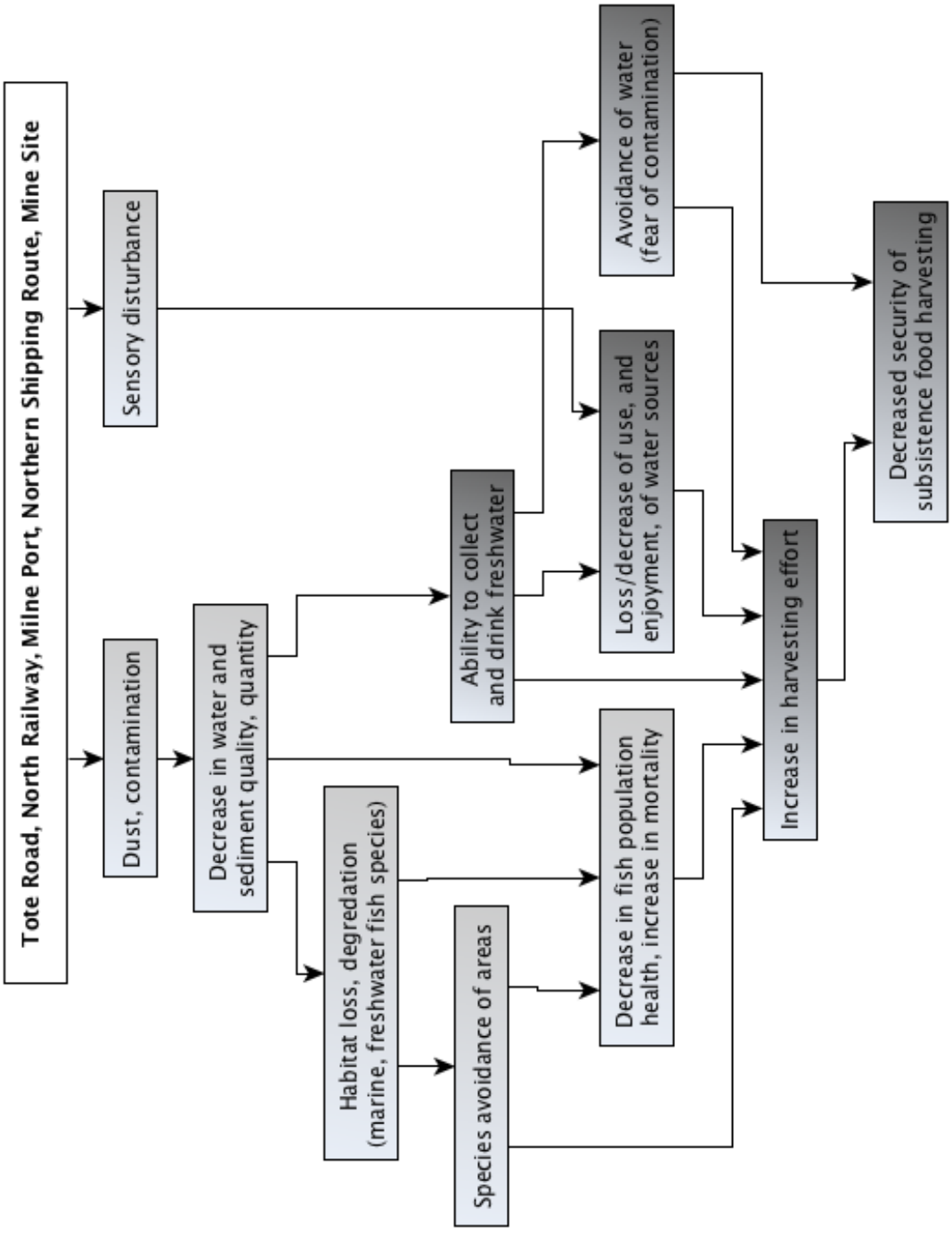

Figure 16: Potential Project interactions in relation to the Mine site, Tote Road, and Northern Railway with Pond Inlet Fishing and Fresh Water values.

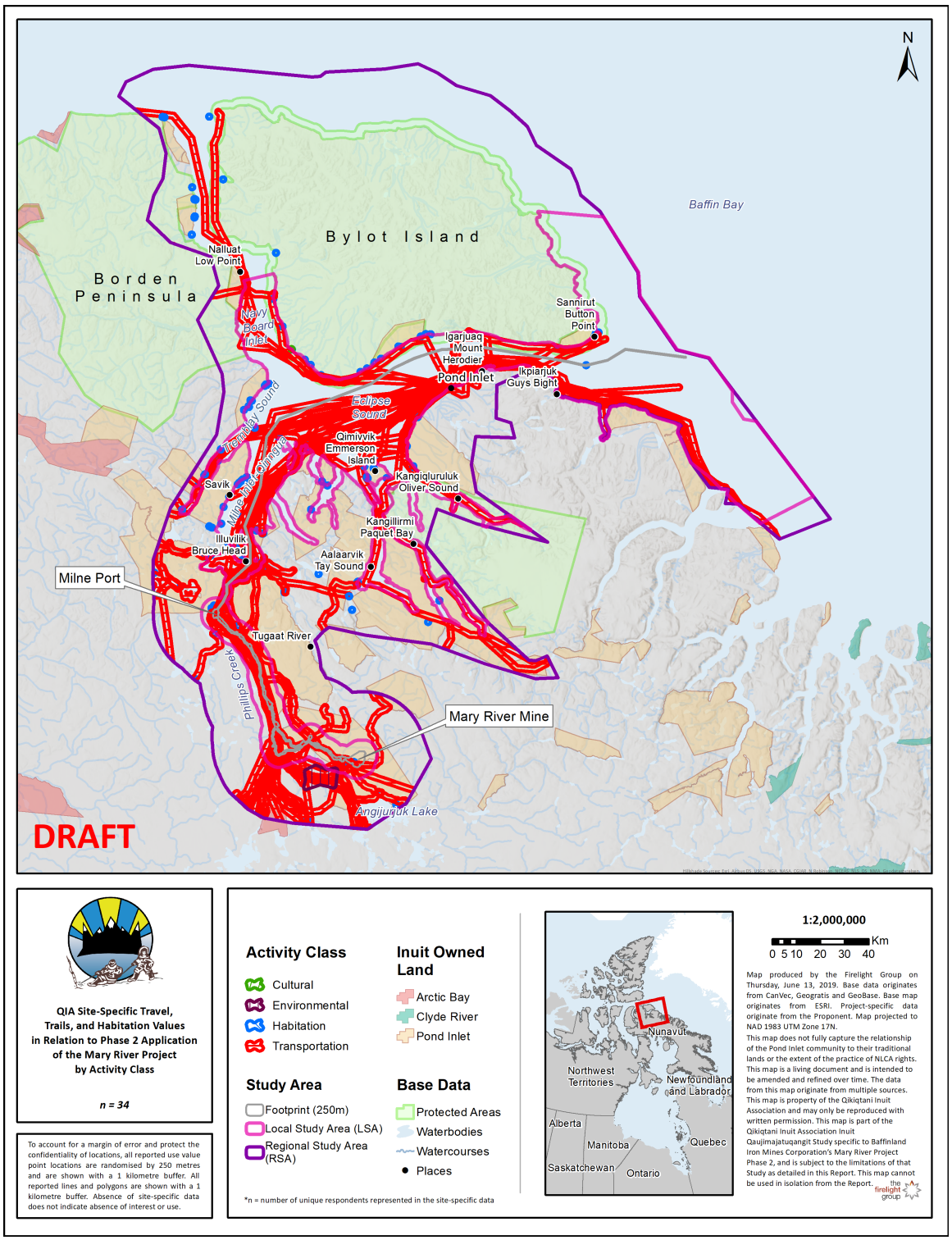

Figure 17: Pond Inlet reported site-specific Travel, Trails, and Habitation values in the Project Footprint, LSA, and RSA.

4.5 TRAVEL, TRAILS, AND HABITATION

Section 4.5 provides further details on Inuit reported site-specific Travel, Trails, and Habitation values by Activity Class and location. This section also includes a discussion on the importance of Travel and Trails values, and where possible, the current impacted baseline conditions and change trends. The qualitative data provide additional crucial context for the interpretation of the site-specific data.

4.5.1 Site-Specific Values

Table 5: Site-specific values for Travel, Trails, and Habitation Valued Components reported within the Project Study Area, by Activity Class

Activity Class	Footprint, including 250 meter buffer		LSA, including Footprint		RSA, including LSA and Footprint	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Cultural	0	0%	1	0.4%	1	0.4%
Environmental	3	3.9%	4	1.7%	4	1.4%
Habitation	25	32.9%	156	66.7%	189	68.5%
Transportation	44	57.9%	68	29.1%	77	27.9%
Impacted	4	5.3%	5	2.1%	5	1.8%
Total	76	100%	234	100%	276	100%

Description of Documented Travel and Trails Values

The following Travel, Trails, and Habitation values were documented in the Project Study Area, organized by Activity Class:

- **Cultural** values including**:** traditional gathering sites;
- **Environmental** values including: an area where travel is difficult due to natural land features;
- **Habitation** values including: cabins and campsites that are used as a base while travelling to undertake various subsistence activities, visit other communities, or be out on the land;

- **Transportation** values including: a boat launching site; trails that are used to access areas used for subsistence activities, other communities, or to be out on the land; and water routes used to access areas used for subsistence activities, cabins and campsites; and
- **Impacted** values including: trails that cannot be accessed due to the railway line; and trails that community members are reluctant to use because of the dust form vehicular traffic travelling along the road.

Geographical Distribution of Travel, Trails, and Habitation

The majority of recorded site-specific Travel and Trails can be found on the sea ice in Eclipse Sound, in particular towards the floe edge at Guys Bight, down Navy Board Inlet to the floe edge at Lancaster Sound and from Eclipse Sound to Qinngua. The Phillips Creek watershed is also the site of a significant number of site-specific Travel and Trails values where Inuit have travelled on trails to Igloolik and into the interior regions of Baffin Island.

4.5.2 Importance

Travel and movement across the land, ice and seascapes are central to Pond Inlet community members' way of life. Terrestrial and aquatic travel networks are essential for accessing important hunting areas, camp locations, and other valuable places across the territory of Pond Inlet community members. During their interviews, residents of Pond Inlet described travelling on a year-round basis, modifying and adapting their travel patterns, routes and methods according to the changing seasons.

For the community members of Pond Inlet, they rely on a vast network of trails to access their broader territory, of which the Study Area is a portion. Trails are relied on for accessing important hunting sites for both marine and terrestrial animals. In some cases, participants describe traveling across large areas of land, ice and sea, which hunters have intimate knowledge of after many years of travel.

> *I know all this area, along that area too and this too, towards Nanisivik, inland, I used to hunt caribou there and also along the coast towards [inaudible 00:06:18]. I've been there, and especially here along the coast and back here. I am a hunter, I search this area, some of this area. You've even got to Mary River, I've been past it to the ocean, other side, this trail, all along this area I've been to and from here to Ikpikitturajuaq, and I've been to Iqaluit, up in all this area, up the coast there too, and Pond Inlet I've traveled down to here and we have a route through here too and through here. I've traveled all that, and this area too, and through this route, what we call [inaudible 00:07:41], and to the ice cap here. These areas I've hunted in before.* (P24, 07-Feb-19*,* interpreted from Inuktitut)

> *He himself has gone through there three times, and he'll take his dog team to hunt caribou in the area. And then when they had skidoos, they would go up to Mary River more frequently as they could now go faster.* (P08, 05-Feb-19*,* interpreted from Inuktitut)

> *…on our way back to town and there's that seal hunt, them seal hunts, lots of them. Twenty-four hours of light and we were worried about where we can sleep at the time.* (P11, 08-Feb-19)

> *Every year, in April my half-brother from Arctic Bay and his wife's older brother, they usually come up to here and then from here we usually travel to Milne. And then from Milne we usually go to the mainland to go caribou hunt, past Hall Beach towards to Naujaat. Sometimes near Kugaaruk. Yeah. Because there's no quota there. But for us, we're given seven caribou per person. So, it's more than what we can catch along Baffin, so that's what we do every year.* (P09, 05-Feb-19)

Inuit have been hunting and travelling throughout the Eclipse Sound area for generations. In particular, community members continue to travel from Pond Inlet and Bylot Island area in towards Qinngua and Mary River, often for the purposes of hunting caribou as well as hunting marine mammals and accessing cabin and camping areas.

> *In springtime they would travel to Bylot Island ... And they [Interview participant] would travel to the Milne Area. Travel by dog team. They would travel down island.* (P06, 05-Feb-19, interpreted from Inuktitut)

> *And she and her husband would camp there at Agliruujaak and then she and her husband hiked up all the way to Mary River ... Her son was just 2 years old, and they took him along ... They would follow the sun inland to hunt caribou for clothing.* (P18, 06-Feb-19, interpreted from Inuktitut)

> *They would pass Mary River to Ikiqtuuq area where they stayed there for a period of time*. (P30, 08-Feb-19, interpreted from Inuktitut)

> *We walked up there during summer ... And we would live right near Mary River on the high mountains ... We were in the high hills, and we had a tent there.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *We always go through here, go through there, all the way up to Mary River, but this area (lower tundra around Tugaat River] … This area's not as mountainous as this part, so we used to go down a little and walk to this area, every winter ... Sometimes we go caribou hunting in that area.* (P22, 07-Feb-19)

> *He's saying there's an uphill area [in the Mary River area] where you can climb onto the top of the hills and mountains, and in all that area they look for caribou there.* (P04, 04-Feb-19, interpreted from Inuktitut)

While modes of terrestrial travel now include ATVs and snowmobiles, many community members continue to travel across the land and sea-ice on foot and with dog teams.

Up to today, he goes to the same area [Mary River area] that he used to go annually. To the Mary River area ... Instead of qamotiq, they are now using ski-doos. (P30, 08-Feb-19, interpreted from Inuktitut)

He grew up in that area [vicinity of Guys Bight], they would hike by foot with dog packs, dogs carrying their packs. So that's … So, he grew up in that region. And it was hard. They only moved near Pond Inlet after he became a skilled hunter. (P08, 05-Feb-19, interpreted from Inuktitut)

There was no limit to travel when you were travelling by dog team. You can go anywhere you want to go, so no limitations. (P04, 27-Apr-19, interpreted from Inuktitut)

That time when they went in the land with their dog teams, they got caribou. Because this was when they used mostly animals, animals' skins for clothing ... and he was a mature man and he would walk up to those mountains [in the vicinity of Qinngua] and see that snow cap, and he would bring his dogs along as pack animals and he says - he says he's seen that snow cap more than once. He said these lakes have fish here in them - no, icebergs in them. (P08, 05-Feb-19, interpreted from Inuktitut)

Okay, so they had – remember they had the caribou skin qamotiq here. But the had left their regular sled here last spring before they start waling up inland. So, they fetch it and they got ready. [Inuktitut spoken]. (P30, 08-Feb-19, interpreted from Inuktitut)

Interview participants also described their reliance on boats for marine transportation and marine hunting (see Section 4.2). Traveling on the sea and rivers by boats was described by several participants as being important for hunting both terrestrial and marine animals, such as caribou, narwhal, and seal. One participant described the multi-purpose value of traveling with boats, as they can create a temporary shelter when traveling in adverse weather.

From there, from the falls [on Phillips Creek], they would take a motorboat all the way. Thirty-five horse power on a canoe. That's how they would hunt caribou. (P04, 05-Feb-19, interpreted from Inuktitut)

During springtime, the floe edge, you could hunt like narwhal or seal or like be at the floe edge and wait for seal in a small boat. (P21, 08-Feb-19)

Then right along here [shoreline close to Saattut and Qarmakuluit] is kind of shallow, so you can follow the narwhal with the boat. (P09, 05-Feb-19)

Yeah, like depending like – we'll use a little boat and go around and find a good spot. Yeah. Every high tide, then I will be coming – all coming along the shore here [Guys Bight] ... Yeah. Like be like around here with my uncle, on a little boat, drinking – we'd bring out tea and coffee, grab some snacks because we know we're going to be there for a couple hours, waiting for the

> *narwhal. And if the wind does pick up, we usually tip the little boat over and try and make a little wind block.* (P09, 05-Feb-19)

Many journeys are made over the course of a single day, while some may take days or several weeks. These long journeys were described by one participant as an important learning opportunity.

> *[Interviewer: What's special about a longer trip?] Like being out on the land or not being at home. You're, like, experiencing the land. Seeing something new out on the land instead of just staying home. Yeah. We're learning something new about history of the place.* (P21, 08-Feb-19)

Interview participants described traveling long distances from Pond Inlet, to communities such as Igloolik and Clyde River. Numerous interviewees also described their travels into the interior of Baffin Island to hunt caribou and journeys to Igloolik and Clyde River on snowmobiles.

> *When I was seven, eight, nine. You can tell there, in the summer time, in the last summer when we were lived there, in the last summer we went to the mainland to hunt caribou, the whole family.* (P11, 06-Feb-19)

> *From here to Igloolik, it usually takes me 11 hours, non-stop. It's just when I need to fill up, I fill up. And then after I fill up, I have my thermos in my pocket. And then whatever I'm going to eat is in my pocket. So, I just eat off that.* (P09, 05-Feb-19)

Participants noted that while they often travel for the purposes of accessing hunting areas, many journeys are made in effort to explore new places. In some cases, community members explained they would travel to certain areas that elders had shared stories of with them. This experiential knowledge and place-based learning is key to the continuity of IQ and culture.

> *It's seeing new land and finding where the animals are, where they stay and of course they never stay in one place; they're moving all the time and you just have to find them and that itself is quite exciting, is when you start getting to know how to find them and looking at different signs and tracks and all that, and you have to be very observant to know where they are. So it's a challenge and it's fun.* (P13, 06-Feb-19)

> *I was trying to get to know the area because people were – some elders were speaking of it. And I had to go over and see it – see it for myself, how it is in the summer. I had to get an idea of it, when they were speaking of it.* (P09, 05-Feb-19)

> *And him and his brother-in-law has tea during the springtime, in front of the ocean, and you could hear the falls going and it was a really soothing and great sound of the water, was flowing so fast it sounded like it was people, huge crowds singing. You want to go there and listen to them? Yep, it*

sounds like huge crowds singing. (P04, 04-Feb-19, interpreted from Inuktitut)

Gathering on trails and travel networks were reported by interview participants as being an important aspect of their journeys on the land. In certain places, community members would gather to meet and share food, stories and supplies. As described in the quote below, one participant explained how it was common for community members to meet on their travels from Clyde River, Pond Inlet and Igloolik.

> *Historically, that whole area [Mary River] has been used and people would come in walking from Clyde River, from Pond Inlet, from Igloolik. It was like a central meeting place. So people would gather to collect food and clothing from their caribou and the dogs were essentially helping to bring all the stuff, whether it'd be camping gear or to help bring the catch and then this area here has lots of sharp rocks, edges. And so when dogs would go through those areas, sometimes it get caught up in those rocks with the big packs. Like there's the traditional backpacks, traditional bags for dogs.* (P15, 07-Feb-19, interpreted from Inuktitut)

While travelling on the land, it is common for community members to establish camps while pursuing activities such as hunting or preparing foods, which require a more stationary existence in order to dry fish or cache meat. Campsites were explained as being built in close proximity to important resources along trails, such as good fishing sites or areas where caribou, polar bears, seals and narwhal are abundant.

> *We have an outpost camp here [Nalluat], and all this area is narwhal hunting areas, all these places during the summer.* (P24, 07-Feb-19, interpreted from Inuktitut)

> *We had our camp at Button Point, right there. We were seal hunting and we had our camp there; and one day we were seal hunting and then decided to go polar bear hunting, and so we headed in that direction and saw tracks and fresh tracks and started following them.* (P13, 06-Feb-19)

> *That used to be my biological grandparents' spring camp, and their winter camp was over here – where are you? Right here [Upirngivik], right here, and the reason why we picked that was of course for cultural reasons as well, and also the animals go by that area up closer to the shoreline than the rest of the year, in the beach in that area, so.* (P13, 06-Feb-19)

> *With a tent, yeah, camping in this area [southwestern Bylot Island], yeah, because this time of the year like in spring just we all go to Bylot Island to hunt and go egg picking for geese.* (P23, 08-Feb-19, interpreted from Inuktitut)

> *We used to have a camp there [Nalluat] for the summer and we hunted narwhals, seals, bearded seals, sometimes polar bear and in winter some guys go caribou hunting too around here.* (P17, 07-Feb-19)

> *My mother was born not too far along from that area. Like right along here [close to Nuvuajuruluk]. My mother was born in a qammaq somewhere here ... There was – from what my mother told me, that was like the area where a bunch of people gathered up and had their feast. They gather up and do their hunt, seal hunting around that area.* (P09, 05-Feb-19)

> *They only go there because certain narwhals go there [Qinngua] ... That's why they want to build a cabin ... All the water's in that area have char, right-right down to the point [Illuvilik].* (P04, 04-Feb-19, interpreted from Inuktitut)

One community member shared their story of a time when they were hunting near a camp and had to carry caribou carcases back to the camp on foot. They would rely on songs to ease the journey as they hauled their fresh kill back to their dwelling.

> *[Personal name] and him went up the hill [close to Pamiujaq], just to scout around, and they probably had meat caches there from back then, 'cause we forgot to go get 'em. Most of it they carried back to camp ... He carried two full caribou-cut up two full caribou and hiked 'em back down to the shore ... Yeah, they sing a bunch of songs to make sure they didn't get worn out going down the hill.* (P04, 04-Feb-19, interpreted from Inuktitut)

Interview participants described a range of habitation sites used for varied periods of time, from informal camps that might be dismantled, to long term buildings and cabins that are inhabited for several seasons or years. Regardless of permanency, community members detailed their camp and habitation sites as being strategically placed near key resources, such as fishing and hunting locations.

> *We'd put the boat in up here [close to Iqaluit on Tay Sound], take the quad and travel around, sleep over night, come back with meat, seal skins, come back again and keep doing that for two weeks. At the same time some guy would be drying fish.* (P07, 05-Feb-19)

> *We used to use that for overnight site for hunting caribou. Just right beside that cabin, just only about 50 feet away from the cabin there [close to Sannirut] was a little land, a slope like this onto the shore in that area, there was a polar bear denning just about 50 feet away from a cabin here.* (P11, 06-Feb-19)

> *They were living in igloos. So, when they come across people who have already established their sod houses, they said the smell was very strong and they get used to it the next day and it didn't smell much anymore.* (P30, 08-Feb-19, interpreted from Inuktitut)

The permanent dwellings in Pond Inlet are relatively new, as community members and their ancestors lived a mobile lifestyle. One participant recalled their parents' wooden igloo, noting how they didn't move into Pond Inlet until after their grandfather quit working with the Hudson Bay Company.

> *Since when I start, remember, my parents had a wooden igloo, because my grandfather, [personal name], used to work with the Hudson Bay Company before, after he quit and they moved to Igarjuaq, to live down there. He brought some, their stick house to that area, to that place and started living there.* (P11, 06-Feb-19)

It is evident that the community members of Pond Inlet travel extensively across the land and sea for extended periods of time, which require them to camp in multiple places within the Study Area. The cultural pattern and practice of travelling and dwelling in numerous locations that are geographically vast was summarized by one interview participant:

> *I've been camping a lot more but it's a long time to talk about, you know, in this area [area around Pond Inlet]. Because I grow up here, Mount Herodier, grow up and live here and always going back and forth between the Pond Inlet to Button Point area, even to that area. And Eclipse Sound, up to Milne and Tay Sound, Paquet Bay. In the different years I travelled a lot so that's how we use this area and live with it...* (P11, 08-Feb-19)

The quotes in this section clearly reveal the importance of the Study Area to Pond Inlet community members' values related to the Travels and Trails VC.

4.5.3 Impacted Baseline

During the Study, interview participants detailed a number of existing impacts to Travels and Trails values within the Study Area. In one instance, a community member explained how the Tote Road has affected their ability to travel to the interior of Baffin Island. They noted that while the Proponent has created underpasses for snowmobiles across the Tote Road, these get clogged with snow, obliging travelers to drive over the road. Consequently, the gravel and grit on the road damages the hunter's travel equipment.

> *Baffinland is recommending us to travel under the bridge when there is too much snow. It's not high enough to travel under the snow but just like last week, we had to cross the Tote Road, we have no choice. That was like a barrier to us, we don't want to cross this road because of the gravel. It's going to ruin our slides on the qomatiqs and on our carbines.* (P15, 07-Feb-19)

As detailed in Section 4.3.2, Pond Inlet community members have observed a decline in caribou populations near and on Baffin Island. One participant discussed how they now make longer journeys towards the mainland (such as Igloolik and Hall Beach) in order to hunt the caribou, particularly during periods when there may be a difference in quotas. This journey is made by snowmobile along a route that has been in use for generations.

> *Well since there's hardly any caribou on Baffin Island anymore, hunters go to Igloolik area and Hall Beach area to hunt caribou by snow machine, and they use that route. And they go there to visit family, some people have gone*

> *there to participate in fishing derbies every year, so it's used extensively every year.* (P13, 06-Feb-19)

As a consequence of having to travel farther to hunt caribou, the cost of traveling has also risen, making traveling on the land less accessible if they cannot afford gasoline.

> *Yeah, I think everybody is but no gas. I think people just don't have enough gas for travelling.* (P17, 07-Feb-19)

A Hunters and Trappers Organization (HTO) cabin previously situated in the immediate proximity of the mine site was moved by Baffinland to an alternative location. However, a couple of participants expressed that its new siting is not satisfactory due to ground conditions and orientation relative to the prevailing winds.

> *Last year, because that hunter cabin's … in the swamp area. It's in a mushy area in the summertime, it's not a very good area when you're travelling in the summer time when you're caribou hunting. You can't go to the cabin because of that river, creek and it's all mushy. So basically, you're stuck – you want to go to the cabin but you can't in the summer time. So HTO made a recommendation to move the cabin to the other side and the door, the main door is facing northeast. So all the wind accumulates towards the door and last year, it caught a lot of snow inside the cabin. So we made a recommendation to have the door facing west.* (P15, 07-Feb-19)

> *They HTO tried to have their cabin moved to a different site because it is in a marsh area and they wanted it on dry land.* (P04, 07-Feb-19, interpreted from Inuktitut)

While Study participants have reported existing impacts to trails and transportation routes in the Study Area, the region continues to remain valued for Pond Inlet community member's Travels and Trails values.

4.5.4 Project Interactions

Throughout the interviews, participants detailed their concerns about the potential for the proposed Project to further affect their Travels and Trails values, particularly with respect to limiting, restricting or preventing community members from accessing important transportation routes. Community members identified the mine operations, the Tote Road and proposed railway, and the Port Facility, as specific Project components they are concerned will negatively affect their ability to travel the land and seascapes freely.

Participants expressed concerns about the potential for the proposed mine expansion to impact their ability to travel safely along the Mary River. One participant specifically raised the concern about dust from the mine, which is observed by an interviewee to accumulate on the snow and, consequently, increase friction on their sled runners. This friction would cause travellers to move more slowly and burn more fuel.

> *Right next to the [Mary] River, there's so much dust because the wind is always coming from that direction ... From east, northeast ... So more weight you're pulling going up and going down. Too much dust, more friction.* (P15, 07-Feb-19)

Interview participants voiced numerous concerns over the proposed railway routing. A site of particular contention was the diversion between the road and the railway, where they diverge and the railway follows the Mary River valley. As detailed in the quotes below, participants view the proposed railway route as an obstacle to traveling towards the centre of Baffin Island and the Mary River area. Some participants are worried their trails may be destroyed as a result of its construction and operation.

> *But I think one of the contentious issues for location of the railroad has been closest to the Mary River where it kind of veers off to northwest, northwest side and then it goes back into the Tote Road ... I think there was a concern that it's going to block the traditional travelling trail in this area ... Yeah. The Tote Road is basically in that kind of a shallow valley area where there's river, going by the river down to the Milne beach.* (P13, 06-Feb-19)

> *So, he has heard, and his own thoughts, this the new proposed [railway is] not a good idea. It is not going to be conducive to travelling. He would rather see it elsewhere ... He would rather stick close to the Tote Road. This new proposed area is going to be in the way for travellers. It is just going to block their trail, for both caribou, travellers. This is the area where people go to Igloolik Trail is so it's going to block both the caribou and the travellers and hunters.* (P30, 08-Feb-19, interpreted from Inuktitut)

> *So, he is saying that the proposed railway would destroy their ski-doo route. Well they wouldn't be allowed to go through there ski-doo route anymore.* (P04, 07-Feb-19, interpreted from Inuktitut)

> *Very much so, we travel through here, up into this area, and some people go through here on their way to Igloolik, and this is our highway, through here. There's qammaq there, and this site is listed on our routes, the proposed line runs right on our route.* (P24, interpreted from Inuktitut, 07-Feb-19)

> *Like I think the main concern is that we want to have full access to that area and if there's – if the project is going to hinder our traditional travelling areas, trails and stuff, nobody's going to like it. And we cannot use the Tote Road right now contrary to the land claims agreement when we're supposed to be able to use it any time, any year. For certain reasons they put in controls to ensure that there's no accidents, but they do carry their – if they want to use the Tote Road, they do carry the hunting equipment and load them up and take them to Mary River and vice versa. But if the people, hunters choose to stay away from the Tote area, they can do so as well and there's other routes that they can use.* (P13, 06-Feb-19)

> *This area because people travelling by snow machine to Iglulik use this area and it's going to block their trail. And I don't know if there has been any*

change in the location of it, but initially that's what – and I was hearing from the community that it's a concern, that it will block our trail going to Iglulik because in every year since I can remember, people have been going back and forth from Iglulik to Pond Inlet and also to Arctic Bay as well and Clyde River, you know, by snow machine and dog team, we've done that for thousands of years and it's still continuing, we're still doing that. (P13, 06-Feb-19)

My opinion is if the railway can we set on that side, but don't let it cross the river. If it crosses the river close to the mouth of the river, the people who come to this area from the other side, they would be cut off. (P20, interpreted from Inuktitut, 07-Feb-19)

I know the first plan with Baffinland was made several spots every – there will be a crossing for the hunters and the people who want to go over the other side. But that will be – there will be, I know, the problem we don't go just to follow – go there along try to get to the crossing area and cross it because it's wasting our gas. We always try to go across, I mean we can go straight though. That will be a problem. Even if Baffinland made a crossing spot area for several areas, that will be affected as well. (P11, 26-Apr-19)

Because some people have trouble already with the tote road...It's too high or you can't cross the road. Because all the snow clearing...Sometimes they are here, it's hard to cross. (P22, 27-Apr-19)

Study participants expressed concerns with the railway route, in particular because the river valley leading up Phillips Creek to the Mary River area is acknowledged to be an important travel route for Pond Inlet community members. As detailed by interview participants, travel alongside the Mary River is made difficult – and in some cases, not possible – due to the rough, steep terrain and exposed rocks.

People use that as, this is the area [railway diversion] that they really do not agree with. This area [west side of Phillips Creek] is not a very good travel route. He has travelled across here as emergency, but he now knows that it is not a good route. You can always follow that existing route, except that new part that's curved to the left, that's a big concern for them. (P25, 08-Feb-19, interpreted from Inuktitut)

The other side [of the rail-line] is not travel-worthy, at all, with all the rocks. It's easy to burst your wheels when you're traveling through there. (P25, 08-Feb-19, interpreted from Inuktitut)

There is a big island there. And, they had wanted the route to take that. And if they were to build the railway there it wouldn't get in the way of the hunters ... They call that site Jerusalem because it has like – I guess like a wall of Jerusalem. (P04, 07-Feb-19, interpreted from Inuktitut)

It's [the proposed railway] right on the trail. When we travel by skidoo while going hunting we use this trail, going towards Milne [Inlet]. (P26, 08-Feb-19)

> *...yeah, because it's such a narrow path [Trail from Milne Inlet to Igloolik along Phillips Creek]. And people keep saying—every—every one of them—keep saying that it's such a narrow path, and the railway shouldn't be there.* (P34, 29-Apr-19, interpreted from Inuktitut)

> *You see this proposed railroad? That's our main route going to the mine...This one over here, you usually get over this mountain to get to the cabin. And, you know, we have Nunavut Quest every year coming from Igloolik or Pond Inlet to Igloolik...Yeah, or Pond Inlet to Arctic Bay, Arctic Bay to Igloolik, depending on each year, this is the main route for the dog team race where the proposed railroad is. That's the route we used to get down to port. Because this area is pretty rocky and rough and this one's too much hills. A lot of hills going to Mary River. We use this is our main route to get to cabin where the proposed railroad is and this here – I know this caribou calving ground over here where the railroad is.* (P32, 28-Apr-19)

One trail in particular is of concern for an interviewee, as it is a trail relied on for caribou hunting. The participant expressed concern how the railway impeding other hunter's ability to access the trail, and thus be able to access important caribou hunting grounds.

> *We are opposing this area [railway diversion from road] because the hunters goes there, you know, all the way here, around this area [Igloolik trail by Phillips Creek] ... So, the hunters very depending on it, ever since I remember, right until now. Because you know this valley? That's a caribou trail road. Here. Through here.* (P10, 05-Feb-19, interpreted from Inuktitut)

Impacts to habitation sites such as camp locations were also identified as being susceptible to Project impacts. Specifically, one community member is concerned about the Project's potential to impact on historic and presently-used campsites and habitation sites near Qinngua, near the Project Footprint. The participant pointed out that the loss of these campsites would mean that elder knowledge about these places can no longer be passed on.

> *Everywhere they travelled by Honda, by four-wheeler, and whenever they want to stop for tea … everywhere they stopped around there [the head of Qinngua], on their Hondas, just to rest or to take a break or overnight, they would – no matter where you stopped, they would see tent rings, from our ancestors. Even to a point where there's - where there's even arctic heather for bedding still there. So he feels that if all that is ruined, that what his ancestors have passed on will be lost, and he will be very sorry if that happens.* (P12, 05-Feb-19, interpreted from Inuktitut)

Additionally, one participant discussed the impacts of project shipping activities in selecting the site for a permanent camp in the region, noting that the family wishes to avoid proximity to the shipping route.

> *We've spent quite a bit of time camping in Tremblay Sound, and we've spent quite a bit of time also camping in Milne Inlet and we've been kind of hunting for a location to put a cabin for quite some time. And we haven't been sure which side to kind of put a permanent camp up. But one thing that our family has been speaking a lot about is all the shipping that's happening in Milne Inlet and how maybe we want to be on the other side of the shipping.* (P27, 27-Apr-19)

> *When we're in Milne, I don't know, like, it might – when we're in Milne and you see a ship every day and sometimes you have ships within your vicinity all day, every day, because they're waiting. Like, if you're here where we have camped, there's always ships here waiting and you can always see them. And so one thing that me and my husband have spoken about it, is maybe we want to be at a place where, just for, like – not really for a particular reason, but just to enjoy our view and not have ships in our view.* (P27, 27-Apr-19)

The interview data make clear the links between the proposed Project and its potential to interact with Pod Inlet community members' Travel and Trails values. The Study Area remains central to Pond Inlet community members' ability to access and travel across their territory.

Project interactions and impact pathways impacting increased travel time and harvesting effort that emerged from the Study related to the VC of Travel, Trails, and Habitation are as follows:

- Damage to travel equipment due to the Tote Road and dust from the Mine Site;
- Sensory disturbances and impacts to safety;
- Impacts to safe inland travel from mine-related activities;
- The loss of traditional caribou trails due to the North Railway;
- Impacts to ground disturbance from the Milne Port and Phase 2 activities;
- Impacts to caribou harvesting and marine mammal harvesting due to Phase 2 activities generally;
- Changes to access to preferred hunting and trapping areas due to disruption from truck and rail traffic; and
- Potential changes to access, should current plans for the proposed rail routing proceed, due to interference with the primary trail to Igloolik.

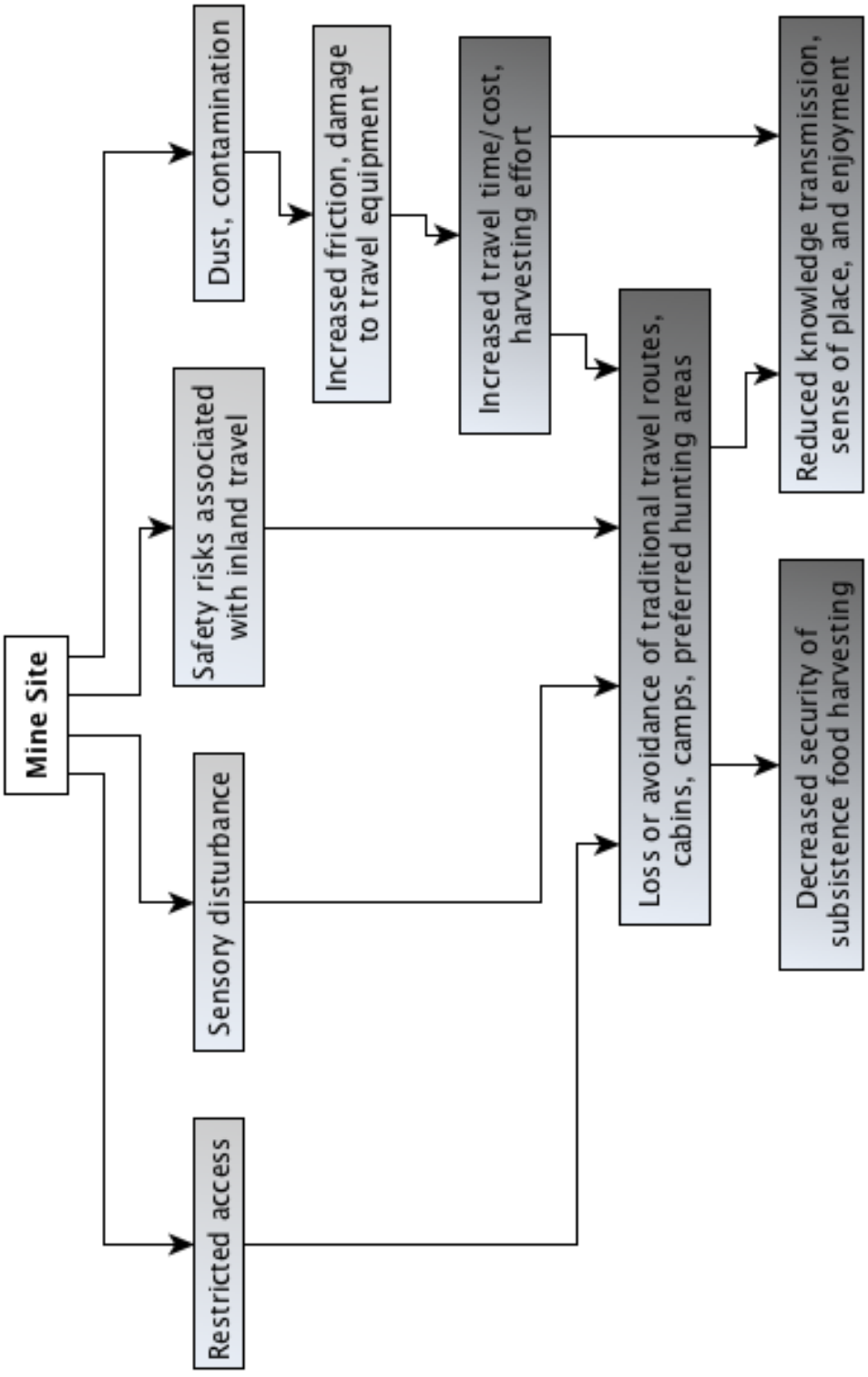

Figure 18: Potential Project interactions in relation to the Mine Site with Pond Inlet Travel, Trails, and Habitation values.

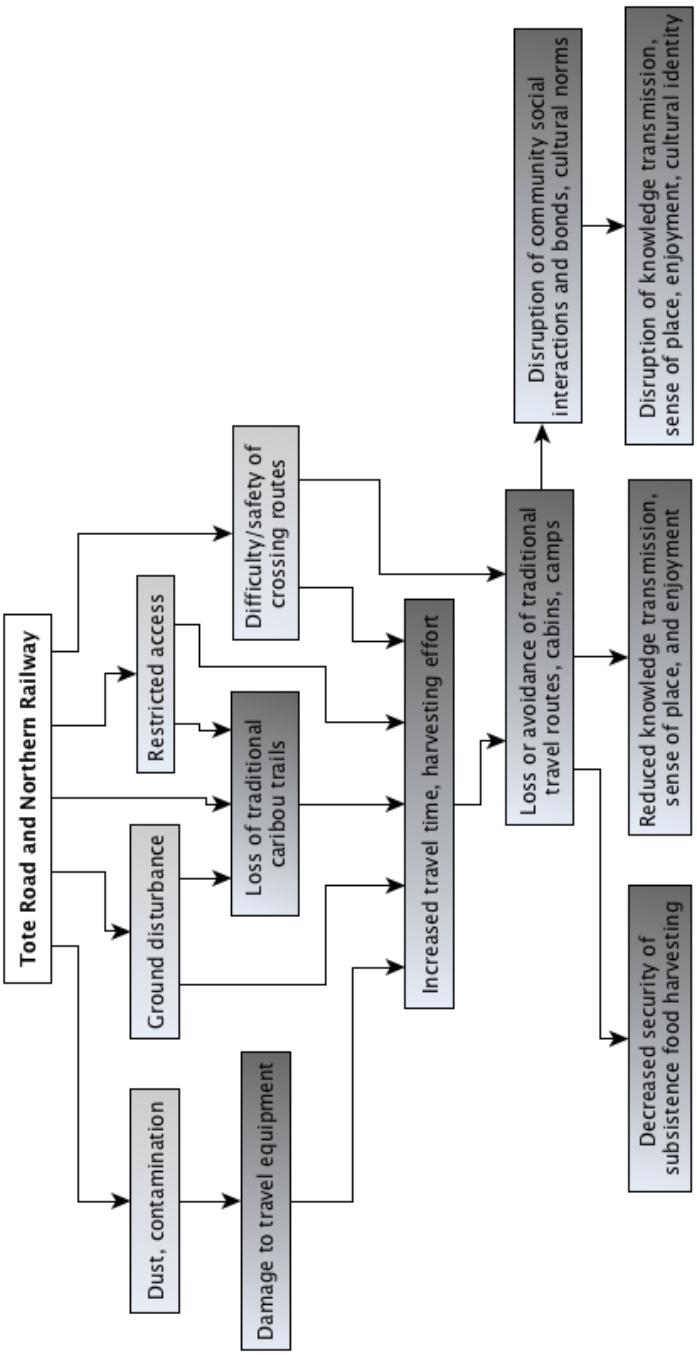

Figure 19: Potential Project interactions in relation to the Tote Road and North Railway with Pond Inlet Travel, Trails, and Habitation values.

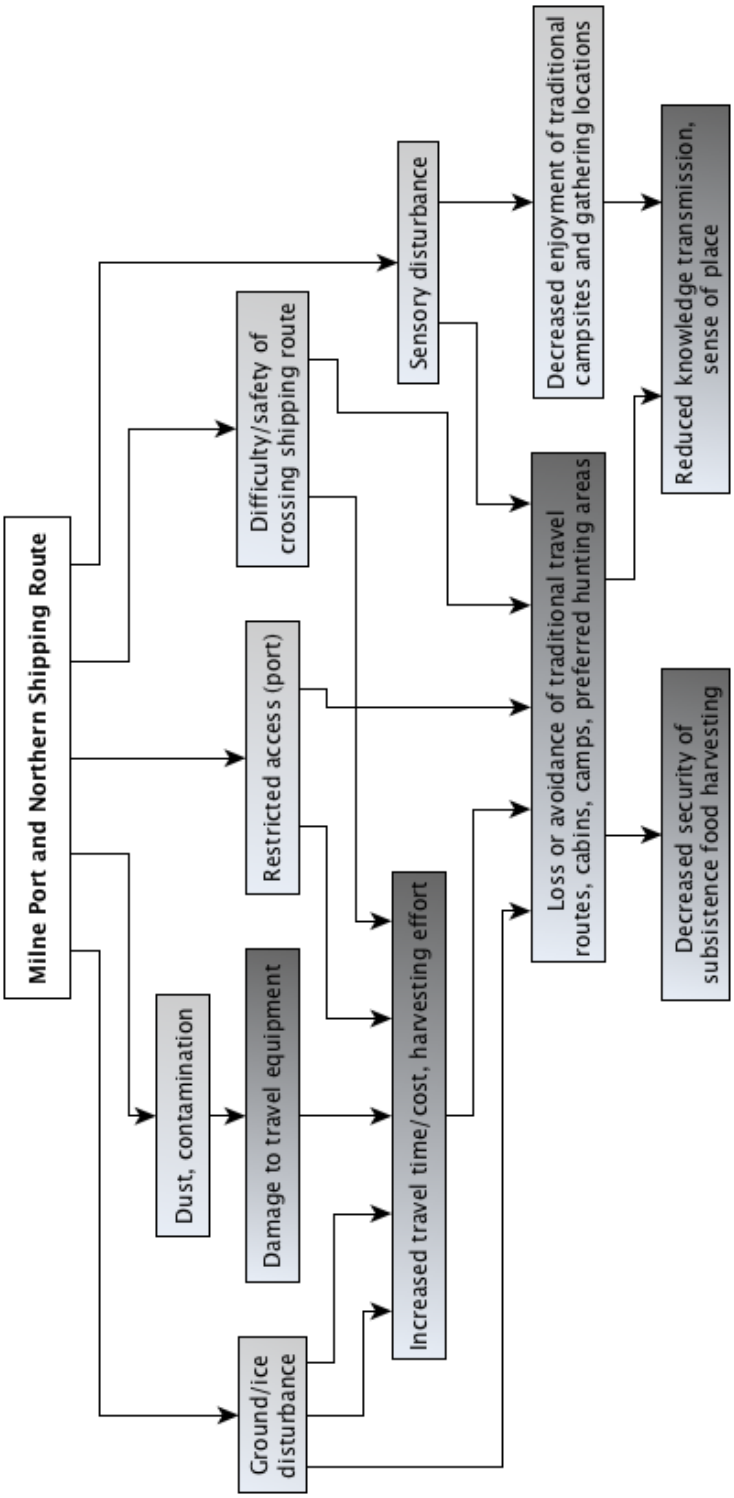

Figure 20: Potential Project interactions in relation to the Port and Northern Shipping Route with Pond Inlet Travel, Trails, and Habitation values. (See Footnote 3 for legend)

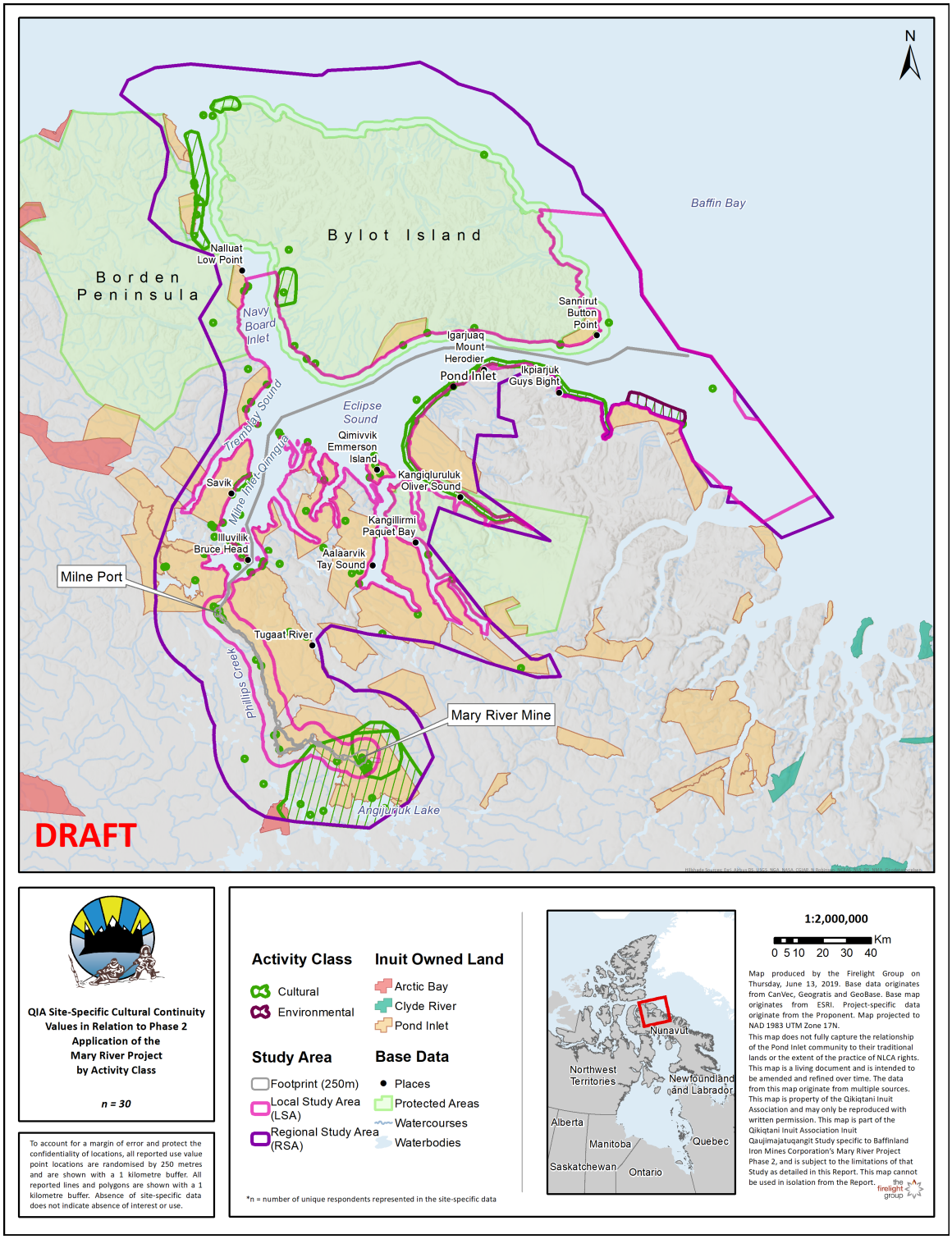

Figure 21: Pond Inlet reported site-specific Cultural Continuity values in the Project Footprint, LSA, and RSA.

4.6 CULTURAL CONTINUITY

Section 4.6 provides further details on the site-specific Cultural Continuity values reported by Pond Inlet community members, by Activity Class and location. This sections also includes a discussion on the importance of Cultural Continuity values, and where possible, on current impacted baseline conditions and change trends. The qualitative data provide additional context for the interpretation of the site-specific data.

4.6.1 Site-Specific Values

Table 6: Site-specific Cultural Continuity values reported within the Project Study Area, by Activity Class.

Activity Class	Within the Footprint, (250 m)		Within the LSA, including Footprint		Within the RSA, including LSA and Footprint	
	# of reported values	% of reported values	# of reported values	% of reported values	# of reported values	% of reported values
Environmental	0	0%	1	1.1%	1	0.7%
Cultural	11	64.7%	86	92.5%	130	93.5%
Impacted	6	35.3%	6	6.5%	8	5.8%
TOTAL	17	100%	93	100%	139	100%

Description of Documented Cultural Continuity Values

The following Cultural Continuity values were documented in the Project Study Area, organised by Activity Class:

- **Environmental** values including**:** a known traditional area;
- **Cultural** values including**:** birthplaces; burial sites; soapstone and sandstone collection sites; gathering places; sod houses; historic whaling stations; caribou fences; caribou blinds; tent sites; place names; teaching areas, including areas where practices associated with hunting, food processing and fishing are shared; and
- **Impacted** values including**:** water and ice that are contaminated with ore dust; traditional camping areas that have been negatively affected by activities associated with Baffinland's developments.

Geographic Distribution of Cultural Continuity

Recorded site-specific Cultural Continuity values can be found throughout Eclipse Sound, with higher densities along upper Phillips Creek, on the shores of Qinngua, and in the Bruce Head area. Concentrations of sites were also recorded on the southern shoreline of Bylot Island and on Emerson Island.

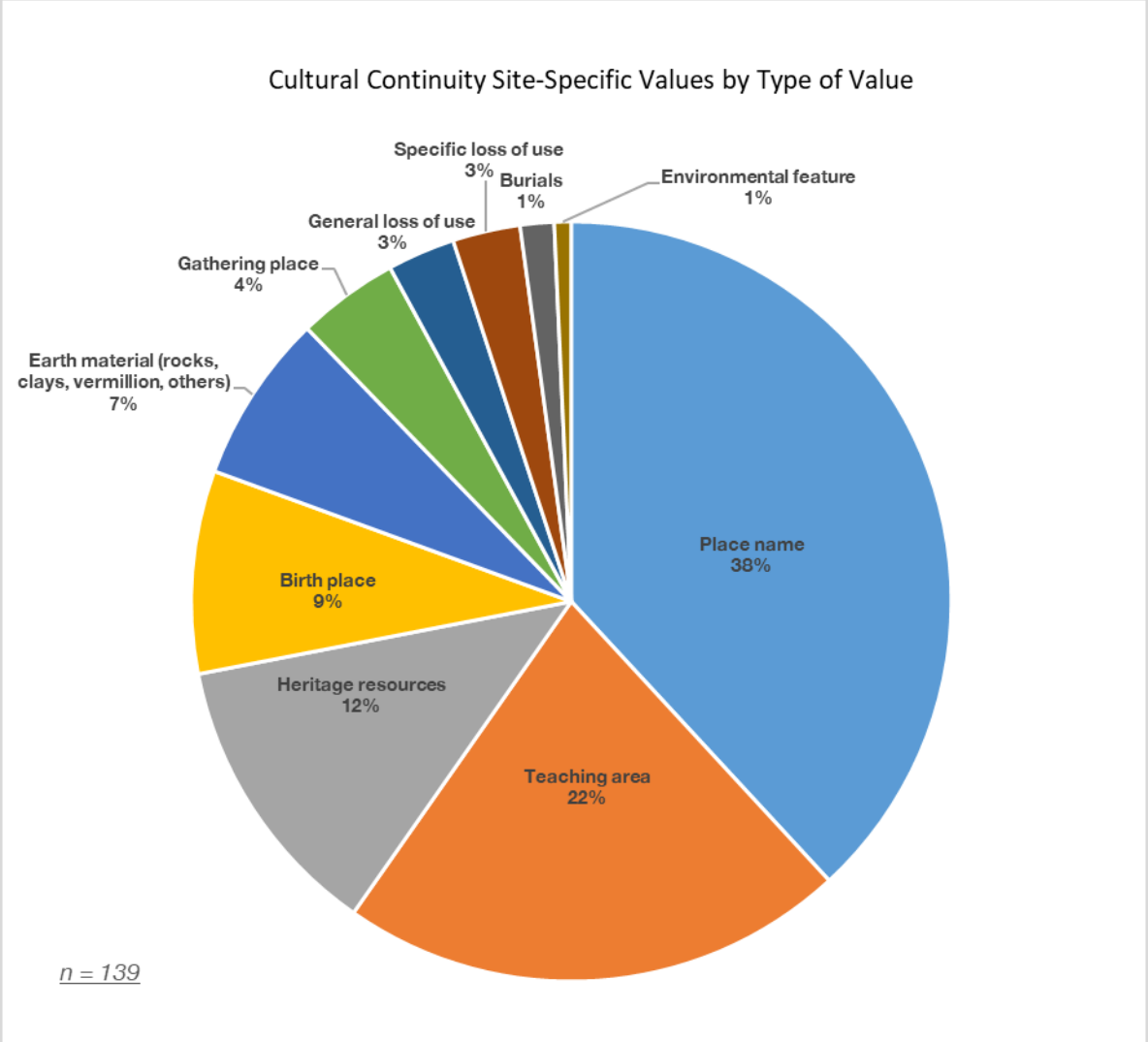

Figure 22: Cultural Continuity site-specific values reported in the Project Study Area by type of value; n = 139

4.6.2 Importance

The Cultural Continuity VC encompasses intangible and tangible values and activities central to the culture of the Pond Inlet Inuit community. These values and activities include: knowledge transmission; community gatherings; attachment and affinity to

place; identity; heritage and heritage resources and sites; and broader aspects of IQ, including principles and protocols.

The cultural continuity of the Pond Inlet community is dependent on the ability of community members to transmit and share cultural knowledge. This includes knowledge about land use activities, animal movement and behaviour, protocols and principles, norms, language, cultural protocols, and more. These often highly specialised bodies of knowledge have developed over generations, and are maintained by continuous experience and teachings in the cultural landscape.

Examples of specialised cultural knowledge held by Pond Inlet community members include information about caribou mating behaviours, and how weather conditions interact with animal behaviours and ice conditions — information that is used to increase the likelihood of a successful hunt and ensure safety on the land.

> *And we also know the behaviour of the animals, how they behave if there's going to be bad weather coming up, good weather coming up. Animals, if you watch them, observe them all the time, they tell you what the weather is going to be like.* (P13, 06-Feb-19)

> *When caribou are mating, the males butt heads and some of the antlers fall off during the winter. The old males', bulls, antlers become easier to fall off because they charge each other head to head with their antlers, but in the areas that we go caribou hunting, they're still mating when they arrive during October, November.* (P24, 07-Feb-19, interpreted from Inuktitut)

> *As hunters, we're very, very observant of our environment and the weather, condition of the ice, the snow, everything. It's, we get our food from the land and we know, depending on the type of weather that we have in certain years, the animals will not be there, they will be in different areas and stuff like that.* (P13, 06-Feb-19)

> *It's important for us, the Button Point is, 'cause it's usually a lot of wind from here going towards and when you're trying to camp on ice, it's not safe. So, they usually go to the Button Point to camp where they're safest. So, it's kind of a safe spot for the hunters to stay there for a few days.* (P01, 04-Feb-19)

Though the depth and breadth of cultural knowledge held by the Pond Inlet community cannot be fully encapsulated in this Report, it is clear that cultural knowledge is generally transmitted, accrued, and verified in two principal ways: *individual* experience and observation, and *social* transmission (i.e., learning from someone else) — both often involving years of direct experience out on the land.

Sharing knowledge of observational changes is critical for the Pond Inlet community, particularly in an environment that changes rapidly, and navigating risks and uncertainties is part of being on the land. For example, several Study participants described the importance of storytelling and direct communication that support hunting activities.

> *It's an ongoing thing. People, hunters that when they return from hunting, if they see something different or things have changed or the place where they went to, whether there was animals or more seal holes, they will tell the other hunters of what they've seen and the condition of the ice and the dangerous areas and depending on different seasons of the year.* (P13, 06-Feb-19)

> *Soon as – like every time we get a chance, we communicate because Inuit are always observing and learning, and trying to adapt to the changes. So, like a lot of the hunters that I speak with, they want information, the newest information, and where's a good spot to go hunt and look out for any potential dangers around the area. It's like common things, like for around here. Yeah. Because you don't want a hunter to get hurt or stranded from something that could have been prevented from passing on the knowledge of what you see and what is dangerous. Then you can tell the next person going around that area, then you can map it out on his GPS, just be careful around that area.* P09, 05-Feb-19)

> *So, when the ladies are out berry picking and, if they happen to spot a caribou, which is, that's a common area where they've been spotted, they'll, they'll communicate that to the men. And, then, at that time, men can go inland and, hike.* (P03, 04-Feb-19*,* interpreted from Inuktitut)

In many instances, especially in the instruction of youth, more knowledgeable adults will take younger generations directly onto the land in order to guide and instruct them. Pond Inlet community members frequently recounted hunting, fishing, travelling, and camping with older family and friends, often from a fairly early age.

> *So, it was 2008 when he went to Mary River to hunt caribou ... He was training his son how to hunt, and that time he did most of the hunting.* (P16, 06-Feb-19, interpreted from Inuktitut)

> *That's one of the reasons why I built the cabin over there, so that I had a reason to go out with my kids when they were young, this was before we had GPS and stuff, and I would teach them the snow, the snow drifts, prevailing winds, where they come, when they start blowing, it's going to blow from this direction and Pond Inlet is going to be over there. It's all about angles of where the wind is coming; and also, even if you can't see 50 feet ahead of you, all you do is just look on the ground and see where the snow drifts are and that's what we use to go home. So I was teaching them all that; and also igloo building like at our cabin, to make shelter if they get stuck. Yeah, I've done that, and I've taught them how to hunt as well from small game to big game.* (P13, 06-Feb-19)

> *When I was growing up, I used to go with my father all the time for seal hunting … seal hunting, we live here, right there.* (P11, 06-Feb-19)

> *And I've hunted seals all in that area, baby seals and I'd teach them how to hunt and how to cut up seals and animals, so my plan worked. Now it's down to the grandkids.* (P13, 06-Feb-19)

> *He [participant's father] showed me how to do, how to skin him [polar bear] back here, pulling there. It was hard.* (P03, 04-Feb-19)

> *Dry the caribou hide and how to dry the arctic char. She was teaching me these things because she liked certain things in a certain way... later on, I finally figure it out it will be easier for her to do things while she's – if she's making a parka with caribou hide, that it would be easier for her to make the pattern that she taught me to dry it a certain way.* (P19, 07-Feb-19)

> *I could remember my aunt's voice telling me, as soon he butchered the caribou meat. Put the hide this way to dry up so it will be easier for me while I'm working on the hide, by cutting a pattern or when I'm stretching it. It will be easier for me to work on it … With her aggressive voice that she told me, and I could remember it ever since. And she demonstrated how to draw the hide up. And she taught me if I cut it – if I'm taking the hide off, if I do it this way, I'll have more pattern to use. It's a good memory between my aunt and her husband about caribou hide and meat, and hunting ground.* (P19, 27-Apr-19)

Knowledge transmission may also include learning by observation. Knowledge is accrued by direct exposure and experience, repetition, and time with resources and places central to Pond Inlet cultural values. These key concepts were emphasised in Study interviews as a key part of knowledge transmission.

> *We teach our children even when we're not telling them this is how we do it. They just watch us, you know. They watch us and what we do and they just – they learn. That's how we – that's how they – that's how we learn too.* (P23, 08-Feb-19)

> *Well I would just tag along with my parents. My father – I wasn't an actual hunter yet. But as I got better, as I got more skilled, by the time we lived at [inaudible 0:10:52.2] I was an actual skilled hunter.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *His father towards the Igloolik area, he grew up there. He grew up where all the – his father grew up in the Igloolik area where there is abundance of caribou as well so he knew all the knowledge of those kinds of things.* (P30, 08-Feb-19, interpreted from Inuktitut)

> *And the biggest thing is that when you start going out being younger and you go with experienced hunters and obviously you learn from them, and they teach you where to go and they don't teach you in like a typical classroom setting, but they tell you this and that and we learn by watching and following them and sometimes they don't have to speak in order to learn*. (P13, 06-Feb-19)

> *We did that with caribou too. And when we see a herd, all we do is just, we just watch them; their behaviour, which direction they're heading to, which ones are very cautious, always looking around and then we know we're going to get this one first ...* (P13, 06-Feb-19)

Because Pond Inlet knowledge transmission relies on access to the land and resources, cultural continuity is contingent on teaching and learning opportunities; these are determined, in part, by the quantity, quality, and location of resources.

Access to the land and sufficient numbers of healthy resources not only facilitates knowledge transmission, but also the building and maintenance of social bonds. However, these are tightly intertwined. For example, harvesting activities (such as egg collection or seal hunting) are often social occasions, which are important opportunities for people to meet, share stories, and learn from each other.

> *And, so, the ladies will get dropped off, on land and, then while the ladies pick, the men go hunting. And, he says it gets crowded. And, there's lots of people. And, it's a common like, a group…event, where many different people go.* (P03, 04-Feb-19, interpreted from Inuktitut)

> *Yeah, all the family goes out spring. Good time of the year to go out, to be out with the family too, spring and summer it is up here in the north ... A lot of fun and this is a lot of hunting. Good hunting area.* (P23, 08-Feb-19)

> *With our parents, we'd go up there, on the lakes. So there's usually more than five tents, more than five families lived up there [Mary River area] for fishing ...* (P10, 05-Feb-19)

> *Throughout the springtime, we got a little area here. Where we camp out, me and a whole bunch of family. There's usually six or nine snow machines. Then we do our seal hunting, like all along here. Catch the ring seals.* (P09, 05-Feb-19)

> *It's always, it's like I said, we're not always successful, but we always have good times. It's not always about successful hunting, it's about the, you know, together time with your friends. We always used to say there's always next time. We can always come back to this area.* (P32, 28-Apr-19)

Cultural land use activities would not only bring Pond Inlet families together, but as illustrated in the two quotes below, people from different communities would also meet out on the land.

> *From the Igloolik side, and from the Pond Inlet side, if you were traveling, they would meet and connect there ... That was during the summer ... And they would travel inland with their dog teams because they would use like, use them as pack trains...So the community members from Pond and Igloolik would meet there, and even from the Igloolik, Arctic Bay people.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *Yeah, most likely too from Arctic Bay if it wasn't too far for people … They would gather around there, same thing. Trading, getting caribou-caribou country for sure. So there'd be a lot of meat and furs and gathering of different people. (*P15, 07-Feb-19, interpreted from Inuktitut)

For members of the Pond Inlet community, experiences on the land —such as those described above — contribute to their sense of place and identity. Sense of place is comprised of personal experiences, as well as place meanings, which may be collectively held and symbolic. The physical (e.g., landscape and resources) and social (e.g., the social ties present, facilitation of bonding) characteristics of place can also influence attachment. For example, gatherings on the land (supported by the environment and enabled by land use activities) generated, for one Study participant, positive psychological and emotional experiences.

> *Like we – it was having like a party, like family gather. Like no one else around. It was awesome.* (P21, 08-Feb-19)

In a similar vein, other Pond Inlet interviewees reported feeling a sense of well-being while out on the land, while spending time with and learning from close family members.

> *It's very important, some of it for sanity reasons, like, I grew up on the land, hunting all the time. Even as a child, I was always with my grandparents, and if one day I had woken up and not been able to go, I think it would be very stressful and it would have an emotional and mental health impact on me. Wellbeing, sense of being, not being able to eat country food, not being able to spend time out there, whether I actually catch something or not, like, there's been times where we've gone hunting, not caught anything, but the fact that we were out there trying, we were out there enjoying – whether enjoying company, enjoying the scenery, that experience has the ability to calm and kind of – I don't know how to explain it, but it's, like – I don't know, I cannot imagine not being out there.* (P27, 27-Apr-19)

> *[Interviewer: How does it feel to be out on the land like that?] It feels great...Like no need to worry or like it feels natural or good. Good to be out. Yeah.* (P21, 08-Feb-19)

> *Spending time with my grandfather made it so special and he told me so many different stories throughout the two weeks.* (P19, 07-Feb-19)

Furthermore, being on the land and ice in the Study Area contribute to community members' identities, while also facilitating the expression of these identities, e.g. through cultural activities. A Pond Inlet hunter explained that for them, hunting is:

> *My culture, my tradition. It's in my blood, my metabolism is addicted to it. I need it to survive on, it's part of my blood. My parents raised me and raised me, my adopted parents raised me, feeding me with tradition. This is a good way of surviving, surviving in winter, surviving in the summer time and keep*

> *the tradition going, keep the cycle going and they're survived it for so many years.* (P15, 07-Feb-19)

For the individual quoted above, the animals they hunt and the places where these animals contributed to their physical health and cultural identity. Another Study participant likewise articulated how hunting on the land and in the wintertime defines what it means to be an Inuit man from Pond Inlet.

> *It's when you're a man like living up north a man needs to go out in a cold weather in order to be normal person. When you're in your home or when you're staying like in – when you're being at – going to be at your place never going, hardly going out hunting the man can always be … I don't know how do I say. It's maybe like not acting normal person. Once a man goes out, person who's always going out hunting like especially in winter, they like to go out hunting because feeling the cold weather means to them that … And it helps them to be healthy and once they started staying in the community never going out they get grumpy and getting bored mostly all the time. That's, yeah. That's how important it is with Inuit living up north, especially with the male person. And our elders too. Always they say these words too to us.* (P23, 08-Feb-19)

Harvesting and wildlife are not, however, the only things that give places importance or meaning for the Pond Inlet community. As previously described, the land can also support a general sense of well-being and family bonding experiences (e.g., through knowledge transmission), which in turn can make them important for the community or particular individuals.

The Study Area also supports the artistic expressions of Pond Inlet cultural identities. Soapstone collection sites are of particular importance to the Pond Inlet community, whose members travel inland to the Mary River area to collect the soft stone for the purposes of carving and artistic production.

> *We travel there and then up and then collect our soap stones in this area [in the vicinity of Mary River]. There's lighter green stone like serpentine with yellow stripes and darker like crystals in there, sort of like micas with some micas, little micas in them. There's two different stones that we gather there.* (P15, 07-Feb-19)

> *I don't exactly where, where they were collecting soapstone. I was just a teenager and going with them, with my cousin, yeah. It was in Mary – they – we went to Mary River because there used to be some few shacks. We had to go somewhere around like maybe into the mountains to get the soapstone somewhere.* (P23, 08-Feb-19)

> *That site has lots of soap stone, and every side has some along here, and right underneath there's a big soapstone deposit right beneath the Mary River mountain.* (P24, 07-Feb-19, interpreted from Inuktitut)

Past and ongoing use can also make a place important by supporting heritage values. This can include old hunting grounds and cache sites, as well as old habitation sites. A number of Study participants cited a range of locations where they have seen or know of sod houses or tent rings. These sites are important as they can provide a way for contemporary Pond Inlet community members to connect with their ancestors and their cultural heritage.

> *And so we had a sod house just to the left of the mouth of the river, on top of a hill ... Today they're barely visible now. The ones in the sod house, they're just small shallow depressions into the ground because they're overgrown, the vegetation.* (P20, 07-Feb-19, interpreted from Inuktitut)

> *He would like to say again that all the land was in use extensively before we were born, so there's a lot of inuksuk's and tent rings between Pond Inlet and Ikpikitturajuaq. Yeah. But they have seen lots of evidence when they had gone inland and there's lots of rock formations that people had created and tent rings. And that's like that all the way to the other side. In the past, it was all, it – you could tell that people had hunted without rifles, hunted caribou without rifles. Yeah, he says that before they had rifles, they had to wait behind rocks or something for the caribou to come along, and when they would come along, they would stab them. And there are rivers with stone formations that Inuit had created when they were fishing char using those harpoon things.* (P08, 05-Feb-19, interpreted from Inuktitut)

> *And there are old sod houses, lots of old sod houses there. It's a very old camp, his parents-his grandparents used to live there, they had sod houses there, and his father, and his parents.* (P04, 04-Feb-19, interpreted from Inuktitut)

> *Yeah all in-between Tugaat and past Tugaat, all the way to Mary River in the hilly areas, in the mountains, yeah there's food caches and potential graves and those rock marks they use for caribou hunting way back, trying to scare them or whatever*. (P05, 04-Feb-19)

While rock formations, burials, and sod houses are physical representations of ancestral occupation on the land, place names are analogous intangible symbols. Study participants identified a number of place names, associated the past activity and presence of ancestors.

> *No, I don't know the details, why it's there, but I know why it's called Kapautalik. The person was – the name was Kapuru, the person on the grave was Kapuru. So, they started calling it Kapautalik, the grave is.* (P01, 04-Feb-19)

> *And we had a sod house there, and that place is called Aalaarvik. And it has a high, low tide area, and it has a river, where when low tide happens it gets pretty low, when high tide reaches it's very deep. And the mouth of the river had been created, well, worked on by our ancestors so the mouth of river*

> *(Avaliqqurjuaq) was tight, not wide.* (P04, interpreted from Inuktitut, 04-Feb-19)

Place names and their associated locations are not only records of history and heritage, they also continue to be used in contemporary life. For example, one interviewee explained how hunters navigate the land and communicate with one another based on shared understandings and knowledge of place names.

> *So it's still happening, people are still talking to each other; sometimes they use the radio to inform the hunters, "If you're going to go that way, this is what I saw, this is how it is and you have to be careful in certain areas"; and the land, we have Inuktitut name for every, every mile or so and when the person starts talking about where he's been and which area, name of the land, we know exactly where it is. So, that's how we look out for each other, you know? That's how we maintain the knowledge of what's happening, what changes are happening.* (P13, 06-Feb-19)

The qualitative data presented within this Section (4.6.2) and throughout this Report show that Pond Inlet community members' cultural identity is closely associated with life on the land. Beyond land-based cultural practices and heritage values, the Study Area also supports the persistence of cultural protocols and norms that are a part of Pond Inlet community members' cultural identities. A clear example is the Pond Inlet community members' sharing of country foods and resources.

Sharing food can foster and cement social bonds as well as insulate families from periods of hardship when they cannot secure adequate food supplies themselves. Sharing is continually practiced in Pond Inlet and was described by several Study participants as an important aspect of daily life.

> *It's not just that it's a part of my diet, I eat it, but a part of my lifestyle needs to know how to prepare and needs to know how to butcher, needs to know how to clean. And then know how to create clothing from it. And then with that, is also the social component that country food brings people together and we share and we eat with each other. The fact that there's country food means we gather, and then that has a social benefit, but it also has a cultural benefit, because we're practicing that cultural practice of sharing and gathering. I think it's important for my children to witness and to be a part of that sharing, so that as they grow, they practice.* (P27, 27-Apr-19)

> *[Interviewer: Is going out hunting important to you?] Yeah. It feeds all my family...Yeah. Not just only feeding family, even the friends. I share with my friends, too.* (P03, 04-Feb-19)

> *More than pride. It's, like, a sense of belonging, a sense of helping, a sense of self, a sense of so many things. The fact that, like, there's all these things where a seal – like, catching one seal and sharing it, it goes a long way. It can feed multiple families, it can clothe multiple people. But I think the sharing means so much more today, because as we're struggling to find the balance of traditional and modern lifestyles, I think a lot of people fear that*

sharing component will be lost of our culture. And for us to continue sharing, I think is important, because we're not only continuing a cultural practice, but we're also modelling, but we're also providing, like, to those people that do not go out anymore, or do not have the equipment to go. Country food is kind of the core of our culture. (P27, 27-Apr-19)

Yes, like they say, the more you give, the more you get in the future. Yes. So, I like to give a little bit more than I should, so I can better in the future. (P01, 04-Feb-19)

It's – when you have a whole family gathering and people eating and seeing the group eating, that's something to be proud of it's a good feeling that you're feeding lots of people, yeah. (P33, 30-Apr-19)

Because my father used to share his meat to his common-law, to his sakik, his in-laws. So, I learned from him how to share meat with family and how they shared it. Yeah. That's how. I learned from my father to share the meat to family. Yeah. (P03, 04-Feb-19)

And with fish, like, when my husband goes fishing it's a little bit different, because if it's a really good time of the fishing season, he gets lots of fish, then we share as much of it as we can. Like, if he's gotten a lot, because we could not eat all of that. And so I think our biggest thing with the animal would be the sharing. (P27, 27-Apr-19)

First narwhal, I usually used to be first one to catch a narwhal in the springtime. Like I practically used to be the first one every year. And whenever I came back to town, the whole town – people would come pick – get [mak-ta]. I didn't care. I was the first one. That's – people wanted it. They want. (P22, 27-Apr-19)

The connections between the Pond Inlet community and the Study Area are defined by personal and community experiences and meanings. The cultural continuity of the Pond Inlet community depends, in part, on the continuity and preservation of these connections that are made possible by cultural knowledge transmitted across generations.

4.6.3 Impacted Baseline

As evidenced by the mapped and qualitative data (see Figure 21, and Sections 4.1 and 4.6.1), the Study Area is an important location for the Pond Inlet community's cultural knowledge transmission.

In Section 4.6.1, Pond Inlet knowledge transmission is described as experiential, highly specialised, and place-based, where access is a key component of teaching and learning. As detailed in Sections 4.2.3, 4.3.3, 4.4.3, and 4.5.3, access to the Study Area and its resources have been substantially affected by the Mary River mine, Tote Road, and port/shipping activities. For example, prospects for hunting and fishing in the Study Area are fewer than in the period prior to the construction of the Mary River Project

(also see Sections 4.2.2 and 4.3.2), simultaneously leading to fewer opportunities to transmit and learn hunting and fishing knowledge.

With fewer animal resources, and more difficulty accessing the Study Area, less time can be spent directly engaging with marine and terrestrial wildlife. For younger generations especially, less time and exposure to the land can mean that cultural knowledge is more difficult to obtain and retain, while also making it more difficult for knowledge to be verified through experience and observation. Changes to the environment can thus lead to fewer direct experiences on the land, while simultaneously reducing the reliability of knowledge held by any one individual.

Opportunities for knowledge transmission have also been lost due to avoidance. Avoidance of the Study Area and its resources obviously precludes teaching and knowledge transmission in the region. For instance, Study participants reported avoiding geese that have been contaminated with dust associated with Tote Road activity (Section 4.3.3). Thus, the opportunity to teach and learn about goose hunting in those locations has been lost.

As elaborated in Section 4.5.2, knowledge transmission frequently has social dimensions, including family and community bonding and gathering. As a result of wildlife dispersal that has been partially attributed to the Mary River Project (e.g., caribou and narwhal), there are now fewer opportunities in the Study Area for social interaction through harvesting. Relatedly, decreases in the availability and catch of wildlife have also had likely effects on the ability of Pond Inlet community members to share meat with one another.

It is clear from the collected evidence that physical characteristics (e.g., caribou calving areas), activities (e.g., hunting), and place meanings (e.g., the community's hunting ground) that contribute to Pond Inlet community members' sense of place have been adversely affected by the Mary River Project. While the most obvious effects have been on wildlife harvesting, other physical or spatial representations of Pond Inlet ancestry in the Study Area such as old habitations and trails have also been adversely affected. These physical features that are important to the Pond Inlet community's history, place meanings, sense of place, and identity have been disturbed by mining activity. For example, one participant expressed their concern that construction of the Tote Road had damaged cultural sites including tent rings.

> *This area [Mary River], lots of people used to go there, and even before we were born, this area was extensively used. And there's a lot of tent rings along there. And this was before we were born ... They're right near the [inaudible 0:20:45.7] and he's heard that some of the tent rings have been destroyed by the road crew people.* (P08, 05-Feb-19, interpreted from Inuktitut)

Another Study participant discussed a camping and gathering area at the head of Qinngua that has been disrupted by the activity around the port facility, preventing enjoyment of an area that has been in continuous use for decades.

> *This area. All that area [head of Qinngua] is covered with tent rings … That a boat anchor area. All that is for the – all along the shore are tent rings and people would pitch their tents where it is most appropriate at the time they landed ... Up to 2007, every year from July. Even though they have to go through some icy areas coming to Milne ... They would spend the summer up to a month every summer ... That, when Baffinland started developing this area. They [Inuit camping at the head of Qinngua] were bothered by the activity*. (P04, 05-Feb-19, interpreted from Inuktitut)

Moreover, among the changes created by the Mary River Project are altered aesthetic qualities of the Study Area, as well as changes to the soundscape. Examples of these include the very presence of the mine, road, and port, as well as associated ships, traffic, and people, and the sounds of mining activity that have led to the dispersal of wildlife.

The myriad connections between the Pond Inlet community and the Study Area that contribute to their sense of place and identity have thus been, and continue to be, impacted by the Mary River Project. Because knowledge transmission, sense of place, and identity are closely linked with the other VCs examined in this Report, effects in other seemingly unrelated and distant spheres can and do have consequences for these largely intangible but essential cultural values.

4.6.4 Project Interactions

From the interviews for this Study, the interactions identified between the Mary River Project and the Pond Inlet community's Cultural Continuity are likely to continue and potentially increase by the Mary River Project's Phase 2.

Knowledge transmission pertaining to marine and terrestrial hunting, fishing, travel and habitation on the land, and other aspects of Pond Inlet cultural life are likely to be affected by the second phase of the Mary River Project given that Phase 2 proposes to expand activities already identified as having adverse effects on valued natural resources and places that support these aforementioned cultural practices.

For instance, the addition of a rail line would likely further disrupt caribou habitat and disturb or otherwise impact caribou (Section 4.3.4), while increased shipping calls would likely increase disturbance of narwhal and other marine mammals (Section 4.2.4). Both potential effects would decrease the ability and opportunities of Pond Inlet community members to access caribou and narwhal, and to teach associated knowledge and hunting techniques to future generations. As a result, the aforementioned effects and interactions with Pond Inlet knowledge transmission will likely have multi-generational consequences for Pond Inlet community members to teach and learn cultural knowledge in the Study Area. Pond Inlet bodies of cultural knowledge pertaining to the Study Area may also lessen as a result.

Below, community members discuss the potential impacts of the Project on the relationship between animals, the environment, and community knowledge and practices, noting that balance and awareness of these relationships is crucial in the process of development.

> *If there is any development happening, you need to first find out the animal patterns of – of the environment, or where they travel and where they move first, and then do what has to be done...Because up here, animals are from the silence. Not like in the south, where there's lots of noise. They – they live in silence in the Arctic...If they are going to be developing, they need to be working with – without providing too much noise, so that they don't disturb the animals.* (P04, 27-Apr-19, interpreted from Inuktitut)
>
> *Inuit will not always be opposed to development. But at the same time, the animals need to be made sure that there's not destroyed. Because that's part of the subsistence living with the Inuit. And it has to be a balance, where the animals are not disturbed as much, and at the same time, seeing the development happen with cognisant of the Inuit knowledge and the animal environment.* (P04, 27-Apr-19, interpreted from Inuktitut)

Important places in the vicinity of Phase 2 activities identified by Pond Inlet members have a likelihood of being further impacted. At a minimum, existing impacts are unlikely to abate in locations in the Study Area that will continue to change from Phase 2 construction and operations. This includes, for example, old habitation sites and markers of past occupation that may exist in the path of proposed infrastructure, and associated heritage values.

Social relations and connections discussed throughout Study participants' accounts of their land use in the Study Area are also at risk of further disruption from Phase 2 activities. Data collected for this Study show that family and community relationships and interactions are integral to and fostered by cultural activities, including terrestrial and marine hunting, camping, and travelling the land, among others. Constraints to these activities are thus likely to lead to corresponding disruptions in community social interactions, including cultural norms, such as the sharing of meat from successful hunts.

Project interactions and impact pathways impacting knowledge transmission and sense of place that emerged from the Study related to the VC of Cultural Continuity are as follows:

- Changes in access and the availability of harvesting resources due to a loss of access, a loss of cabins and camps for hunting, and impacts to the availability of mammals (caribou and narwhal in particular) due to mine-related activities;
- Changes in access to travel corridors, cabins and camps due to mine-related activities including the Tote Road;
- Loss of archaeological sites due to ground disturbance from the terrestrial mine-related activities; and
- Loss of other culturally important gathering sites, tent rings and other sites due to ground disturbance from the mine, road and proposed rail, and shipping traffic.

Together, the above-mentioned cultural values, activities, and norms are connected to the Study Area. Therefore, potential ways in which the identities of Pond Inlet community members may be affected by the second phase of the Mary River Project include negative changes to valued place characteristics such as resource availability, aesthetics and peacefulness, freedom of movement and safety, amongst others. Importantly, all potential Mary River Project Phase 2 interactions, including to Cultural Continuity, would occur in the context of existing Project-related effects as well as cumulative effects. The potential for cumulative effects is described in a preliminary fashion in Section 4.6 below.

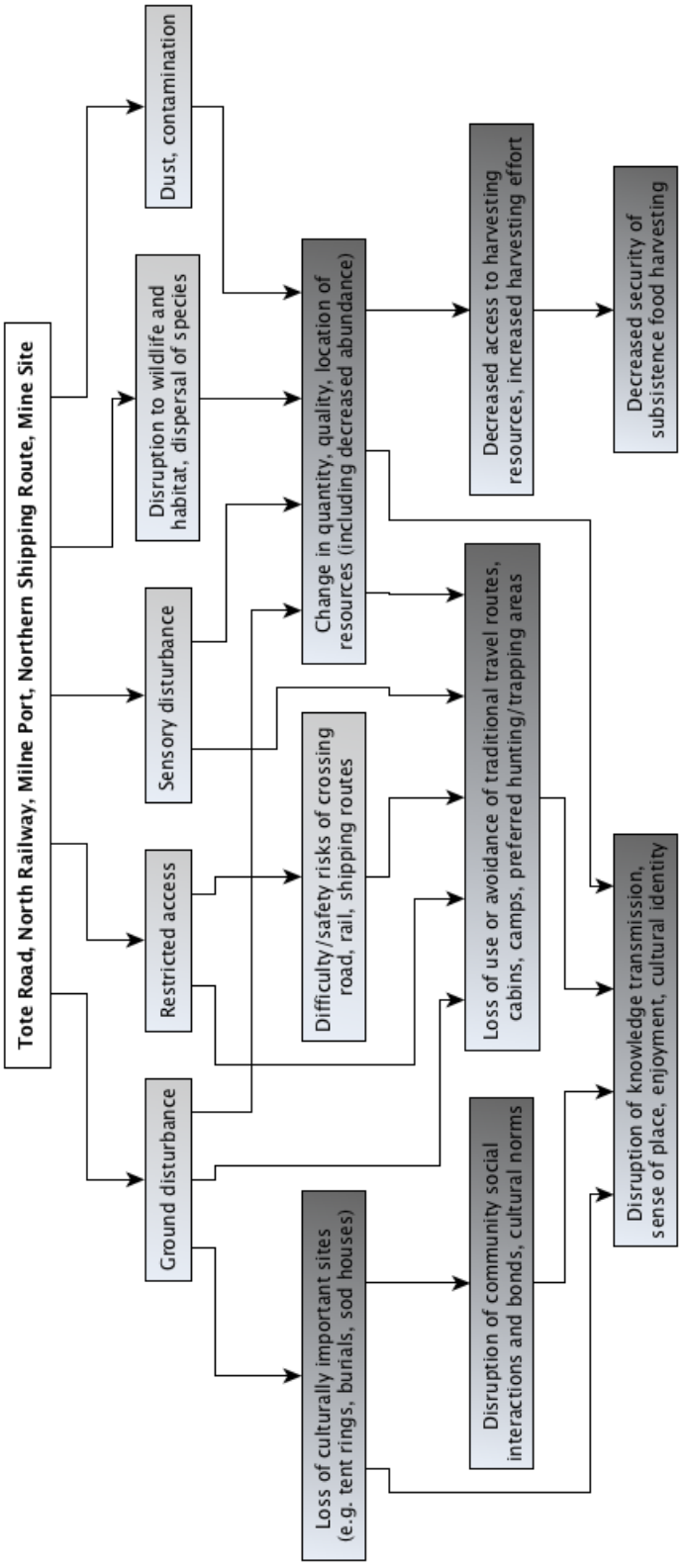

Figure 23: Potential Project interactions in relation to the proposed Phase 2 project with Pond Inlet Cultural Continuity values.

4.6 Preliminary Consideration of Cumulative Effects

A comprehensive cumulative effects assessment was not conducted during this research as it is outside the scope of this Study. While the focus of Study interviews was on potential impacts from the proposed Mary River Project Phase 2, interviewees voiced a number of concerns with impacts that may add to or act synergistically with effects from existing mining, mine-associated activities and other developments on Pond Inlet knowledge and use. These include cumulative effects from the Mary River Project as a whole as well as from additional developments and activities and human-caused changes.

The data presented in this section serve to underscore that Project impacts on Pond Inlet culture (both existing and potential) are likely to be compounded by additional stressors. In short, the cumulative effects from the mine and from other stressors are likely to constrain Pond Inlet community members from using their land and waters in the unencumbered way they are used to, and also disrupt the conditions required for their cultural continuity.

4.6.1 All Existing and Reasonably Foreseeable Mary River Mine Developments

Potential impacts from the Mary River Project Phase 2 on Pond Inlet knowledge and use identified in Sections 4.2.4, 4.3.4, 4.4.4, 4.5.4, and 4.6.4 must be understood in the context of impacts from existing, permitted and potential future Mary River Mine developments. Impacts from existing Mary River Mine infrastructure are discussed in Sections 4.2.3, 4.3.3, 4.4.3, 4.5.3 and 4.6.3. In addition to these developments, a number of Mary River Project components have been permitted but have not yet been constructed. Permitted components include a port at Steensby Inlet (Steensby Port) and a railway (the Southern Railway) connecting the Mary River Mine site to the Steensby Inlet port. Additionally, permitted operations would entail the use of a southern shipping route for transport of ore from Steensby Port through Foxe Basin, Foxe Channel and Hudson Strait. The scope and scale of the full effects loading of Mary River Phase 2 developments can only be understood by considering these impacts within the context of potential impacts from these permitted developments; in other words, the full build out scenario, which now includes Phase 2, a never previously contemplated or permitted expansion of northern ore shipping, port and development of a northern rail route from the mine to Milne Inlet.

This section presents an initial outline of participants' concerns with impacts from permitted Mary River Mine developments and how these may combine or interact with potential impacts of Mary River Mine Phase 2. A Mary River Mine Cumulative Effects Study Area is used to demonstrate a sampling of reported Pond Inlet knowledge and use in relation to all past, current and potential future Mary River Mine developments. This consists of the Study Area as defined in Section 3.1.1 with the following additions:

- Project Footprint: 250m buffer around all existing and potential future physical works, including active Baffinland leases;
- Local Study Area (LSA): 5 km buffer around all existing and potential future physical works, and including Foxe Basin with a 250m buffer on the shoreline; and

- Regional Study Area (RSA): 25km buffer around all existing and potential future physical works; including the marine environment surrounding the Southern Shipping route.

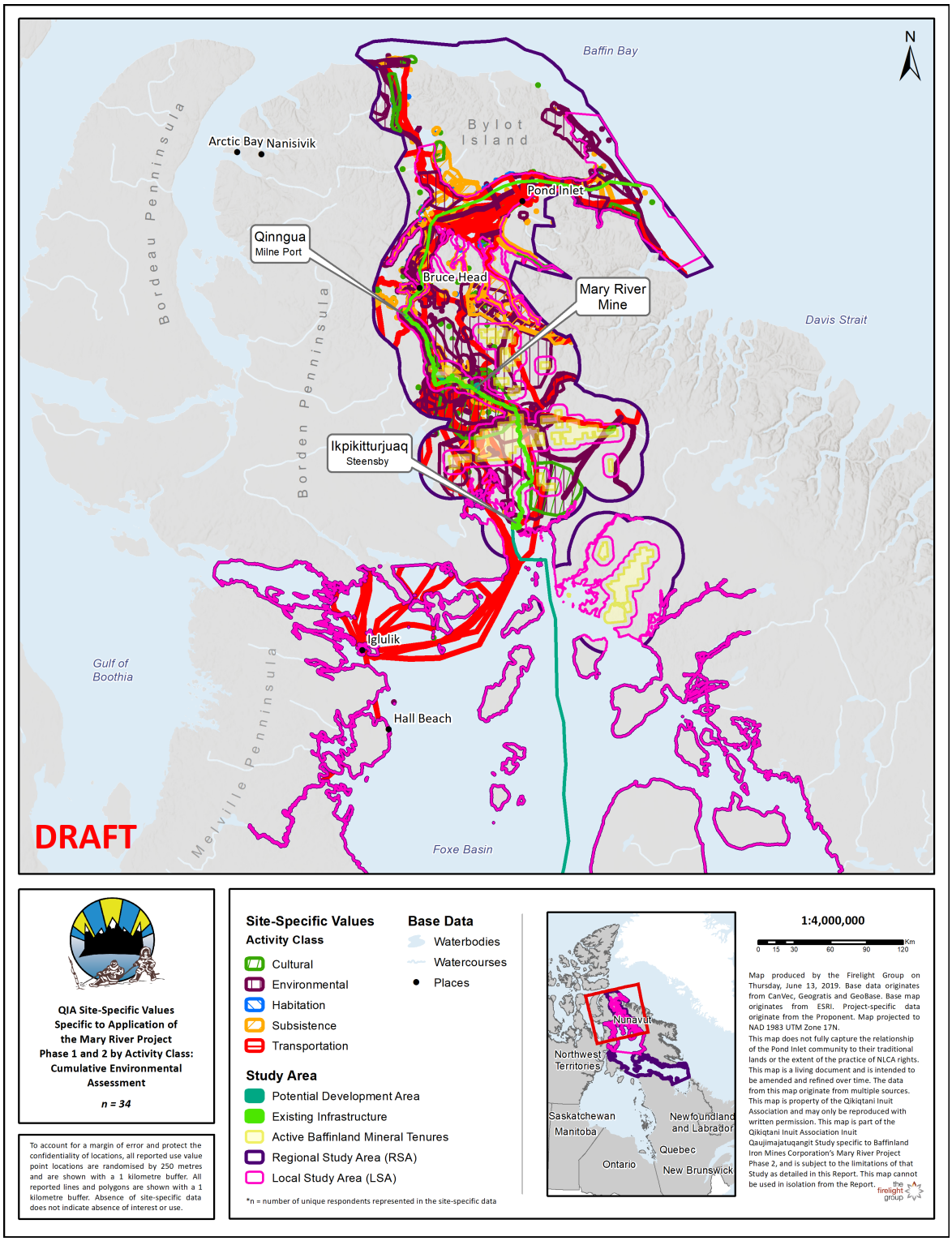

Figure 24: Pond Inlet reported site-specific values by Activity Class within the Mary River Mine Cumulative Effects Study Area

A number of participants expressed concern that the Southern Railway would pass through an area of valued caribou habitat, and noted the presence of a number of important caribou migration corridors within the area. In particular, concerns were focused on the Southern Railway forming a potential barrier to caribou movement within this area. One participant noted the need for crossings to be built along the route in order to mitigate these potential impacts.

> *In his own thinking, he thought, if this [Southern Railway] is going to be used, that it will be more of a barrier to the caribou.* (P16, 26-Apr-19, interpreted from Inuktitut)

> *It's—he doesn't mind it, as long as—he doesn't mind the railway, as long as there's—what do you call them—pathways, for the caribou to go under. And he sees it more necessary to have these pathways for caribou than up here, because there's so much caribou over that way, in this area [area surrounding Southern Rail route].* (P34, 29-Apr-19, interpreted from Inuktitut)

Evidence from interviews suggest that the addition of a potential Northern Railway to the permitted Southern Railway would amplify combined impacts from the two developments should they both proceed. As highlighted below, some participants noted that a railway stretching from Milne Inlet to Steensby Inlet may physically impede the migration of caribou across Baffin Island and disturb caribou and other animals from a large area due to noise levels. Reduced access to important caribou harvesting areas for Inuit hunters was also cited as a concern.

> *Okay. All I can say is there will be several things that Inuit use to travel with a different – different hunt – hunting. Like caribou and wolf. Also, travelling between that two communities, Pond Inlet and Igloolik, will be lost, for sure. Because the Pond people – Pond hunters and Igloolik hunters used to go around... here. Pond people and Igloolik people used to go hunt wolf around here every year. But that will be at blocked too. Because when they build that railroad, either way to Milne Inlet and to Steensby, that will be blocked both way. For hunt – caribou migration and hunters travelling areas...Because Igloolik people usually hunt caribou around here too every year.* (P11, 26-Apr-19)

> *I'm sure it would impact the caribou and the wolves. The noise [would impact caribou]...And the train going back and forth.* (P17, 30-Apr-2019)

In addition to the potential impacts on caribou and caribou harvesting from railway developments, potential impacts on caribou migration from development of the Steensby Port were also identified during interviews.

> *So in the fall, when the–the ice is forming and they – caribou from around this area will travel all the way through here [the northeastern shoreline of Steensby Inlet] to get to–to get up here. He thinks that they will be affected once this [Steensby Port] is built.* (P04, 27-Apr-19, interpreted from Inuktitut)

Participants identified a number of unique habitat areas near Steensby Inlet and to the south in Foxe Basin where shallow waters provide feeding areas for abundant walrus populations. The potential for Project-related vessel traffic on the southern shipping route to disturb walrus populations was observed by participants.

> *He says because of the shallow waters around Steensby in that area, there's lots of walrus. He can see it when he's flying over on the plane on his way to Igloolik or coming from Iqaluit, that you can actually sometimes see the bottom of the water whereas you don't in the Pond Inlet areas. Because of the walrus, they feed at the bottom of the ocean.* (P08, 29-Apr-19, interpreted from Inuktitut)

> *And this is the–the feeding ground for walrus, because it's shallow, and they would be just along the–the open ice...Walrus doesn't stay in the deeper area because they don't stay down underwater as long as seals do … With walrus, they can't bore a hole as deep as the seals, but they can in the–with the ice that is–that's not as thick. And–but they normally revert to the open water.* (P04, 27-Apr-19, interpreted from Inuktitut)

> *The only thing that he is worried about are the walrus habitat ... Because there's lots of walrus in in that area.* (P16, 26-Apr-19, interpreted from Inuktitut)

Additionally, participants from Pond Inlet highlighted that the southern shipping route may impact walrus harvesting and other harvesting practices of Inuit from Hall Beach and Igloolik. This emphasises the need for further research to be completed into the impacts of the Mary River Mine and its operations on Inuit knowledge and use throughout the region.

> *Initially they [People of Pond Inlet] thought this would be a great way for the southern route until they realized how people in Igloolik and Hall Beach, how much they are concerned about that area, so. Their main concern is walrus, because they harvest walrus a lot in that area ... Yeah, this area, the whole area is a habitat for walrus and there's not as much narwhal as where it's the eclipse sound area. This is the waters of the walrus.* (P28, 29-Apr-19, interpreted from Inuktitut)

> *I'm only concerned about this area is Pond – Pond people is not really using all the time. But Igloolik does. Igloolik is really, very concerned about this shipping road along here. Especially Hall Beach… Hall Beach, this a road. It's right on their walrus hunt area. That's very, very concerning for Hall Beach and Igloolik as well. So, also, this area has got – they hunt for fish in the summertime time, the Igloolik people.* (P11, 26-Apr-19)

> *...they [Iglulingmiut] go hunting to that area [Steensby Inlet] and spend their summer season.* (P19, 27-Apr-19)

The slow rate of recovery of arctic environments was highlighted as a primary concern in one participant's consideration of cumulative effects. Another participant emphasised

that time and further study will be required in order to fully understand total impacts of existing Mary River Mine developments.

> *Again, like these types of things, the accumulation of activities happening is going to change the Arctic region and the recovery period for the Arctic region environment, like is very slow.* (P13, 06-Feb-19)

> *He said that we have spent almost ten years now with the development and it won't be until 20 years later that we will fully know what the impact is.* (P04, 07-Feb-19, interpreted from Inuktitut)

The total effects loading from Phase 2 proposed activities and developments in combination with existing and reasonably foreseeable (permitted) Mary River Mine developments is not fully understood. While an initial outline of Pond Inlet concerns with the total effects loading is provided above, further study is required in order to fully characterise potential impacts on Inuit knowledge and use throughout the Mary River Mine Cumulative Effects Study Area.

Impacts from Mary River Phase 2 must furthermore be understood in the context of adverse effects from other sources (past, present, and likely future). Potential impacts from other sources that were highlighted during interviews are presented in Section 4.6.2 below.

4.6.2 Additional Impact Sources

When considering cumulative effects, Study participants highlighted impacts from increased ship traffic, notably from tourism operations and climate-change-related effects on the environment. Study participants reported observing increasing amounts of marine traffic in the Study Area, especially cruise ships.

> *She is saying that traffic has increased greatly up here. And even the cruise ships, there is lots of them coming here now.* (P06, 05-Feb-19)

> *There was a lot of cruise ships last summer. This last summer there was more ships than ever, cruise ships.* (P23, 08-Feb-19)

> *So, my biggest concern's the ships. Where there's too many ships, so I don't see any, what the good side of it toward to the sea mammals. They might be chased ...* (P10, 05-Feb-19)

A major concern among Study participants is that marine traffic is having a disruptive and negative effect on marine mammals in the Study Area. In the quotes below, interviewees discussed how an increase in watercraft, including pleasure vessels, has led to the dispersal of narwhal and contributed to changes in their migration patterns.

> *And there's other small craft, ships, sailboats and we see quite a few of them every year, and they're just increasing and they're going all over the place and they go places where they shouldn't be going to places. So*

> *there's a lot of factors involved in the change of marine migration patterns in the last 20 years.* (P13, 06-Feb-19)

> *They [narwhal] come in groups. Maybe once every two days. One time a ship was going through here [Milne Inlet] and they came across, usually come down this area but they came across, they were running away from a ship, coast guard was going through here, through ice. And they just start … running away. Practically jumping out of the water. Two summers ago.* (P22, 07-Feb-19)

> *There's tourist ships involved up here and that come up here, like last year we had like over 20 I believe that landed in Pond Inlet and they go everywhere and anywhere and they harass the animals. They look for narwhals, they harass them, find them and that's having a big effect on the animals as well.* (P13, 06-Feb-19)

According to Study participants, the lack of regulation and restriction on the speed of tourist vessels and where they can travel are among the reasons why such traffic is disruptive to marine mammals.

> *They [tourist ships] don't respect anything at all, they go right close to the shoreline full speed, they go to places where they're not supposed to go; they're the problem, but in this case, we're not dealing with them.* (P13, 06-Feb-19)

Participants in this Study also expressed concerns that marine traffic in general, including both mining and non-mining traffic, might cumulatively reduce the abundance of marine life (including seals, narwhal, and char) that sustains Pond Inlet ways of life.

> *But all the ships have been coming going back and forth, going to Milne Inlet in through – going through here. Last summer there was hardly any narwhals coming by because of the ships and the cruise ships.* (P23, 08-Feb-19)

Study participants identified repercussions for their land use as a result of the marine traffic and tourist activities, including a loss of catch and avoidance of areas frequented by tourists.

> *And last year, when we waited with all the pack ice that's been going in and out and we have little limited of open water, we spotted three narwhals in front of us. There was a tourist group that was travelling right along the edge. They were looking for open water so they could view narwhals, that's their point is to go down and watch narwhals. And they were like nine snowmobiles with tourists. And just before they got pretty close to us, we waved go back, go back. There were three narwhals here, they were getting closer and closer. They were keep coming and I waved and waved. And before that, the narwhals were scared off by a shot and I missed and all that week that I was waiting for these narwhals, I was disturbed by a bunch of tourists.* (P15, 07-Feb-19)

> *I like to go further on a floe edge, 'cause on – over there, there's usually a lot of people and tourists and outfitters.* (P01, 04-Feb-19)

One Study participant identified oil exploration from years past as a contributing factor in the reduction of animals, and which more recent shipping has exacerbated.

> *Yeah, there's been many changes since the shipping had started. He also thinks that the effect of the mammals diminishing is also the result of the oil exploration that happened years ago in the deeper area, like further out. Further out this way. So.* (P12, 05-Feb-19, interpreted from Inuktitut)

Of particular concern was the potential for narwhal to abandon their calving areas within the fjords and bays of Eclipse Sound. These concerns were expressed within the context of an acknowledged increase in cruise tourism in past years (Stewart et al. 2013).

As described above, Pond Inlet hunters have lost opportunities to provide sustenance to their families and community because of non-mining related marine traffic as well as tourism. In combination with mine-related shipping, Study participants are concerned about impacts on the availability of traditional foods.

> *So, it's not only the mining ships that go up there, there's other ship traffic. And these sail boats come up now, and they can go anywhere they want to, even places we don't want them to go to. So, he's – so it's very concerning that there will now be no more food to us that's left in the future.* (P08, 05-Feb-19, interpreted from Inuktitut)

Effects from the Mary River Project Phase 2 on the Pond Inlet community's habitation sites and sense of place would also be in addition to existing effects from non-mining ship traffic. For instance, cruise ships and recreational vessels impact the enjoyment of community members' time out at their cabins as they sail close to shore.

> *That's a narwhal hunting area. He has a camp in there too. And even cruise ships come right by the shoreline. And that happened in the summer. Some of the cruise ships don't pay attention, so we've had people getting too close, but the cruise ships don't listen. So, it's not only the mining ships that go up there, there's other ship traffic. And these sail boats come up now, and they can go anywhere they want to, even places we don't want them to go to. So, he's – so it's very concerning that there will now be no more food to us that's left in the future.* (P08, 05-Feb-19, interpreted from Inuktitut)

Pond Inlet marine hunting and fishing are, moreover, being affected by changes in the ecological environment, including warming marine environments as a result of climate change. An example of this trend is a noted increase in orca whales in the Study Area, with attendant impacts on prey or competitor species (such as narwhal or Arctic char, respectively- see also Higdon and Ferguson 2009).

> *And one of the other reasons that we see now is that there is a whole lot more killer whales coming to Pond Inlet area, like lots of them; and again, I*

> *was talking about earlier that there's different factors involved in narwhals not migrating to Pond Inlet area as they used to, and I believe this is one of them as well. The killer whales two years ago stayed in Milne area all summer and kept the narwhals away from that area; and again, they're killers, they'll just kill.* (P13, 06-Feb-19)
>
> *Yeah. Also for the last five years we've had a problem with killer whales, they're here all the time now. Last summer they came … where the narrows are, three days later seven more and they keep adding. And HTO decided let's count how many killer whales are there now and how many narwhales has been killed by killer whales. So we went right there, right here somewhere here, yeah. We went right there. And the killer whales were hunting over there, over there somewhere, yeah...Yeah. And we come, there were over 100 killer whales and they were teaching their young ones how to kill, narwhals.* (P07, 05-Feb-19)

In sum, potential effects from the Mary River Mine Project Phase 2 on the Pond Inlet community's knowledge and use must be considered in combination with effects from other sources, including climate change, non-mining marine traffic, and tourism. Given that the evidence suggests there will be measureable adverse effects from Phase 2 on Inuit use and values, a full and proper assessment of cumulative effects on Inuit culture, resources and land use is necessary in the Study Area. To date, that has not been conducted. As a result, predicted interactions provided in this Report are necessarily conservative as they are based on Project-specific information. Because cumulative effects may render Pond Inlet VCs more vulnerable to disturbance, this Study strongly recommends that a full cumulative effects assessment be conducted.

5.0 CONCLUSION

5.1 SUMMARY

This Study of Baffinland's proposed Mary River Project Phase 2 expansion suggests past and ongoing and likely future Marry River Project impacts on Pond Inlet's Marine Hunting, Terrestrial Hunting and Trapping, Fishing and Fresh Water, Travel and Trails, and Cultural Continuity values.

Based on the data collected in this Study, it is possible to state with a high degree of confidence that the Study Area is of great importance to the Pond Inlet community. The site-specific data clearly demonstrate that the Pond Inlet community have used the Study Area across multiple generations and continue to do so. A total of 1020 site-specific values were reported in the Study Area (the Project Footprint, LSA, and RSA) combined. Additionally, the Study Area contains numerous important sites that support the Pond Inlet community's cultural persistence across a range of cultural practices, including (but not limited to) marine and terrestrial hunting; fishing; trapping; and community and family gatherings.

In particular, along the proposed railway, the potential disruption of key travel routes is of great concern to Pond Inlet community members. The potential lack of access to these important travel routes will not only inhibit access to hunting areas and trails but also to other communities on Baffin Island. The continued reliance on narwhal and caribou as primary food sources was clear in the interviews with Study participants. The observed impact on these populations since the Mary River mine's operations began was documented in the Study.

This Study has identified a number of likely interactions (Sections 4.2.4, 4.3.4, 4.4.4, 4.5.4, and 4.6.4) from the Project that would result in adverse effects on the Pond Inlet community's knowledge and use.

Although the Study VCs are interconnected, this Study has identified potential interactions between the Project and each VC. Project interactions and impact pathways impacting marine mammal harvesting, safe travel inland and on the sea ice, increased harvesting effort, loss and disturbance of hunting areas and cabins, and knowledge transmission and sense of place which emerged from the Study related to the VC of Marine Hunting are as follows:

- Impacts to marine ice, water and sediment quality primarily from the Milne Port;
- Avoidance of areas by marine mammals and harvesters due to the Milne Port and the Northern Shipping Route;
- Impacts to marine species health and impacts to habitat loss and changes in habitat due to the Milne Port and the Northern Shipping Route;
- Acoustic disturbances from the Northern Shipping Route and the Milne Port;
- Risks of mortality from vessel strikes and increased vessel interactions due to the Northern Shipping Route;

- Loss of wildlife habitat, including critical narwhal calving environments due to acoustic disturbance from ship traffic;
- Loss of use or avoidance of preferred areas for hunting due to decreased abundance of preferred species (such as narwhal); and
- Loss of use or avoidance of preferred areas for hunting due to safety concerns and restrictions on access.

Project interactions and impact pathways, including impacts to safety, increasing harvesting effort, and a loss or disturbance of use of hunting areas and camps/cabins with potential impacts to household and community-level subsistence, that emerged from the Study related to the VC of Terrestrial Hunting are as follows:

- Increased dust from the Tote Road;
- Alterations to, and loss of, habitat from all aspects of the mine operation;
- Barriers to movement from particularly mine-related activities;
- Risk of mortality due to truck and train collisions;
- Impacts to caribou health, including impacts related to sensory disturbance and contamination;
- Loss of use or avoidance of preferred areas for hunting and trapping due to safety concerns and restriction of access; and
- Impacts on the abundance of wildlife, particularly caribou, due to factors including acoustic disturbance.

Project interactions and impact pathways impacting fish harvesting and the ability to collect and drink fresh water that emerged from the Study related to the VC of Fishing and Fresh Water are as follows:

- Impacts to quality and quantity from the Tote Road and mine site;
- Impacts to the health and condition of fish (Arctic char) due to changing water quality and impacts from the Milne Port and Northern Shipping Route;
- Habitat loss and alteration in both marine and freshwater environments for Arctic char due to Milne Port and North Railway and Tote Road related activities, leading to a decline in fish populations; and
- Species avoidance of areas due to impacts to fish habitat and diminished water quality.

Project interactions and impact pathways impacting increased travel time and harvesting effort that emerged from the Study related to the VC of Travel, Trails, and Habitation are as follows:

- Damage to travel equipment due to the Tote Road and dust from the Mine Site;
- Sensory disturbances and impacts to safety;
- Impacts to safe inland travel from mine-related activities;

- The loss of traditional caribou trails due to the North Railway;
- Impacts to ground disturbance from the Milne Port and Phase 2 activities;
- Impacts to caribou harvesting and marine mammal harvesting due to Phase 2 activities generally;
- Changes to access to preferred hunting and trapping areas due to disruption from truck and rail traffic; and
- Potential changes to access, should current plans for the proposed rail routing proceed, due to interference with the primary trail to Igloolik.

Project interactions and impact pathways impacting knowledge transmission and sense of place that emerged from the Study related to the VC of Cultural Continuity are as follows:

- Changes in access and the availability of harvesting resources due to a loss of access, a loss of cabins and camps for hunting, and impacts to the availability of mammals (caribou and narwhal in particular) due to mine-related activities;
- Changes in access to travel corridors, cabins and camps due to mine-related activities including the Tote Road;
- Loss of archaeological sites due to ground disturbance from the terrestrial mine-related activities; and
- Loss of other culturally important gathering sites, tent rings and other sites due to ground disturbance from the mine, road and proposed rail, and shipping traffic.

In addition, Study participants stated that cumulative effects have already impaired their ability to practice culturally important activities in the Study Area. As such, the Project may create additional or synergistic adverse effects on the Pond Inlet lands, cultural knowledge and use of lands, practice of rights, and wellbeing. From the findings of this Study, it is recommended that a full and comprehensive evaluation of potential cumulative effects that may emerge from this Project in interaction with past, present, and reasonably foreseeable future anthropogenic activities be undertaken.

5.2 CLOSURE

Should you wish to discuss any aspect of this Report further, please do not hesitate to contact Rachel Olson at (604) 563-2245.

Sincerely,
ORIGINAL SIGNED
Rachel Olson, PhD

_____

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CITATIONS

Baffinland Iron Mines Corporation. 2018. “Technical Supporting Document: TSD 02: Project Description.” Baffinland.

———. 2019. “Mary River Mine.” Corporate Website. *Baffinland Iron Mines Corporation* (blog). March 18, 2019. https://www.baffinland.com/mary-river-mine/mary-river-mine/.

Bennett, John, and Susan Rowley. 2004. *Uqalurait: An Oral History of Nunavut*. McGill-Queen’s Press - MQUP.

Condon, Richard G., Peter Collings, and George Wenzel. 1995. “The Best Part of Life: Subsistence Hunting, Ethnicity, and Economic Adaptation among Young Adult Inuit Males.” *Arctic* 48 (1): 31–46.

DeRoy, Steven. 2012. “Using Geospatial and Network Analysis to Assess Accessibility to Core Homeland Areas of the Athabasca Chipewyan First Nation (ACFN) in the Context of Increasing Oil Sands Development.” Dissertation for Masters of Geographic Information Science, University College London.

Ford, James D., Joanna Petrasek Macdonald, Catherine Huet, Sara Statham, and Allison MacRury. 2016. “Food Policy in the Canadian North: Is There a Role for Country Food Markets?” *Social Science & Medicine* 152 (March): 35–40. https://doi.org/10.1016/j.socscimed.2016.01.034.

Government of Canada, Statistics Canada. 2017. “Census Profile, 2016 Census - Pond Inlet, Hamlet [Census Subdivision], Nunavut and Nunavut [Territory].” February 8, 2017. https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=6204020&Geo2=PR&Code2=62&Data=Count&SearchText=Pond%20Inlet&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=6204020&TABID=1.

Hallam, Elizabeth, and Tim Ingold. 2016. *Making and Growing: Anthropological Studies of Organisms and Artefacts*. Routledge.

Hamlet of Pond Inlet. 2019. “Hamlet of Pond Inlet: History.” Municipal Website. *Hamlet of Pond Inlet, Municipal Website* (blog). March 18, 2019. http://pondinlet.ca/history.

Harder, Miriam T., and George W. Wenzel. 2012. “Inuit Subsistence, Social Economy and Food Security in Clyde River, Nunavut.” *ARCTIC* 65 (3). https://doi.org/10.14430/arctic4218.

Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling, and D. Stalker. 1999. *Cumulative Effects Assessment Practitioners Guide*. Hull, Quebec: AXYS Environmental Consulting Ltd. and the CEA Working Group for the Canadian Environmental Assessment Agency.

Henderson, Ailsa. 2008. *Nunavut: Rethinking Political Culture*. UBC Press.

Higdon, Jeff W., and Steven H. Ferguson. 2009. “Loss of Arctic Sea Ice Causing Punctuated Change in Sightings of Killer Whales (*Orcinus Orca*) over the Past Century.” *Ecological Applications* 19 (5): 1365–75. https://doi.org/10.1890/07-1941.1.

“Inuit Heritage Trust: Place Names Program.” n.d. Accessed March 21, 2019. http://ihti.ca/eng/place-names/pn-index.html?agree=0.

Karetak, Joe, Frank J. Tester, and Shirley Tagalik. 2017. *Inuit Qaujimajatuqangit: What Inuit Have Always Known to Be True*. Fernwood Publishing.

Lee, David, and George Wenzel. 2004. “Narwhal Hunting by Pond Inlet Inuit: An Analysis of Foraging Mode in the Floe-Edge Environment.” *Études/Inuit/Studies* 28 (2): 133–57. https://doi.org/10.7202/013200ar.

Matthiasson, John S. 1992. *Living on the Land: Change Among the Inuit of Baffin Island*. University of Toronto Press.

Nunavut, Department of Environment. 2018. “2018-2019 Summary of the Nunavut Hunting Regulations.” Nunavut, Department of Environment.

Olson, Rachel, Jeffrey Hackett, and Steven DeRoy. (2016) *Mapping the Digital Terrain: Towards Indigenous Geographic Information and Spatial Data Quality Indicators for Indigenous Knowledge and Traditional Land-Use Data Collection.* The Cartographic Journal.

Ready, Elspeth. 2018. “Sharing-Based Social Capital Associated with Harvest Production and Wealth in the Canadian Arctic.” Edited by Spencer Moore. *PLOS ONE* 13 (3): e0193759. https://doi.org/10.1371/journal.pone.0193759.

Searles, Edmund. 2002. “Food and the Making of Modern Inuit Identities.” *Food and Foodways* 10 (1–2): 55–78. https://doi.org/10.1080/07409710212485.

Stenton, Douglas R. 1991. “The Adaptive Significance of Caribou Winter Clothing for Arctic Hunter-Gatherers.” *Études/Inuit/Studies* 15 (1): 3–28.

Stewart, E. J., J. Dawson, S. E. L. Howell, M. E. Johnston, T. Pearce, and H. Lemelin. 2013. “Local-Level Responses to Sea Ice Change and Cruise Tourism in Arctic Canada’s Northwest Passage.” *Polar Geography* 36 (1–2): 142–62. https://doi.org/10.1080/1088937X.2012.705352.

Tester, Frank James, and Peter Irniq. 2008. “Inuit Qaujimajatuqangit: Social History, Politics and the Practice of Resistance.” *Arctic* 61: 48–61.

Tobias, Terry N. 2009. *Living Proof: The Essential Data-Collection Guide for Indigenous Use-And-Occupancy Map Surveys*. Ecotrust Canada.

Wenzel, G. W. 2004. “From TEK to IQ: Inuit Qaujimajatuqangit and Inuit Cultural Ecology.” *Arctic Anthropology* 41 (2): 238–50. https://doi.org/10.1353/arc.2011.0067.

Wenzel, George W. 1991. *Animal Rights, Human Rights: Ecology, Economy, and Ideology in the Canadian Arctic*. University of Toronto Press.

INTERVIEW CITATIONS

P01, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P01, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P02, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P03, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P04, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P04, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P04, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P04, 27-APR-19. 2019. Transcript of Apr 27, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P05, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P06, 4-FEB-19. 2019. Transcript of Feb 4, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P07, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P07, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P08, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P08, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P09, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P10, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P10, 27-APR-19. 2019. Transcript of Apr 27, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P11, 6-FEB-19. 2019. Transcript of Feb 6, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P11, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P11, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P12, 5-FEB-19. 2019. Transcript of Feb 5, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P13, 6-FEB-19. 2019. Transcript of Feb 6, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P14, 6-FEB-19. 2019. Transcript of Feb 6, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P15, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P15, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P16, 6-FEB-19. 2019. Transcript of Feb 6, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P16, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P17, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P17, 30-APR-19. 2019. Transcript of Apr 30, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P18, 6-FEB-19. 2019. Transcript of Feb 6, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P19, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P19, 27-APR-19. 2019. Transcript of Apr 27, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P20, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P21, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P21, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P22, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P22, 27-APR-19. 2019. Transcript of Apr 27, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P23, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P23, 28-APR-19. 2019. Transcript of Apr 28, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P24, 7-FEB-19. 2019. Transcript of Feb 7, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P24, 26-APR-19. 2019. Transcript of Apr 26, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P25, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P26, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P27, 27-APR-19. 2019. Transcript of Apr 27, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P28, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P28, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P29, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P30, 8-FEB-19. 2019. Transcript of Feb 8, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P30, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P31, 30-APR-19. 2019. Transcript of Apr 30, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P32, 28-APR-19. 2019. Transcript of Apr 28, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P33, 30-APR-19. 2019. Transcript of Apr 30, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P34, 29-APR-19. 2019. Transcript of Apr 29, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

P35, 30-APR-19. 2019. Transcript of Apr 30, 2019 Interview from the QIA Inuit Knowledge and Use Study Specific to the Baffinland Mary River Project Phase 2. Firelight Research Inc. for the QIA.

APPENDIX 1: ENGLISH LANGUAGE CONSENT FORM

CONSENT FORM
INUIT QAUJIMAJANGIT COLLECTION

Participant Name: _____

Community: _____

Purpose

QIA is collecting Inuit Qaujimajangit (IQ) to support protecting and advancing the rights and interests of Qikiqtani Inuit. This IQ collection supports the ongoing development of the QIA IQ database, in this case specifically about the Mary River Project and the proposed Phase 2 application. IQ will be collected on areas of traditional use, marine and terrestrial environments, wildlife, activities on the land, water and ice, harvesting, customs, beliefs, values and other aspects of cultural expression and IQ.

By signing below, I indicate my understanding that:

1. I am an Inuk, and a member of the Qikiqtani Inuit Association (QIA). I understand that QIA is working with the Firelight Group to conduct these interviews.

2. I consent to have my words and responses recorded on maps, in notes, and using audio and video recording equipment.

3. I wish to participate in the interview, I am free to not respond to questions that may be asked and I am free to end the interview at any time I wish.

4. At the conclusion of the interview, QIA will be given possession of all materials containing my IQ contribution. QIA will maintain intellectual property rights over my IQ contribution and may use the information in pursuit of its work defending and communicating the rights, interests, and values of Inuit under the Nunavut Agreement. This includes, but is not limited to, sharing information for the purposes of negotiation or participation in regulatory or court proceedings. I direct QIA to protect my IQ contribution in all its forms.

5. I understand some of my IQ contribution might include information where I could be considered the owner of copyright or other intellectual property rights. If this occurs, I understand I will continue to be the exclusive owner of any property rights, if any, that I have in my IQ contribution. I do not assign or waive any legal rights I have in my IQ contribution.

6. I appoint QIA to act as my representative to use my IQ contribution for any purpose, in any format. I give QIA a non-exclusive licence to use my IQ contribution, and to grant further licence to my IQ contribution for any purpose that QIA considers to be in the best interests of Inuit.

7. QIA shall hold my IQ contribution until such time as I request in writing that QIA return my IQ contribution. If I request the return of my IQ contribution, I agree QIA may keep a copy of the IQ contribution in all its forms for its continued use pursuant to its non-exclusive licence.

CONSENT FORM
INUIT QAUJIMAJANGIT COLLECTION

8. I give my permission to QIA to publically disclose and use any personal information about me that is contained in my IQ contribution, including permission that my name can be publically associated with my IQ contribution and my name and personal information may be used by QIA in connection with any QIA use of my IQ contribution.

9. I consent to any filming, recording or photographing of IQ interviews where I am present and use of all images of myself in whatever form.

Privacy Statement

At Qikiqtani Inuit Association (QIA), respecting privacy is an important part of our commitment to our members. We uphold the 10 principles of the federal legislation known as PIPEDA (Personal Information Protection and Electronic Documents Act), which sets out rules for the collection, use and disclosure of personal information.

Any time you participate as a respondent, you can be assured that your individual responses will be kept confidential and never linked to your personal identifying information without your express permission (as explained above). We safeguard all personal identifying information by password-protecting and storing it on a secure network. We only keep personal information for as long as it remains necessary or relevant for the purposes outlined above, or as required by law.

If you have any questions or concerns about how your privacy is protected at QIA, or if you wish to review your information, please contact our Privacy Officer by e-mail at ExecDir@qia.ca, or by mail to Igluvut Building, 2nd floor, P.O. Box 1340, Iqaluit, NU X0A 0H0, or by telephone at (867) 975-8246.

Signatures to Consent

By signing this consent form, you are allowing QIA to use the information you provide.

Signature of participant _____ Date _____

APPENDIX 2: INUKTITUT LANGUAGE CONSENT FORM

ᐊᒃᑎᖅᓯᔾᔪᑎ ᑕᑕᑎᕆᐊᓕᒃ
ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ

ᐃᓚᐅᔪᖅ ᐊᑎᖓ: ______________________________

ᓄᓇᖓ: ______________________________

ᐃᔾᔪᑎᒋᔭᕗᑦ

ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐃᑲᔪᕈᑎᖏᑦ ᓴᐳᓐᓂᐊᕐᒥᒃ ᐊᒻᒪ ᐱᕗᑦᑎᕐᑎᑦᑎᓂᕐᒥᒃ ᐱᔪᓇᐅᑎᖏᓐᓄᑦ ᐊᒻᒪᓗ ᐱᔪᒪᔭᖏᓐᓄᑦ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ. ᐅᓇ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᑲᑎᑦᑎᓂᖅ ᓄᐊᑦᑎᓂᖅ ᐃᑲᔪᖅᑐᖅ ᑲᔪᓯᓗᓂ ᐱᕗᑦᑎᐊᑎᑕᐅᓂᕐᒧᑦ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖏᑦ ᐱᓪᓗᒋᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓄᑦ ᖃᐅᔨᓴᕈᑎᑦ ᑲᑎᓯᒪᔪᓄᑦ. ᑖᒃᑯᓄᖓᓗ ᐱᓯᒪᔪᑦ ᓄᓘᔾᔭᖅᓂ ᓴᓇᔪᑦ ᐊᒻᒪᓗ ᓴᓇᔭᐅᑲᓂᕈᓐᓇᖅᑐᖅ ᓯᕐᕆᓂᖓ 2 ᐆᒃᑐᑎᖓᓄᑦ. ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᑲᑎᑕᐅᓂᐊᖅᑐᑦ ᑕᒪᒃᑯᐊ ᐱᐅᓯᑐᖃᕐᓄᑦ ᐊᑐᖅᑕᐅᕙᒃᑐᑦ, ᑕᕆᐅᕐᒥ ᐊᒻᒪᓗ ᓄᓇᒥ ᐊᕙᑎᖏᓐᓂᒃ, ᓂᕆᔭᑦ, ᓄᓇᒥ ᖃᓄᐃᓕᐅᕈᑕᐅᕙᒃᑐᑦ, ᐃᒪᕐᒥ ᐊᒻᒪᓗ ᓯᑯᒥ, ᐊᓯᕙᕈᓯᑦ, ᐊᑐᖅᐸᒃᑕᑕᐅᖃᑦ, ᐅᒃᐱᕆᔭᑦ, ᐊᑑᑎᖃᖅᑐᑦ ᐊᓐᓂᓇᖅᑐᑦ ᐊᒻᒪᓗ ᐊᓯᖏᑦ ᐱᐅᓯᑐᖃᕐᑎᒍᑦ ᐅᖃᐅᓯᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᑦ.

ᐊᑎᓕᐅᖅᓗᒍ ᐊᖏᓂ, ᓇᓗᓇᐃᖅᐸᖓ ᑐᑭᓯᓂᖅᓂᒃ:

1. ᐃᓅᔪᖓ, ᐊᒻᒪᓗ ᐃᓚᒋᔭᐅᔪᖓ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ. ᑐᑭᓯᔪᖓ ᐅᑯᐊ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᓴᓇᖃᑎᖃᖅᑐᑦ ᕗᐃᔭᓚᐃᑦ ᐱᓇᓱᐊᖃᑎᒌᑦ [Firelight Group] ᑖᒃᑯᓂᖓ ᐊᐱᖅᓱᖅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᖅᓗᑎᒃ.

2. ᐊᖏᕐᒥᖅᑐᖓ ᐅᖃᖅᓂᐊᖅᒪ ᐊᒻᒪᓗ ᑭᐅᓯᖃᑦᑕᖅᓗᖓ ᓂᐱᓕᐅᖅᑕᐅᓗᖓ ᑎᑎᕋᖅᑕᐅᓗᑎᓗ ᓄᓇᙳᐊᑎᒎᑦ, ᑎᑎᕋᖅᑕᐅᕙᓪᓕᐊᓗᑎᒃ, ᐊᒻᒪᓗ ᓂᐱᓕᐅᕈᑎᒃᑯᑦ ᐊᒻᒪᓗ ᑕᖅᓴᓯᐅᑉᓴᑎᒎᑦ.

3. ᐃᓚᐅᕙᓚᐅᖓ ᐊᐱᖅᓱᖅᑕᐅᔪᓂ ᖃᐅᔨᓴᕈᑎᓄᑦ, ᐃᓱᒪᒃᓱᖅᑐᖓ ᑭᐅᓯᓐᖏᑦᑐᓐᓇᖅᓱᖓ ᐊᐱᖅᑯᑎᑦ ᐊᒻᒪᓗ ᐃᓱᒪᒃᓱᖅᑐᖓ ᓄᖅᑲᕈᓐᓇᖅᓱᖓ ᐊᐱᖅᓱᖅᑕᐅᕙᓪᓕᐊᓂᕈᒪ ᖃᖓᑐᐃᓐᓇᖅ.

4. ᐃᓯᓚᑎᑦᑐᒍ ᐊᐱᖅᓱᖅᑐᑦ, ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᑐᓂᔭᐅᓂᐊᖅᑐᑦ ᑕᒪᕐᒥᒃ ᑎᑎᖅᑲᓂᒃ ᐱᑦᑐᒋᑦ ᐅᕙᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐅᖃᐅᓯᕆᔭᓐᓂᒃ. ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᖃᑐᔾᔨᖃᑎᒌᑦ ᓇᒥᓂᖅ ᐱᖁᑎᒋᓂᐊᖅᑕᖏᑦ ᐱᕗᓐᓇᖅᓂᖅᑕᖅᑐᑦ ᑖᒃᑯᓄᖓ ᐅᕙᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐊᑐᕐᓇᖅᑐᑦ ᑐᓴᖅᑎᖅᑎᑦᔪᑎᒋᓗᒋᑦ ᐱᑦᑐᒍ ᓴᓇᓕᕆᔭᑎᒃ ᐊᒻᒪᓗ ᑐᓴᖅᑎᖅᑎᑦᔪᑕᐅᔪᓄᑦ ᐱᕗᓐᓇᖅᓂᖅᓄᑦ, ᐱᔭᐅᔪᒪᔪᓄᑦ, ᐊᒻᒪᓗ ᐊᑑᑎᖃᖅᑐᓄᑦ ᐃᓄᒃᓄᑦ ᐊᑖᒍᑦ ᓄᓇᕗᒻᒥ ᐊᖏᕈᑎᖏᑎᒎᑦ. ᐅᓇ ᐃᓚᖃᖅᑐᖅ, ᑭᓱᐊᓂ ᐃᓚᒃᓂᕈᓐᓇᖅᑐᖅ ᑭᓱᑐᐃᓐᓇᓂᒃ, ᑐᓴᖅᑎᖅᑎᑦᔪᑎᒋᔭᒃ ᐊᑐᖅᑕᐅᓗᑎᒃ ᐋᖅᑭᒋᐅᖅᑐᓂ ᐊᒻᒪᓗ ᐃᓚᐅᔪᓂ ᐱᖁᔭᖑᓕᕆᔪᓂ ᐅᓪᓗᒥᓐᓂᑦ ᐃᖅᑲᖅᑐᖅᑕᐅᔪᓂ. ᐊᖏᕐᒥᖅᑕᒃ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᓴᐳᒻᒥᖁᓪᓗᒋᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᒃ ᖃᓄᑐᐃᓐᓇᖅ.

5. ᑐᑭᓯᔪᖓ ᐃᓚᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᒃ ᐃᓚᖅᑲᖅᓇᖅᑐᑦ ᑐᓴᖅᑎᖅᑎᑦᔪᑎᒋᔭᐅᓂᒃ ᑕᐃᒪᓗ ᐃᓱᒪᒋᔭᐅᓂᐊᖅᑐᑦ ᐅᑯᐊ ᓇᒥᓂᖅᑯᑎᒃ ᑕᕐᕋᓕᐅᕈᓐᓇᖅᓂᖅᑯᑦ ᐱᕗᓐᓇᐅᑎᖅᑕᖅᑐᖓ ᐅᓪᓗᒥᓐᓂᑦ ᓇᒥᓂᖅ ᐱᖅᑕᖅᑎᑕᐅᕙᓐᓂᖅᑯᑦ ᐱᕗᓐᓇᐅᑎᖅᑕᖅᑐᖓ. ᐱᑕᖃᕐᓂ, ᑐᑭᓯᔪᖓ

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ᑲᔪᓯᓂᐊᖅᑕᕋ ᓇᖕᒥᖃᖅᑐᖓ ᓇᓪᓕᐊᖕᓄᑐᐃᓐᓇᖅ ᐱᖁᑎᓐᓄᑦ ᐱᔪᓐᓇᐅᑎᑎᒍᑦ, ᐱᑕᖃᕈᓂ, ᑕᐃᑲᓂ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᐅᓂᒃ, ᑐᓂᓯᑐᐃᓐᓇᐅᓐᖏᓚᖓ ᐊᒻᒪᓗ ᐋᖅᓱᓐᖏᑦᑐᖓ ᓇᓪᓕᐊᖕᓂᑐᐃᓐᓇᖅ ᒪᓕᒐᑎᒍᑦ ᐱᔪᓐᓇᐅᑎᒋᔭᐅᓂᒃ ᑖᒃᑯᓄᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᐅᓄᑦ.

6. ᑎᒃᑯᐊᖅᓯᕗᖓ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᑮᓪᓚᖅᑐᖁᑦᑐᒋᑦ ᐅᕙᓂᒃ ᐊᑐᕐᓗᑎᒃ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᐅᓂᒃ ᑭᓱᑐᐃᓐᓇᒧᑦ ᐊᑐᕈᓐᓇᖅᑎᑦᑐᒋᑦ, ᖃᓄᐃᓕᖓᑐᐃᓐᓇᖅᑐᑎᒍᑦ. ᑐᓂᓯᕗᖓ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᑕᒪᐃᓐᓂᒃ ᐊᑐᕈᓐᓇᖅᑐᒋᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᓂᒃ, ᐊᒻᒪᓗ ᑐᓂᓯᔾᔪᑎᒋᑲᓂᕈᓐᓇᖅᑕᖏᑦ ᐊᔪᖏᑎᑦᑐᒋᑦ ᑕᒪᑐᒥᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᐅᓄᑦ ᑭᓱᑐᐃᓐᓇᒥᒃ ᐱᔾᔪᑎᖃᖅᑲᓗᑎᒃ ᑖᒃᑯᐊ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐱᓕᕆᓂᖏᓐᓄᑦ ᐱᑦᑐᒋᑦ ᐱᔪᒪᔭᖏᓐᓄᑦ ᐃᓄᐃᑦ.

7. ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᑎᒍᒥᐊᕐᓂᐊᖅᑕᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᐅᓂᒃ ᑕᐃᒪᓗ ᖃᖓᐅᓕᖅᐸᑦ ᐱᔪᒪᒍᒃᑭᑦ ᑭᓯᐊᓂ ᑎᑎᕋᕐᕕᒋᓗᒋᑦ ᑖᒃᑯᐊ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐅᑎᖅᑎᑕᐅᕐᑯᓗᒋᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᒃᑲ. ᑕᐃᒪᓗ ᐅᑎᖅᑎᑕᐅᕐᑯᒃᑭ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᒃᑲ, ᐊᖏᖅᑐᖓ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐱᓯᒪᔪᓐᓇᖅᑕᖏᑦ ᑕᕝᕙᖏᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᒃᑲ ᖃᓄᑐᐃᓐᓇᖅ ᐱᓯᒪᔪᑦ ᑲᔪᓯᓗᒋ ᐊᑐᕐᓗᒋᑦ ᒪᓕᒐᑎᒍᑦ ᑕᐃᒪᓐᓂᒃ ᐊᔪᖏᑎᑦᑕᒃᑲ.

8. ᐅᕙᖓ ᐊᖏᖅᑐᖓ ᑖᒃᑯᓄᖓ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐃᓄᓕᒫᓄᑦ ᓴᕿᑎᑕᐅᔪᓐᓇᖅᑐᑦ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᐅᕙᓂᒃ ᐱᓯᒪᔪᑦ ᐅᑯᐊᓗ ᐃᓗᐊᓃᑦᑐᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᓂ, ᐃᓚᒋᔭᐅᔪᑦ ᐊᖏᖅᓱᕆᑦᓗᖓ ᐊᑎᕋ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᖅ ᐃᓄᓕᒫᓄᑦ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓐᓂᒃ ᐃᑲᔫᑎᒋᔭᓄᑦ ᐊᒻᒪᓗ ᐊᑎᕋ ᐊᒻᒪᓗ ᐅᕙᓂᒃ ᐅᖃᖅᓯᒪᔫᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᑲᑎᖓᔫᓄᑦ ᐊᑕᔫᓄᑦ ᓇᓕᐊᑐᐃᓐᓇᖅ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐃᑲᔫᑎᒋᔭᖏᓐᓄᑦ.

9. ᐊᖏᖅᑐᖓ ᑕᕆᔭᐅᓯᐊᖑᔪᓐᓇᖅᑐᖓ, ᓂᐱᓕᐅᖅᑕᐅᓗᖓ ᐅᓪᕙᔫᓐᓃᑦ ᐊᔾᔨᓕᐅᖅᑕᐅᓗᖓ ᑖᒃᑯᓄᖓ ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᑕᖏᓄᑦ ᐊᐱᖅᓲᑎᑦ ᖃᐅᔨᓴᖅᑎᖏᓐᓄᑦ ᑐᓂᔭᐅᓂᒃ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᑕᒪᕐᒥᒃ ᐊᔾᔨᙳᐊᒃᑲ ᖃᓄᐃᓕᖓᔪᑐᐃᓐᓇᐃᑦ.

ᐃᓕᖅᓯᒃ ᐱᓯᒪᔪᓂᒃ ᐅᖃᖅᓯᒪᔪᓄᑦ

ᑕᐃᑲᓂ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ, ᐃᒃᐱᒍᓱᑦᑎᐊᕐᓗᑎᒃ ᐃᓕᖅᓯᒃ ᐱᓯᒪᔪᑦ ᐱᒻᒪᕆᐅᖅᒪᑕ ᐃᓚᒋᑦᑐᒍ ᐊᖏᖅᓯᒪᓂᖅᐹᑦ ᐃᓚᒋᔭᑎᓄᑦ. ᐊᑐᖅᓯᓂᐊᖅᑐᒍᑦ ᖁᓚᑦ (10) ᑐᓐᖓᓯᔾᔪᑕᐅᔪᑦ ᒐᕙᒪᑐᖃᒃᑯᓂᑦ ᒪᓕᒐᖅ ᐃᓄᖕᒥ ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᓯᖏᓐᓂᒃ ᓴᐳᒻᒥᓂᐊᖅᑐᒍᑦ ᐊᒻᒪᓗ ᖃᕆᓴᐅᔭᒃᑯᑦ ᑎᑎᖃᓂᒃ ᐱᖁᔭᖅᑕᐊᖅ, ᐅᓇᓗ ᑎᑎᕋᖅᓯᒪᔪᖃᖅᑐᖅ ᐱᖁᔭᓂᒃ ᑕᒪᒃᑯᓄᖓ ᓄᐊᑦᑎᓂᕐᒧᑦ, ᐊᑐᖅᑕᐅᓂᖏᓐᓄᑦ ᐊᒻᒪᓗ ᓴᕿᑎᑕᐅᓂᖏᓐᓄᑦ ᐃᓅᑉ ᐊᑎᖏᑦ.

ᖃᖓᑐᐃᓐᓇᖅ ᐃᓚᐅᒍᕕᑦ ᑭᐅᓯᔭᕆᐊᖃᖅᑐᑎᑦ ᖃᐅᔨᓴᖅᑎᓄᑦ, ᖃᐅᔨᒪᑎᐊᕐᓂᐊᖅᐸᑎᑦ ᐅᓇ ᐃᓕᖅᓯᑦ ᑭᐅᓯᔾᔪᑎᒋᔭᑎᑦ ᐊᓯᖕᓄᑦ ᑐᓴᖅᑎᑦᑎᔾᔪᑕᐅᓂᐊᓐᖏᑦᑐᑦ ᐊᒻᒪᓗ ᐊᑕᓂᐊᓐᖏᑦᑐᑦ ᐊᑎᕐᓄᑦ ᐊᖏᖅᓱᒍᕕᑦ ᑭᓯᐊᓂ (ᖁᓛᓂ ᓇᓗᓇᐃᖅᓯᒪᒍᖅ). ᓴᐳᒻᒥᑎᐊᕐᓂᐊᖅᑕᕗᑦ ᑕᒪᕐᒥᒃ ᐃᓕᖅᓯᒃ ᐱᓯᒪᔪᑦ ᐊᑎᕐᓂᖓ

ᐊᖏᕐᓯᔾᔪᑎ ᑕᑕᑎᓇᐊᓕᒃ
ᐃᓄᐃᑦ ᖃᐅᔨᒪᔾᔪᖃᖏᓐᓂᒃ

ᑕᒪᐅᓇ ᒪᑐᐃᖅᓯᔾᔪᑎᖃᕐᓗᑎᒃ ᑭᓯᐊᓂ ᐊᒻᒪᓗ ᑐᕐᑯᖅᓯᒪᕐᑎᐊᖅᑐᑦ ᖃᓇᓴᐅᔭᒃᑯᑦ. ᐃᓕᖕᓂᒃ ᐱᓯᒪᔪᑦ ᐱᓯᒪᓂᐊᖅᑕᕗᑦ ᑭᓯᐊᓂ ᐊᑑᑎᖃᖅᑎᓪᓗᒋᑦ ᐱᓯᒪᔪᓄᑦ ᖁᓖᓂ ᓇᓗᓇᐃᖅᓯᒪᒐᖅ, ᐅᕙᓐᓅᓐᓃᑦ ᑕᐃᒪᓐᓇᐅᔭᓇᐊᖃᖅᑎᑕᐅᕙᒍ ᒪᓕᒐᖅᑎᒍᑦ.

ᖃᓄᑐᐃᓐᓇᖅ ᐊᐱᖅᑯᑎᒃᓴᖃᕈᕕᑦ ᐅᕙᓐᓅᓐᓃᑦ ᐃᓱᒫᓘᑎᖃᕈᕕᑦ ᖃᓄᖅ ᑕᒪᓐᓇ ᐃᓕᖕᓂᒃ ᐱᓯᒪᔪᑦ ᓴᐳᒻᒥᔭᐅᓂᐊᕐᒪᖔᑕ ᕿᑭᖅᑖᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᓂ, ᐅᕙᓐᓅᓐᓃᑦ ᕿᒥᕐᕈᐊᕈᒪᒍᕕᒋᑦ ᐅᖃᐅᓯᕆᓯᒪᔭᑎᑦ, ᐅᖃᖃᑎᒋᓗᒍ ᑐᓴᕈᓘᔭᖅᑕᐅᔪᓇᐊᖃᖕᖏᑐᓕᓇᔪᖅ ᓴᓇᔨ ᖃᓇᓴᐅᔭᒃᑯᑦ ᑐᖅᑭᑖᓄᑦ ExecDir@qia.ca, ᐅᕙᓐᓅᓐᓃᑦ ᑎᑎᖅᑲᒃᑯᕕᒃᑎᒍᑦ ᐅᕗᖓ Igluvut Building, 2nd floor, P.O. Box 1340, Iqaluit, NU X0A 0H0, ᐅᕙᓐᓅᓐᓃᑦ ᐅᖃᓗᒃᓗᑎᑦ (867) 975-8246.

<u>ᐊᑎᓕᐅᕐᓗᒍ ᐊᖏᕐᓯᔾᔪᑏᑦ</u>
ᐊᑎᓕᐅᕈᖕᓂ ᐅᓇ ᐊᖏᕐᓯᔾᔪᑏᑦ ᑕᑕᑎᓇᐊᓕᒃ, ᐊᔾᔨᖏᔾᔪᑎᖏᑦ ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᑦ ᐊᑐᕈᓐᓇᖅᑐᑦ ᑐᓴᕐᑎᑎᔾᔪᑎᒋᔭᕐᓂᒃ.

ᐊᑎᓕᐊᖓ ᐃᓚᐅᔪᖅ ______________________ ᐅᓪᓗᒥ ______________________

APPENDIX 3: INTERVIEW GUIDE

Interview Guide for Qikiqtani Inuit Association Knowledge and Use Study for Baffinland's Mary River Iron Mine Project

This guide includes:

- Interview questions;
- Mapping notes; and
- Mapping codes.

INTRODUCTION

[Complete the interview checklist, and then read with **audio and video recorders on** at the start of each interview.]

Today is [date]. We are interviewing [participant name] for the Qikiqtani Inuit Association knowledge and use study for Baffinland's Mary River Iron Mine Project. Thank you for coming.

My name is [name] and my co-researcher(s) is/are [name]. We're at the [building/office] in [community] in Nunavut. [Participant name] has read and signed the consent forms, and we have assigned him/her participant ID [number]. We have explained the purpose of the study, mapping process, and interview plan. We will be mapping in Google Earth at 1:50,000 or better.

Primary Goal: to document community knowledge and use in the area of the Project. We'd like to know how you have used these areas, as well as what you may know about how community members have used it.

BACKGROUND AND EXPERIENCE

Personal Information

- Full name?
- Place of birth?
- Age and year of birth?
- Where you were raised?
- Beneficiary of the Nunavut Land Claims Agreement?
- Parents and grandparents' names?

GENERAL USE QUESTIONS

Be sure to ask the following questions with Google Earth centred on and displaying the entire Study Area. Questions in Section 2 are designed to give an overview of the parts of the Study Area that are important to participants, and how they use this area and its resources.

Have you ever used the area around the Project?

For hunting / trapping / fishing / camping / plant gathering / passing on traditional knowledge or language / gatherings or ceremonies?

- If yes:
- When?
- What do you do there?
- Who with?
- How did you learn about this area?
- If no:
- Why?

Have your family or community members ever used the area around the proposed Project, or areas nearby?

- If yes:
- What activities did they do there?
- If no:
- Why?

Is the Project area important to you / your family / your community? Why?

Relevant information to include: *How they learned about the Project area;* *First hand experience;* *Second hand knowledge (map with *);* *Trapline number(s) of individual / family members;* *Other named family members; and* *Remember to spell out all proper names.*

HABITATION

PERMANENT HABITATION (PX) AND TEMPORARY HABITATION (TX)

Can you show us places you have stayed overnight?

- Examples: a cabin you built or used; campsite; tent; and other temporary or permanent structures.

How many times have you stayed there?

- Once or short-term (less than 3 days; TX); and
- More than once or long-term (more than 3 days; PX).

When did you first stay there?

When was the last time you stayed there?

Suggested prompts for detailed knowledge and use on habitation: Describe the location / the conditions Why do you go there? How did you find out about this place? / Who showed it to you? What do you like about the place? What activities do you do when staying there?

What does this place mean to you?
Is this place important to you / your family / community? Why?
Is this place important to sustaining your culture / way of life? How?
Do you teach younger generations there (mark as TA)?
How would you explain the importance of this place to the government / industry?

TRAVEL ROUTES

TRAIL (TR)
Can you show us routes you have travelled by foot, quad, snowmobile or truck, etc. (usually for hunting, trapping, gathering plants, accessing camping or fishing areas, etc., rather than driving on a highway)?

- When did you first use this route?
- When did you last use this route?
- What did you use this route for (e.g., for hunting or plant gathering, or to reach fishing, camping, or other locations)?

Can you show us old trails that have been used by community members (map with *)?

- When was this route used?
- Who was using this route?
- What did they use it for (e.g., for hunting or plant gathering, or to reach fishing or camping sites, or other locations)?

WATER ROUTE (WR)
Can you show us routes where you have travelled along creeks, lakes, and rivers or on the ocean by boat?

- When did you first use this route?
- When did you last use this route?
- What did you use this route for (e.g., for hunting, fishing, or to reach campsites of other locations)?

Can you show us old water routes that used to be used by community members (map with *)?

- When was this route used?
- Who was using this route?
- What did they use it for (e.g., for hunting, fishing, or to reach campsites of other locations)?

Notes for mapping trails or water routes:
Travel routes and all linear features should be controlled.
Follow the actual route and natural features (not a straight line from A to B).
*Include relevant modifiers after the site code (e.g., *,?,+,$).*
Suggested prompts for detailed knowledge and use on transportation:
How did you learn about this route?

What do you do when you are travelling along here?
Is this the only route to get from point A to B, or is there an alternative?
Is this a new route, or a well-travelled, well-recognized route?
Is this route important to you / your family / community? Why?
Is this route important to sustaining your culture / way of life?
What is the farthest point that you have travelled along this route?

HUNTING, TRAPPING, FISHING AND, GATHERING PLANTS AND RESOURCES
See codes at back of this guide for species – these may also be used as prompts.

HUNTING AND TRAPPING
Can you show us places where you have killed or trapped mammals or birds? Prompt by most important species first, e.g. caribou, ringed seals, ptarmigan... See codes at the back of this guide. For each value:

- Which species?
- When?
- Why (e.g., to feed you / your family / your community, or for other uses such as medicines, crafts, or sale)?

FISHING
Can you show us places where you have caught fish? For each value:

- Which species?
- When?
- Why (e.g., to feed you / your family / your community, or for other uses such as for medicines, ceremonies, sale, or simply to enjoy fishing / catch-and-release; catch-and-release and no catch should be marked as EF)?

Suggested prompts for detailed knowledge and use for killed or trapped mammals, birds, and fish:
Why do you hunt / trap / fish?
Who taught you how to hunt / trap / fish (mark as TA)? Where?
Have you taught anyone how to hunt / trap / fish (mark as TA)? Who? Where?
How important are these animals / birds / fish to your daily life?
What did you do with the meat or fur?
How many people can an animal feed (individual / family / community)? For how long?
What does it mean to you to be able to hunt / trap / fish?
Are these animals / birds / fish important to sustaining your culture / way of life? How?
How would you explain the importance of these animals to the government / industry?
Are any of these animals / birds / fish hard to find? Which ones?

HARVESTING BERRIES, OTHER PLANTS, OR FUNGI
Can you show us places where you've collected:

- Berries or other food plants?
- Medicine plants?

- Mushrooms or other fungi?
- Plants for crafts or other uses?

For each value:

- Which species?
- When?
- Why (e.g., to feed you / your family / your community, or for other uses such as medicines, crafts, ceremonies, or sale)?

Suggested prompts for detailed knowledge and use:
How important are these medicines / plants / fungi / resources to your daily life?
Who taught you about collecting and using medicine / plants / fungi / resources (mark as TA)? Where?
Have you taught anyone about collecting and using medicine / plants / fungi / resources (mark as TA)? Who? Where?
Are these medicines / plants / fungi / resources important to sustaining your culture / way of life? How?
How would you explain the importance of these medicines / plants / fungi / resources to the government / industry?
Are any of these medicines / plants / fungi / resources hard to find outside of the Project area and nearby areas?
Who were you with when gathering plants / fungi / other resources?

ENVIRONMENTAL FEATURES

ENVIRONMENTAL FEATURES (EF)
Can you show us the locations of good habitat or environmental features that are important for mammals / birds / fish / plants?
Examples:

- Calving or mating areas;
- Overwintering areas; and
- Fish spawning areas.

ENVIRONMENTAL FEATURE CORRIDOR (EC)
Can you show us routes that animals use to move across the area?

CULTURAL USE

GATHERING PLACE (GP)
Can you show us important places where your community holds or attends gatherings?

- When?
- Who (e.g., use by you / your family members / your community / many communities)?
- What happened there?

Examples:

- Inuit games;
- Drum dancing; and
- celebrations.

TEACHING AREA (TA)
Can you show us places that are used for teaching knowledge to children or others?

- When?
- Who (e.g., use by you / your family members / your community / many communities)?
- What was taught there? How?

Can you show us any places that have special knowledge or stories associated with them?

- Who told you about this place and the stories? When?

Examples:

- Tuniit stories;
- Animal spirit stories; and
- Histories.

BURIAL (BU)
Can you show us places where Inuit people are buried or where their remains are (e.g., cremation)?

- Know first hand or heard from family / community members?

PLACE NAME (PN)
Can you show us any places that have special place names?
Include for each mapped site in Google Earth description field of the dialogue box:

- First and last use (day / month / season and year / decade); and
- Include the place name and translation.

IMPAIRED USE
Specific and general impaired use due to impacts from industry and other environmental or social changes

GENERAL IMPAIRED USE (GL) AND SPECIFIC IMPAIRED USE (SL)
Can you show us any general areas or specific sites where you used to hunt / gather / fish / camp/ practice other rights, but do not go anymore because of impacts from industry or other reasons?

- What did you used to do there? Why (e.g., hunting because there were lots of caribou)?
- When did you last use that place?
- Why did you stop using that place?

Include for each mapped site in Google Earth description field of the dialogue box:
First and last use (day / month / season and year / decade); and
Reason for avoidance.
Suggested prompts for detailed knowledge and use:
Why can you no longer go to this area?
What activities did you used to do in this area?
How often did you go to or use this area?
Can you do those activities somewhere else?
How does it make you feel that you can no longer go to or use this area?
How has the loss of use impacted you / your family / your community?
Has the loss of use impacted your culture / way of life? How?
How would you explain the importance of this area to the government / industry?
How would you explain the impact that not being able to use the area has had on you to the government / industry?

KNOWLEDGE OF USE BY OTHER COMMUNITY MEMBERS (*)

After you have covered a participant's personal use, and if there is still time, you may want to ask about their knowledge of how other community members use the area. You may do this particularly for important areas, if the participant does not have much personal experience of an area, or if you are trying to collect historical use data.
Can you show us places where members of your family or community or your ancestors have:

- Camped or stayed in cabins?
- Killed or trapped animals or birds?
- Caught fish?
- Collected berries / plants / water / other resources?
- Attended ceremonies or gatherings?
- Travelled across the area?
- Other activities?

PROJECT IMPACT QUESTIONS

Make sure industry data and participant's mapped sites are on the screen. If need be, have project descriptions and images for participant's reference. Be open to discussion of impacts beyond the scope of the RSA where appropriate.
Refer back to the participant's use in the Study area, e.g. if they do a lot of fishing and to the initial checklist completed at the beginning of the interview to determine key project components for the participant.

Baffinland's Mary River Iron Mine Project includes the following primary project components:

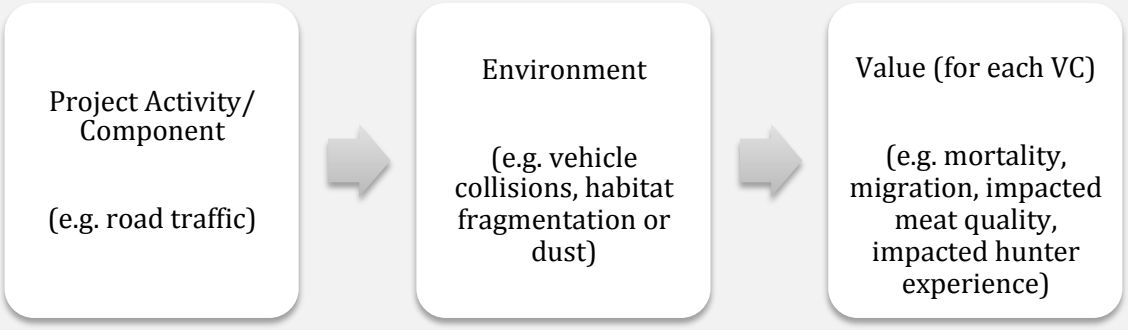
- A Tote Road and railway corridor with associated crossings, infrastructure and traffic
- A port facility and associated refueling, processing, loading and unloading and shipping traffic
- An active open pit iron mine with associated excavations

Ask the following questions for each of the above Project Components (depending on the participant's previous responses – e.g. if an avid seal hunter consider focusing on port and shipping facilities and routes) *Use the following as a tool to order these responses and guide future questioning – notably when asking about project interactions, and impact pathways:*		
VC	**SCOPE**	**PROMPTS**
□ *Hunting*	□ *Marine* □ *Terrestrial*	*Key Species?*
		What activities, during what seasons?
		Key locations and sites?
□ *Fishing*	□ *River* □ *Ocean*	*Key Species?*
	□ *Net fishing* □ *Jigging* □ *Casting*	*What activities, during what seasons?*
		Key locations and sites?
□ *Access*	□ *Travel* □ *Camping*	*Key routes?*
		What activities during what seasons?
		Key locations and sites?
□ *Sense of Place*	□ *soapstone quarries,* □ *burial sites and* □ *cultural activities/sites,* □ *opportunities for teaching and learning* □ *general attachment to a place or enjoyment of a place)*	*Key Species? Cultural Activities*
		What activities, during what seasons?
		Key locations and sites?

Based on your understanding of the project and these primary components, do you think it will affect:

- Your (hunting/ fishing/ access to the land/ sense of place)?
    - If so, how?
- Would these occurrences impact you directly or indirectly?

    - Is the impact displaced (e.g. are there other animals/features of the landscape they will impact)?
- Are impacts seasonal?
- Do you think these impacts will extend beyond the life of the project? Why?
- Will these impacts extend to other community members?
    - Who will feel them?



The above process describes the sorts of information around projected impacts and pathways that we are attempting to solicit from the interview participant. It is important to ask probing questions that solicit opinions and experiences without leading the interview participant.
Do ask: What do you think will happen? Why? How will it impact you?
Don't ask: Will (x, y, z) happen?

What do you think the most important issues are for your community to focus on in relation to the Project?
Are there any other important places or issues related to the Project that you think we should be documenting today?
Are there other community members that we should talk to?

Note: You may want to ask some of these questions earlier in the interview, for example if a participant has talked a lot about caribou hunting in the Study area, ask them if they think the Project will impact their hunting, and why.

CONCLUSION
Read with audio and video recorders on after every session.
Today is [date]. We have just finished interviewing [participant name] for the Qikiqtani Inuit Association knowledge and use study of Baffinland's Mary River Iron Mine Project. Thank you for coming.
My name is [name], my co-researcher(s) is/are [name(s)] and we are here at [office/building] in [community/town]. We've given [participant name] participant ID [#]. We've mapped a total of [#] sites in Google Earth at 1:50,000 or better, and recorded a total of [#] tracks on the digital recorder. Notes are recorded in/on [notebook/computer]. This interview has taken approximately [#] hours [#] minutes.

MAPPING CODES

HABITATION AND TRANSPORTATION

PX = Permanent Habitation
TR = Trail
TX = Temporary Habitation (including resting places, whaling spotting stations)
WR = Water Route
DX = Boat launch/mooring

ENVIRONMENTAL FEATURES

EC = Environmental Feature Corridor (e.g.caribou migration trails)
EF = Environmental Feature
WR = Winter Range
WQ = Polynya
VS = Visual Sighting
SF = Spawning Area
HF = Habitat Feature
DN = Den/ Nest Location
CV = Calving Area
ZC = Ice lead
ZD = Floe Edge
ZK = Breathing holes (seals)

TERRESTRIAL MAMMAL KILL SITES

CA = Caribou
PZ = Polar Bear
LM = Lemming
OG = Other Game
RB = Arctic Hare

MARINE MAMMAL KILL SITES

KW = Orca
DO = Dolphin
BZ = Bowhead Whale
BW = Beluga Whale
PG = Harp Seal
OR = Walrus
NW = Narwhal
MX = Muskox
MW = Minke Whale
UJ = Bearded Seal
RZ = Ringed Seal
ZA = Other Seals
ZB = Other whales

FURBEARING KILL SITES

FO = Other Fur Bearer
FX = Fox
TP = General Trapping Area
WO = Wolf
WV = Wolverine
WE = Weasel

BIRD KILL SITES

FL = Falcon
GE = Goose
HA = Hawk
OB = Other Bird
SJ = Snowy Owl
SW = Swan
RY = Raven
WM = Sea Birds
SN = Sandpipers
PT = Ptarmigan
PF = Puffin
OS = Snow Goose
MZ = Murre
LO = Loon
GU = Guillemot
FA = Fulmar
EI = Eider

FISH CATCH SITES

DV = Dolly Varden
OF = Other Fish
WF = Whitefish
ZR = Roe (herring)
ZL = Smelt
TB = Turbot
SZ = Shrimp
PY = Capelin
PL = Pollock
PD = Scallop
LC = Lingcod
KB = Crab
HL = Halibut
HE = Herring
GS = Greenland Shark
CR = Char
CL = Clams
AM = Mussels
KE = Kelp/ Seaweed

SA = Salmon

PLANTS & OTHER RESOURCES
BA = Barks (crafts, construction, etc.)
BE = Berries/Wild Fruit
DP = Dye Plant
FP = Food Plant (roots, bulbs, cambium)
FU = Fungus
WG = Willow
FW = Firewood
MP = Medicine Plant
ME = Mosses/lichens
OP = Other Plant
AP = Aquatic Plant

OTHER RESOURCES
EG = Eggs
EM = Earth Material (rocks, clays, etc.)
FE = Feathers
WA = Water (drinking water etc.)

CULTURAL USE
BU = Burial
BP = Birthplace
CP = Ceremonial Place
DR = Drying Rack
PN = Place Name
SP = Spirit
TA = Teaching Area
PR = Processing meat/hides
HR = Heritage Resource
GP = Gathering Place
FS = Food Storage (cache)
ZX = Fermenting Site (*Igunnaq*)

IMPAIRED USE
GL = General Loss
SL = Specific Loss

CHECKLIST – ACTIVITY TRACKING

Use the following as a tool to order these responses and guide future questioning – notably when asking about project interactions, and impact pathways:

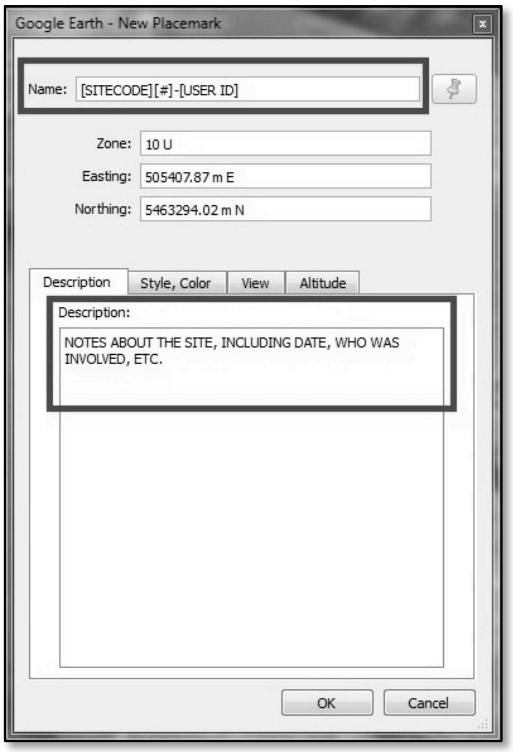
VC	SCOPE	PROMPTS
□ *Hunting*	□ *Marine* □ *Terrestrial*	*Key Species?*
		What activities, during what seasons?
		Key locations and sites?
□ *Fishing*	□ *River* □ *Ocean*	*Key Species?*
	□ *Net fishing* □ *Jigging* □ *Casting*	*What activities, during what seasons?*
		Key locations and sites?
□ *Access*	□ *Travel* □ *Camping*	*Key routes?*
		What activities during what seasons?
		Key locations and sites?
□ *Sense of Place*	□ *soapstone quarries,* □ *burial sites and* □ *cultural activities/sites,* □ *opportunities for teaching and learning* □ *general attachment to a place or enjoyment of a place)*	*Key Species? Cultural Activities*
		What activities, during what seasons?
		Key locations and sites?

MAPPING NOTES

Map all points, lines and polygons at an eye height of approximately 10km or less (1:50,000 or better)

Label each site consistently in the NAME FIELD of the site properties dialogue box (see ex.)

- Each code should indicate
  - Site use
  - Site number
  - Modifiers (if relevant)
  - Source (participant ID)
- Modifiers (after the site number)
  - Firsthand knowledge has no modifier
    - Example: TX01-S08 (member with ID# S08 reports first mapped temporary shelter place where she has camped)
  - Secondhand knowledge is mapped with a *
    - Example: TX01*-S08
  - Approximate spatial information is mapped with a ?
    - Example: TX01?-S08
  - If the participant was present but did not take part in an activity, map with a +
    - Example: BE01+-S08
  - Commercial use (including guiding/outfitting) is mapped with a $
    - Example: TX01$-S08
  - If multiple modifiers are used, a code could look like: TX01*?$-S08



All other information goes in the DESCRIPTION FIELD of the dialogue box (see example)

Transportation routes and all linear features should be controlled

- Zoomed in to less than 10km eye height
- Follow the actual route and natural features (not a straight line from A to B)

Include for each mapped site in Google Earth DESCRIPTION FIELD of the dialogue box

- First and last use (day / month / season AND year / decade)
- Frequency of use
- Species (if relevant)
- Number and names of members who were present
- Any additional information you are told

Other

- Keep list of place names
- Spell out proper names and place names where possible for the recording

TUSAQTAVUT FOR PHASE 2 APPLICATION OF THE MARY RIVER PROJECT

Qikiqtani Inuit Association

June 14, 2019

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Qikiqtani Inuit Association