Summary of the *Draft* Environmental Impact Statement Guidelines

for the Kitikmeot Inuit Association and Government of Nunavut's
Grays Bay Road and Port Project
(NIRB File No. 17XN011)[1]

March 2018

[1] The Draft Environmental Impact Statement Guidelines have been developed to reflect the NIRB's jurisdiction under Article 12, Section 12.5.2 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* and the requirements of ss. 26 and 101 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14.

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FREQUENTLY USED TERMS

EIS	Environmental Impact Statement that provides the studies, methods, and impact assessment of the Project
EIS Guidelines	Environmental Impact Statement Guidelines are guidelines to the Proponent for the development of a comprehensive study of the project
Nunavut Agreement	The *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*
NuPPAA	The *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2
Proponent	Company that is proposing to develop the project proposal. For this file, the Proponent is both the Government of Nunavut and the Kivalliq Inuit Association
Project	Grays Bay Road and Port
Project Phases	The phases of the Project development include the Project approval, construction, operations, maintenance and monitoring, temporary closure (care & maintenance), final closure (decommission & reclamation), and post-closure activities

1.0 INTRODUCTION

The purpose of this document is to provide a summary of the Environmental Impact Statement Guidelines (EIS Guidelines) that will be provided to the Government of Nunavut and the Kitikmeot Inuit Association (the Proponent) for the preparation of an environmental impact statement (EIS) for the proposed "Grays Bay Road and Port Project" (the Project).

Article 12, Section 12.5.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (the *Nunavut Agreement*) and s. 101(1) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*) directs the NIRB to issue Guidelines to the Proponent in respect of the preparation of a statement of the ecosystemic and socio-economic impacts of the project, an Environmental Impact Statement (EIS).

An EIS is a detailed document prepared by the Proponent in accordance with the EIS Guidelines issued by the NIRB, which identifies, predicts, evaluates, and communicates information about the ecosystemic and socio-economic impacts of a project proposal. An EIS also provides for the identification and development of mitigation measures – those provisions or measures, which are designed to control, reduce, or eliminate potentially adverse impacts of an activity or the project.

The purpose of this summary is to provide the public with an opportunity to understand and provide comments on the *Draft* EIS Guidelines, and to ensure that the information requirements for the EIS reflect the Proponent's proposed Project.

All information regarding the proposed project, including the complete *Draft* EIS Guidelines (English) and the Summary of the *Draft* EIS Guidelines in Inuktitut, Inuinnaqtun, English, and French are available from the NIRB's online public registry at www.nirb.ca by using any of the following search criteria:

- Project Name: Grays Bay Road and Port
- NIRB File No.: 17XN011
- Application No.: 125069

2.0 PURPOSE OF THE EIS GUIDELINES

The EIS Guidelines are a set of directions and questions for which the Proponent will be required to provide results and answers in their future EIS document to satisfy the NIRB, federal, and territorial environmental assessment (EA) requirements. The *Draft* EIS Guidelines for the Project has been developed using information provided by the Proponent on the proposed Project and the *draft* Scope List that has been determined by the NIRB (see Appendix A). The NIRB will draw on information obtained during the scoping of this Project in the development of the *Revised* EIS Guidelines.

The *Draft* EIS Guidelines will be revised to reflect any changes noted to the scope, comments received from parties, and comments received during community consultation with the

potentially affected communities. At the end of the process, the NIRB will finalize and issue the *Final* EIS Guidelines to the Proponent for its preparation of an EIS for the Project.

2.1 The NIRB's Impact Review Principles

The *Draft* EIS Guidelines speak to the NIRB's guiding principles which are based on the NIRB's primary objectives found in the *Nunavut Agreement* Section 12.2.5 and *NuPPAA* s. 23. The following summarize the principles and approaches that should be followed in the review process and in the preparation of the EIS by the Proponent. The requirements for each of these principles and approaches are further discussed within the complete *Draft* EIS Guidelines (English):

- An ecosystem-based approach must be considered to ensure that the Review addresses both the direct impacts that the Project will have on the various ecosystem components, as well as the interactions that will occur between components.
- Socio-economic issues including economic development, health, recreation, and other aspects of well-being, must be considered in order to ensure a culturally holistic understanding of the Project's effects.
- An understanding of past, current, and potential future environmental, economic, and social trends in the region potentially affected by all phases of the Project will enable comprehensive understanding of potential project impacts, including potential cumulative effects.
- The well-being of residents of Canada outside the Nunavut Settlement Area must be taken into account and transboundary effects must be included.
- The public that may be impacted by the Project must be allowed to participate in the Review.
- Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge must be included.
- A precautionary approach should be taken, particularly where there is uncertainty about potential impacts of the Project.
- As per the principle of sustainable development and Article 12, Section 12.2.5 of the *Nunavut Agreement* and s. 23(1) of the *NuPPAA*, in reviewing a project the NIRB shall aim to protect and promote the existing and future well-being of the residents and communities of Nunavut.

2.2 Public Participation, Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge

Public participation is a central objective of the NIRB review process. Meaningful public participation requires the Review to address concerns of the general public and Nunavummiut regarding the anticipated or potential environmental effects of the Project. Further, the incorporation of Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge in the development of the Proponent's EIS is an important consideration in the NIRB's assessment process and is a requirement under Article 12, Section 12.5.2 of the *Nunavut Agreement* and s. 101(3) of the *NuPPAA*. The *Draft* EIS Guidelines provide detailed instructions to the Proponent on the incorporation of Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and

Traditional and Community Knowledge and to ensure that the Proponent engages potentially affected communities, residents, Inuit Organizations, Indigenous groups, and other governments or other organizations, including where relevant, adjacent jurisdictions outside of the Nunavut Settlement Area throughout the review process.

3.0 *DRAFT* SCOPE LIST FOR THE GRAYS BAY ROAD AND PORT PROJECT PROPOSAL

As per s. 99(1)(a) and (b) of the *NuPPAA*, the first step in the Review process requires that the Board determine the **scope of the project** proposal, as well as the **scope of the assessment**. The *Draft* Scope List issued by the NIRB on January 30, 2018 was developed based on the Proponent's proposed Grays Bay Road and Port Project as referred to the NIRB for screening by the Nunavut Planning Commission on January 20, 2017. The *Draft* Scope List (see Appendix A) has been used in the development of the *Draft* EIS Guidelines for the Grays Bay Road and Port Project.

4.0 GUIDANCE ON THE CONTENT AND PRESENTATION OF THE ENVIRONMENTAL IMPACT STATEMENT

The *Draft* EIS Guidelines provide specific instructions to the Proponent for the content of each section in the EIS to ensure that the EIS reflect the NIRB's guiding principles. The Proponent will be required to provide an EIS that at a minimum:

- Provides the information as outlined in Article 12, Section 12.5.2 of the Nunavut Agreement and s. 101(3) of the NuPPAA;
- Ensures the EIS is written in a clear, precise language; and
- Ensures that the main document of the EIS and the summaries of each volume of the EIS is provided in both of Canada's official languages (French and English), Inuktitut and Inuinnaqtun for the Grays Bay Road and Port Project.

5.0 INTRODUCTORY SECTIONS OF THE ENVIRONMENTAL IMPACT STATEMENT

The *Draft* EIS Guidelines provide specific instructions to the Proponent on what to include within the introductory sections of the EIS. Specifically, the EIS will be required to describe key project components and associated activities, scheduling details, the timing of each phase of the project, and other key features. If the Project is a part of a phased sequence of projects, the EIS needs to outline the larger context in order to present a fulsome application. The EIS is also required to contain a concise description of the geographical setting in which the project would take place. The description is required to focus on those aspects of the project and its setting that are important in order to understand the potential environmental effects of the project proposal.

Further, the Proponent will be required to identify itself and explain current and proposed ownership of rights and interests in the Project, operational arrangements, and corporate and management structures. The Proponent is also required to present its environmental policy and specify whether and how it applies to all businesses for which it has an operating responsibility, to employees, to contractors, to subcontractors, and to suppliers. The EIS should also include a

discussion on the whether the Proponent has experience in Northern Canada settings, and if not what safeguard it intends to put in place to compensate for the lack of prior experience.

The Proponent will also be required to present its understanding of the regulatory regime in which it would be operating and relate it to all phases of the Project as defined as: *Project approval, construction, operations, maintenance and monitoring, temporary closure (care & maintenance), final closure (decommission & reclamation), and post-closure activities.*

Further, the Proponent will be required to consider the following specific items for the Grays Bay Road and Port Project when describing the Project location within the EIS, which was developed based on the *draft* Scope List (see Appendix A):

- Geographical maps of the project location (at an appropriate scale) including project components, project boundaries of the proposed site with the Universal Transverse Mercator (UTM) coordinates – the lease boundary, site study area, local study area, regional study area, the major existing infrastructure, adjacent land uses and any important environmental features. The maps should include:
    - The proposed Grays Bay Port;
    - The Jericho Station;
    - The proposed all weather access road route, including connection to any winter road or other planned all-weather road;
    - The proposed winter road;
    - The proposed quarry sites along the road, rescue shelters along the winter road and camps along the all-weather road; and
    - Any other significant individual project areas such as long or multi-span bridges.

6.0 PROJECT COMPONENTS AND ACTIVITIES

The *Draft* EIS Guidelines contain explicit requirements to the Proponent for the development of the EIS with regard to Project design, as well as the need for and purpose of the Project. Further, the *Draft* EIS Guidelines speak to details that the Proponent will be required to describe with respect to the Project components and all activities associated with the Project in a systematic way. For the Grays Bay Road and Port Project, the Proponent will be required to consider all phases, components, activities, and works identified in the scope of the Project as part of the effects assessment. In addition, the *Draft* EIS Guidelines provide direction to the Proponent to evaluate any foreseeable expansions of the current Project, the needs of required infrastructure, and associated ecosystemic and socio-economic impacts.

The *Draft* EIS Guidelines also stress that all assumptions underlying design features which are relevant to environmental assessment should be explicitly stated within the EIS and that discussion addressing the need for and purpose of the Project shall be supported by an analysis of the positive and negative social and economic effects on existing industries, markets, and communities over the life of the Project.

6.1 Scope of the Project

6.1.1 Detailed Project Proposal Description

The *Draft* EIS Guidelines speak to what the Proponent needs to include within the EIS when describing the Project components and all activities associated with each. Further, the Proponent will be required to provide a detailed written and graphic description (e.g., map, diagrams, dioramas, and drawings) of the following physical features of the Grays Bay Road and Port within the EIS, which was developed based on the *draft* Scope List (see Appendix A):

a) The Grays Bay Port;
b) The winter road;
c) The all-weather access road;
d) The Jericho Site;
e) All related works and activities including all temporary facilities required for the construction of the previously mentioned facilities, in particular:
    i. Temporary control structures and diversion works;
    ii. Permanent and temporary work camps;
    iii. Permanent and temporary access roads and water access/transportation routes;
    iv. Bridges and watercourse crossings;
    v. Infrastructure for wastewater treatment and waste management;
    vi. Energy supply for camps and worksites;
    vii. Drinking water supply;
    viii. Borrow pits and quarries;
    ix. Management of excavated material; and
    x. Construction worksites and storage areas.

6.1.2 Project Phases

The *Draft* EIS Guidelines speak to what the Proponent needs to include within the EIS when describing the Project development phases.

Further, the Proponent will be required to provide additional information on the construction and commissioning schedules for each Project component for the Grays Bay Road and Port Project, provide detailed descriptions of all aspects of the operation and maintenance of the Project, provide a proposed sequence and methodology for the disassembly of all Project infrastructure; and propose restoration/reclamation strategies to bring the Project sites into a state as close to the original environment as possible. The Proponent will also be required to present the approach, description, materials, methodology, locations, and security measures of all planned construction activities and components. The additional information requested by the NIRB for the Grays Bay Road and Port Project was developed based on the *draft* Scope List (see Appendix A) and is described in more detail within the complete *Draft* EIS Guidelines (English).

6.2 Alternatives

The *Draft* EIS Guidelines provide instruction to the Proponent on the analysis of all alternative means of carrying out the Project components or activities, including a "no-go" alternative, the identification and application of criteria used to determine the technical feasibility and economic viability of the alternatives to the Project.

Further, the Proponent will be required to consider the following specific item for the Grays Bay Road and Port Project when developing the EIS, which was developed based on the *draft* Scope List (see Appendix A):

- Alternate routing options and/or alternative sites for the location of the Project (including port locations) which have been considered.

6.3 Economic and Employment Information

In order to understand the context of the Project, the *Draft* EIS Guidelines directs the Proponent to include a description of the economic and employment aspects of the Project.

7.0 IMPACT ASSESSMENT METHODOLOGY

7.1 Scope of the Environmental Assessment

7.1.1 Factors to be considered

The *Draft* EIS Guidelines speak to the factors that should be considered in the development of the environmental assessment parameters, which focuses the assessment on relevant issues and concerns. The environmental assessment of the designated project in support of the Board's Review of the Project must address the factors as listed in s. 103(1) of the *NuPPAA.*

7.1.2 Scope of Factors

7.1.2.1 Valued Ecosystem and Socio-economic Components

As noted in the *Draft* EIS Guidelines, the EIS should include those valued ecosystem components (VECs) and valued socio-economic components (VSECs) (collectively the Valued Components (VCs)), processes, and interactions between the VECs and VSECs that are likely to be affected by the Project. The *Draft* EIS Guidelines identified a list of biophysical and socio-economic components that are typically relevant to projects in Nunavut and that should be considered by the Proponent in the selection of the VCs.

Further, the Proponent will be required to consider the following specific VCs for the Grays Bay Road and Port Project when developing the EIS, which was developed based on the *draft* Scope List (see Appendix A):

Valued Ecosystem Components

- Groundwater and surface water quality, including surface runoff and snowmelt;

- Freshwater aquatic environment, including:
  - habitat including fish passage and fish spawning areas;
- Wildlife migration routes (land and on-ice routes);
  - Special attention to caribou, caribou calving and post-calving areas, migratory routes; and current herd populations;

Valued Socio-Economic Components

- Traditional activity and knowledge including harvesting (terrestrial wildlife and marine mammals), land use, food security, language, cultural, commercial harvesting and fishery, recreational fishery, and Aboriginal fishery as defined in the *Fisheries Act*;
- Traditional seasonal travel routes; and
- Community resupply.

7.1.2.2 Assessment Boundaries

The *Draft* EIS Guidelines provide guidance to the Proponent on the spatial and temporal boundaries that should be described within the EIS for the Grays Bay Road and Port Project. As described within the *Draft* EIS Guidelines the spatial and temporal boundaries used in the environmental assessment may vary depending on the VC and the Proponent would be required consider the boundaries for each component separately with the EIS.

7.2 Public Consultation, Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge

As noted in Section 2.2 of this summary document, public consultation, Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge is an important feature of environmental assessment and the NIRB review process. Further, early and full involvement of Inuit and other northern residents, particularly those with unique knowledge of the area in the process, ensure a successful environmental assessment and review. The *Draft* EIS Guidelines provide direction to the Proponent on the information required to ensure Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge has been incorporated into the EIS. To summarize, in the preparation of the future EIS, the Proponent will be required to provide highlights of any public consultation and/or engagement undertaken and planned for the future as part of the EIS designed to address concerns of the general public regarding the anticipated or potential environmental effects of the Project. Further, the Proponent will be required to summarize what kinds of Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge were collected and describe the roles and responsibilities of all concerned individuals and organizations in collecting, analyzing, interpreting, and synthesizing this data. The Proponent will also be required to indicate whether special efforts were made to collect Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge from Inuit Elders, women or special groups, or harvesters familiar with the Project area.

7.3 Description of the Environment and Baseline Information

The *Draft* EIS Guidelines speak to what information the Proponent will have to include within the EIS with respect to the environment, including the components of the existing environment and environmental processes, their interrelations and interactions as well as the variability in these components, processes, and interactions over time scales appropriate to the EIS. Further, the *Draft* EIS Guidelines provide direction on what the Proponent needs to consider with respect to the current environment and environmental trends within the project area, and to provide this information within the EIS.

7.4 Study Strategy and Methodology

The *Draft* EIS Guidelines provide guidance to the Proponent on how the Proponent should describe its study methodologies within the EIS. Specifically, the Proponent will be required to explain how scientific, engineering, Inuit Qaujimaningit, Inuit Qaujimajatuqangit, as well as traditional, community, and any other knowledge was used to construct its studies and reach its conclusions. Further, the *Draft* EIS Guidelines directs the Proponent to identify significant gaps of knowledge and understanding, the steps taken by the Proponent to address these gaps, and how these gaps impacted those conclusions.

7.5 Impact Assessment Approach

The *Draft* EIS Guidelines instruct the Proponent on what should be described within the required impact assessment and directs the Proponent to assess the direct, indirect, short-term, and long-term impacts of the Project on the ecosystemic and socio-economic environments, and the interactions between them, focusing on the anticipated response of the VCs. Further, the EIS should include a discussion on how the predicted changes or impacts compare to existing/baseline conditions. The *Draft* EIS Guidelines direct the Proponent to include the effect considered, the significance of the effect and justification for that determination, and if applicable, how the effect fits into a cumulative effects analysis and transboundary effects analysis.

7.5.1 Transboundary Impacts

The *Draft* EIS Guidelines speak to the transboundary impacts that should be considered by the Proponent for the Project. In addition, due to the nature of the Grays Bay Road and Port Project being a proposed road connecting a port on the coast to the Tibbitt-Contwoyto Ice Road, the Proponent shall give due consideration to effects arising from potential increases or changes in the usage of the ice road resulting from shipping to and from the port which may affect VCs within and outside of the NSA.

8.0 PROJECT ENVIRONMENT AND IMPACT ASSESSMENT

8.1 Biophysical Environment and Impact Assessment

The *Draft* EIS Guidelines speak to the biophysical environment and the associated process that should be assessed within the EIS by the Proponent for the Project.

Further, the Proponent will be required to provide additional information on the baseline and the impact assessment for each VEC as listed below for each Project component for the Grays Bay Road and Port Project. The additional information requested by the NIRB for the Grays Bay Road and Port Project was developed based on the *draft* Scope List (see Appendix A) and is described in more detail within the complete *Draft* EIS Guidelines (English).

a) Air Quality
b) Climate and Meteorology
c) Noise and Vibration
d) Terrestrial Environment
e) Geological Features, Surficial and Bedrock Geology and Geochemistry
f) Hydrological Features and Hydrogeology
g) Groundwater and Surface Water Quality
h) Sediment Quality
i) Aquatic Environment
j) Vegetation
k) Terrestrial Environment
l) Birds and Bird Habitat

8.2 Socio-Economic Environment and Impact Assessment

The *Draft* EIS Guidelines instruct the Proponent to present baseline information on the function and stability of the socio-economic environment in the regional study area, with a corresponding impact assessment covering all Project phases of development. The Proponent will also be required to describe the components of the socio-economic environment and the processes affecting the components as they exist without the Project within the EIS.

Given the anticipated long-term operation of the Project, the Proponent shall indicate methods of updating baseline information to account for changes in the operating environment over time, and what criteria will be used to determine when baseline information requires updating.

Further, the Proponent will be required to provide additional information on the baseline and the impact assessment for each VSEC as listed below for each Project component for the Grays Bay Road and Port Project. The additional information requested by the NIRB for the Grays Bay Road and Port Project was developed based on the *draft* Scope List (see Appendix A) and is described in more detail within the complete *Draft* EIS Guidelines (English).

a) Economic Development and Opportunities
b) Employment
c) Education and Training
d) Contracting and Business Opportunities
e) Population Demographics
f) Traditional Activity and Knowledge

g) Non-traditional Land and Resource Use
h) Heritage Resources
i) Health and Wellbeing
j) Community Infrastructure and Public Services
k) Human Health and Safety

8.3 Human Health and Environmental Risk Assessment

The *Draft* EIS Guidelines speak to the human health risk assessment that should be included within the EIS by the Proponent for the Project. As part of the EIS, the Proponent will also be required to include a summary of proposed mitigation measures to prevent or reduce adverse health effects and environmental risks from the project.

8.4 Accident and Malfunctions Assessment

The *Draft* EIS Guidelines provide guidance to the Proponent on the assessment of accident and malfunction scenarios that have a reasonable probability of occurring that must be included within the EIS for the Project. The Proponent will also be required demonstrate that the most probable accident and malfunction scenarios are unlikely to cause long-term or residual effects both to persons and the environment, taking into account proposed mitigation measures, such as preventive measures and emergency response capability within the EIS.

9.0 ENVIRONMENTAL MANAGEMENT SYSTEM

9.1 Environmental Management Plan

An Environmental Management Plan (EMP) provide a systematic approach to consistently managing all environmental affairs for the Proponent, addressing concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, with an aim to improving environmental performance through continual improvement of the management system. The *Draft* EIS Guidelines provide direction to the Proponent on what to include for the EMP for the Project.

9.2 Environmental Protection Plan

The *Draft* EIS Guidelines speak to the Environmental Protection Plan and what will be required to be included for the Project by the Proponent within the EIS.

9.3 Monitoring and Mitigation Plans

The *Draft* EIS Guidelines instruct the Proponent to present individual monitoring and mitigation plans, specific to various aspects of the Project and the environment, and that the plans should be incorporated into all applicable phases of the Project. Further, in its monitoring and mitigation plans, the Proponent will be required to specify proposed criteria or thresholds to trigger mitigation measures if monitoring results warrant.

9.4 Biophysical Environmental Plans

The *Draft* EIS Guidelines speak to the environmental monitoring and management plans that should be developed by the Proponent to eliminate or mitigate potential negative impacts of the Project on the biophysical environment.

As the Grays Bay Road and Port Project is anticipated to have an indefinite period of operation, the Proponent shall indicate how its environmental monitoring and management plans are anticipated to be updated to reflect current operating environments in the future. The plans should also contemplate changes that may be required in order to accommodate the use of the road, port, and other infrastructure by reasonably anticipated potential projects such as mineral development of known deposits, and resupply transport to and from the coast to the south, including destinations within the Northwest Territories.

In addition, the Proponent will be required to provide additional information on the following environmental monitoring and management plans for the Grays Bay Road and Port Project. The additional information requested by the NIRB for the Grays Bay Road and Port Project was developed based on the *draft* Scope List (see Appendix A) and is described in more detail within the complete *Draft* EIS Guidelines (English).

a) Risk Management and Emergency Response Plan
b) Fuel Management Plan
c) Spill Contingency Plan
d) Water Management Plan
e) Waste Management Plan
f) Hazardous Material Management Plan
g) Road Management Plan
h) Port Management Plan
i) Borrow Pits and Quarry Management Plan
j) Explosives Management Plan
k) Air Quality Monitoring and Management Plan
l) Noise and Vibration Abatement Plan
m) Aquatic Effects Management Plan
n) Wildlife Mitigation and Monitoring Plan
o) No Net Loss Plan

9.5 Socio-Economic Environmental Plans

The *Draft* EIS Guidelines instruct the Proponent to present plans, policies and programs to minimize potential negative socio-economic effects and to optimize the potential positive effects of the Project on the socio-economic environment. These plans should be developed to reflect the complete life span of the Project, and contain appropriate monitoring and evaluation techniques (e.g., indicators) that will allow regulators to intervene in a timely and constructive manner.

As the Project is anticipated to have an indefinite period of operation, the Proponent shall indicate how its plans are anticipated to be updated to reflect current operating environments in the future. The plans should also contemplate changes that may be required in order to accommodate the changes in the use of the road, port, and other infrastructure by future developments.

In addition, the Proponent will be required to provide additional information on the following socio-economic plans for the Grays Bay Road and Port Project. The additional information requested by the NIRB for the Grays Bay Road and Port Project was developed based on the *draft* Scope List (see Appendix A) and is described in more detail within the complete *Draft* EIS Guidelines (English).

a) Business Development Plan
b) Occupational Health and Safety Plan
c) Community Involvement Plan
d) Cultural and Heritage Resources Protection Plan
e) Human Resources Plan

9.6 Closure and Reclamation Plan

The *Draft* EIS Guidelines speak to the development of a preliminary Closure and Reclamation Plan and a preliminary Care and Maintenance Plan for the Project, which outlines how the various components proposed by the Proponent will be decommissioned, reclaimed, and closed following Project facilities closure.

9.7 Follow-Up and Adaptive Management Plans

The *Draft* EIS Guidelines provide direction to the Proponent on the requirements for the follow-up and adaptive management plans that should be included as part of the EIS.

9.8 Significance of Residual Impacts

The *Draft* EIS Guidelines speak to the requirements to include an assessment of the significance of residual effects of the Project on the components of the biophysical and human environments after the mitigation measures proposed by the Proponent have been implemented within the EIS.

10.0 List of Consultants, Organizations and Conclusion

The *Draft* EIS Guidelines speak to the requirements to include a list of all the consultants who contributed to the preparation of the EIS. Further, the *Draft* EIS Guidelines speak to the requirements to include a conclusion presenting a summary analysis of the overall projected biophysical and socio-economic impacts, anticipated transboundary and cumulative effects, proposed mitigation measures, and residual impacts.

APPENDIX A: *DRAFT* SCOPE LIST FOR THE GRAYS BAY ROAD AND PORT PROJECT PROPOSAL

DRAFT SCOPE LIST FOR THE GRAYS BAY ROAD AND PORT PROJECT PROPOSAL

The Nunavut Impact Review Board (NIRB or the Board) is seeking feedback from interested parties to determine the scope of Kitikmeot Inuit Association and the Government of Nunavut's (the Proponent) proposed "Grays Bay Road and Port" project proposal (scope of the project) and the scope of the NIRB's Review of this project proposal (scope of the assessment).

SCOPE OF THE PROJECT

1) Description of the project, the purpose of and the need for, the project

The scope of the project proposal includes all physical works, activities, and/or undertakings, as scoped by the NIRB on August 17, 2017 for the Grays Bay Road and Port Project and encompasses the entire project life.

a. Project Proposal Summary

The proposed "Grays Bay Road and Port" project (the Project) involves the construction and operation of an all-weather road and port, located within the Kitikmeot region, with the road beginning at the Jericho site and continuing north to Grays Bay where a deep sea port would be constructed and operated. The Project would be undertaken through a partnership between the Kitikmeot Inuit Association and the Government of Nunavut with the objective of establishing infrastructure connecting the existing Tibbitt-Contwoyto Winter Road to the Northwest Passage and providing an economically viable supply route for Nunavummiut, public, and industrial operators in the area. The program is proposed to commence in June 2020 with a pre-construction phase of two (2) years, construction occurring over three (3) years, and operations continuing for at least 75 years as part of the design life. The facilities are designed as semi-permanent and there are no plans for closure and reclamation of the infrastructure.

b. Project Components

i) All Weather Road

Activities and Facilities would include construction and operations of an approximately 230 kilometre (km), permanent year-round, all-weather road, managed through a tolling regime, specifically:

- Road design: crest between 8.7 and 10 metres (m) wide, maximum vertical slope of 6%, and maximum cross-slope of 2.5%, and appropriate navigation aids.
- Truck turnouts established every 50 m to meet safety requirements during construction, with possible reuse of the gravel if turnouts are removed for operations.

- Up to 230 drainage areas would be required: approximately 18 single or multi-span bridges, up to 50 culverts of diameters between 1.5 m and 5 m, in addition to numerous culverts less than 1.5 m in diameter.
- Up to four (4) temporary camps used during construction of the road, relocated every three (3) months as construction progresses, with each camp to accommodate up to 80 personnel per year. Additional camp infrastructure would include: offices, maintenance shops, equipment and material storage, fuel storage (up to 20,000 litres (L) diesel stored in enviro-tanks, in addition to limited amounts of propane and gasoline), water use, and temporary waste and wastewater storage facilities.
- Wastewater and sewage transported to Grays Bay Port or Jericho Station for treatment, incineration or backhaul and disposal at accredited facility until permanent solid waste and sewage facilities are commissioned.

ii) Grays Bay Port Facility

Activities and Facilities would include construction and operations of a Grays Bay Port, open annually during the open-water season (July to October), managed through port fees, specifically:

- Initial development of one (1) wharf, designed based on the potential docking size of a 75,000 deadweight tonnes Ore-Bulk-Oil class 1A vessel, and a second wharf when demand warrants.
- Dredging of sea floor to reach appropriate depths in the development of the wharf.
- Installation of a small craft harbour to provide safe moorage for up to 50 vessels, including floating docks, launching ramp, refueling station containing approximately 5,000 L of gasoline, tent and refuge area, light vehicle parking for the public, and optional breakwater to reduce wave height within the harbour.
- Installation of appropriate navigation aids.
- Transport, temporary storage, and staging of materials and equipment including:
    - Mobilization of construction materials and equipment via two (2) ocean freighters and barges, lightering and delivering to the Grays Bay shore, followed by annual sealift deliveries during construction and operations.
    - During construction, staging and laydown areas established to store and maintain equipment and supplies, provide loading and unloading facilities, stockpile granular material, store fuel, and provide helicopter landing sites.
    - During operations, laydown and container storage area would support the receipt, handling, and storage of any materials or supplies required for any exploration and mining projects as well as community resupply.
- Establishment of a camp and associated port facilities: temporary accommodations of up to 60 personnel during construction, and permanent, seasonal accommodations for up to 20 personnel per year during operations; offices and support buildings; maintenance shops; generators; water management and waste water treatment facilities; solid waste and wastewater storage facilities including landfill and incinerator; and helicopter pad.
- Establishment of fuel storage facilities within secondary containment to initially contain 25 million litres (ML) of diesel with the potential to expand to 100 ML of diesel.

- Establishment of an up to 1,800 m airstrip constructed initially at either the proposed location of the permanent strip or at a widened section of the embankment along Grays Bay Road at a suitable location. The permanent 1,800 m gravel airstrip and access road would be constructed and operated year round and involve support infrastructure including air traffic control, fuel storage facilities to hold up to 90,000 L of jet fuel, a shelter building, a cargo shelter, and maintenance garage for storage of snowplowing and airfield grading equipment.
- Progressive development of facilities for third party users, including accommodations, hotel, and commercial facilities which may require site grading.

iii) Jericho Station

Activities and Facilities would include the establishment of the Jericho Station located at or near the existing Jericho Mine Site for maintenance crew and truck drivers, including:

- Construction and operations of a vehicle parking area, three (3) person camp, offices, refuelling facilities, refuge station, and associated water, waste, and power facilities. Wastes backhauled to accredited facility or disposed of at Jericho station if incinerator or permanent waste storage location established.
- Optional use of the existing airstrip associated with the Jericho Mine during construction to mobilize the workforce and to bring in supplies. During operations, potential use of the existing airstrip at Jericho for emergency response.
- Up to 5,000 L fuel stored at the airstrip in drums or enviro-tanks.
- Tank farm established within secondary containment to hold up to 20 ML of fuel.
- Staging areas constructed to store materials in transit from Grays Bay until winter road established.

iv) Winter Road

Activities and Facilities would include the construction and operation of a winter road to connect various sites including:

- During construction, winter road sections would be constructed to access quarries and mobile camps along the all-weather road route.
- During pre-construction and annually thereafter, a winter road would connect the Jericho Station to Contwoyto Lake and the Tibbitt-Contwoyto Winter Road to transport supplies.
- During construction, approximately 1,000 trucks each winter season would transport supplies, with yearly amounts of traffic expected to decrease significantly during operations.

v) Quarrying

Activities and Facilities would include quarrying of up to 40 temporary and permanent sites to supply up to 8,000,000 cubic metres (m^3) of rock for construction of the road and port, with up to 100,000 m^3 required annually during operations for road maintenance. Locations approximately every seven (7) km and ideally within 500 metres of the proposed all-season road; every third quarry potentially a permanent quarry used for the life of the Project. Blasting may be required from some if not all quarries during construction; explosives would be stored in accordance with regulations.

vi) Water Use

Activities and facilities would include water use of up to 600 m^3 per day (100,000 m^3 per year) during construction, and less than 100 m^3 per day during operations; sources yet to be determined.

SCOPE OF THE ASSESSMENT

1) Anticipated Effects of the Environment on the Project

The scope of the assessment will include the potential for the Arctic environment to exert effects on the Project throughout the Project's life, including the following specific factors:

a. Climate and meteorology including climate change
b. Permafrost
c. Geotechnical hazards including slope movement, differential or thaw settlement, frost heave, and ice scour
d. Subsidence
e. Flooding
f. Unfavorable geological conditions
g. Sea level change

The scope of the assessment will include the potential for conditions in Nunavut's unique socio-economic environment, including the following specific factors:

a. Limited availability of labour and capacity
b. Limitations on physical infrastructure

2) Anticipated ecosystemic and socio-economic impacts of the Project

The assessment of the potential for ecosystemic and socio-economic impacts to result from the proposed project components and activities as outlined in the section above will be inclusive of the factors listed below. The assessment of impacts to each valued ecosystemic or socio-economic component shall take into account appropriate temporal and spatial boundaries and draw upon relevant information from scientific sources, Inuit Qaujimaningit[1], traditional and community knowledge.

a. Air quality including greenhouse gases
b. Climate and meteorology
c. Noise and vibration
d. Terrestrial environment, including:
    i) Terrestrial ecology
    ii) Landforms and soils
    iii) Permafrost and ground stability
e. Geological features including discussion of geology and geochemistry
f. Hydrological features and surface water quality
g. Hydrogeology and groundwater
h. Sediment quality

[1] Inuit Qaujimaningit encompasses Inuit traditional knowledge (and variations thereof) as well as Inuit epistemology as it relates to Inuit Societal Values and Inuit Knowledge (both contemporary and traditional).

i. Freshwater aquatic environment, including:
    i) Aquatic ecology
    ii) Aquatic biota including representative fish as defined in the *Fisheries Act*, aquatic macrophytes, benthic invertebrates and other aquatic organisms
    iii) Habitat including fish habitat as defined in the *Fisheries Act*
    iv) Commercial, recreational, and Aboriginal fisheries as defined in the *Fisheries Act*
j. Terrestrial vegetation
k. Terrestrial wildlife and wildlife habitat, including:
    i) Representative terrestrial mammals to include caribou, caribou habitat, migration and behavior, muskoxen, wolverine, grizzly bears, Polar Bears, wolves and less conspicuous species that may be maximally exposed to contaminants, with specific consideration of effects on caribou of the Bathurst and Dolphin and Union herds
    ii) Wildlife migration routes and crossings, with specific consideration of potential effects on migration of the Bathurst caribou herd
l. Birds and bird habitat, including:
    i) Raptors
    ii) Migratory birds
    iii) Seabirds
m. Marine environment, including:
    i) Marine ecology
    ii) Marine water and sediment quality
    iii) Marine biota including fish and benthic flora and fauna
    iv) Marine habitat
    v) Commercial, recreational, and Aboriginal fisheries as defined in the *Fisheries Act*
n. Marine wildlife
o. Terrestrial and marine Species at Risk, including
    i) Species under consideration for listing on the *Species at Risk Act*
    ii) Species designated “at risk” by the Committee on the Status of Endangered Wildlife in Canada
p. Socio-economic factors, including:
    i) Economic development opportunities
    ii) Employment
    iii) Education and training
    iv) Contracting and business opportunities
    v) Population demographics
    vi) Benefits and revenues (tax, royalties, etc.)
q. Traditional activity and knowledge and community knowledge including:
    i) Land use
    ii) Food security
    iii) Language
    iv) Cultural and commercial harvesting
r. Non-traditional land use and resource use
s. Heritage resources
    i) Archaeology

ii) Paleontology
iii) Cultural

t. Health and well being
   i) Individual and community wellness
   ii) Family and community cohesion
u. Community infrastructure and public services
v. Health and safety including employee and public safety
w. Cumulative effects, giving specific consideration to the project in terms of existing, proposed, and reasonably foreseeable future mining and transportation infrastructure projects, with specific consideration of advanced mineral projects such as Izok Lake, Ulu, High Lake, the Tibbetts-Contwoyto Winter Road, and an all-weather road from the Northwest Territories
x. Residual effects
y. Transboundary effects

3) Measures proposed by the Proponent to avoid and mitigate adverse ecosystemic and socio-economic impacts, including contingency plans

The scope of the assessment will include any contingency plans or risk management plans to avoid and mitigate adverse impacts caused by the proposed project components and activities. These plans must extend, where relevant, through all project phases. These plans shall take into account the appropriate temporal and spatial boundaries and are expected to draw upon relevant information from scientific sources, best practice as well as traditional and community knowledge and are to include, but not be limited to:

a. Avoidance, Mitigation and Offsetting Measures specifically related to fisheries offsetting for the Grays Bay Road and Port Project
b. Emergency response
c. Spill response
d. Hazardous materials management
e. Accidents and malfunctions
f. Regulatory requirements
g. Monitoring and Adaptive Management
h. Mitigation measures

4) Steps which the Proponent proposes to take to optimize benefits of the Project, with specific consideration being given to expressed community and regional preferences as to benefits

The scope of the assessment will include steps that the Proponent proposes to take to optimize benefits of the project, and should include, but not be limited to:

a. Compensation and benefits
b. Health benefits
c. Human health and well-being
d. Employment
e. Education and training
f. Land use

g. Contracting and business opportunities, and
h. Any non-confidential details from an Inuit Impact and Benefit Agreement.

5) Measures proposed by the Proponent to compensate persons whose interests are adversely affected by the Project

The scope of the assessment will include the steps that the Proponent proposes to take to compensate interests of parties adversely affected by the Project including all non-confidential details pertaining to any Inuit Impact and Benefit Agreement pursued in connection with the Project.

6) Measures proposed by the Proponent to restore ecosystemic integrity after the permanent closure of the project

The scope of the assessment will include any closure and reclamation plans to ensure that issues associated with the effective closure and reclamation of all Project components are considered at the earliest possible stage in the development process, thereby influencing design to take into account environmental issues related to closure and reclamation. These plans must extend, where relevant, through all project phases. These plans shall take into account the appropriate temporal and spatial boundaries and are expected to draw upon relevant information from scientific sources, best practice as well as traditional and community knowledge and are to include, but not be limited to:

a. Care and Maintenance
b. Closure and Reclamation

7) Any monitoring programs that the Proponent proposes to establish and to manage the ecosystemic and socio-economic interests potentially affected by the Project

The scope of the assessment will include any programs that would be established to monitor the potential ecosystemic and socio-economic impacts caused by the proposed project components and activities.

8) The interests in lands, waters and other resources which the Proponent has acquired or seeks to acquire

The scope of the assessment will include consideration for any interests in lands, waters and other resources which the Proponent has secured or seeks to secure based on the proposed works and activities or undertakings that constitute the Grays Bay Road and Port project proposal.

Organization	***Requirement***
Nunavut Impact Review Board	Project Certificate
Nunavut Water Board	Type 'A' Water Licence
Kitikmeot Inuit Association	Land Use Licences, leases, easements, right-of-ways, and Quarry Concession Permit(s)
Government of Nunavut – Department of Culture and Heritage	Archaeology Permit(s) and Palaeontology Permit(s)

Organization	***Requirement***
Government of Nunavut – Department of Environment	Wildlife Research Permit, Spill Contingency Plan approval
Nunavut Research Institute	Scientific Research Licence
Indigenous and Northern Affairs Canada	Class A Land Use Permit, Quarry Permits, and Land Use Lease(s)
Environment and Climate Change Canada	Approval for dredging, Environmental Emergency Plan approval
Fisheries and Oceans Canada	Section 35 authorization under the *Fisheries Act*
Natural Resources Canada	Licence for a Factory and Magazine
Transport Canada	Navigable Waters Approval(s) and/or Exemption(s) and Oil Pollution Prevention/Emergency Plan as per the *Canada Shipping Act*, Approval under the *Navigation Protection Act*
Workers Safety & Compensation Commission	Permit to Store Detonators, Explosives Use Permit

9) Options for carrying out the Project that are technically and economically feasible and the anticipated ecosystemic and socio-economic impacts of those options

The scope of the assessment will include consideration for alternative means of carrying out the Project that might be economically and technically feasible and the environmental effects of those alternative means. This assessment will include alternate timing and development options, as well as presenting the "no-go" or "no-build" alternative, and the "preferred" alternative. The "no-go" alternative is not only a potentially stand-alone option; it also serves as a baseline for comparison with other development alternatives that might reasonably be proposed in the circumstances.

10) Any other relevant information or matters

The scope of the assessment will include any other matters that the NIRB considers relevant, including:

a. Technical innovations previously untested in the Arctic including new technology for port and road design and operations
b. Inuit Qaujimaningit, traditional and community knowledge
c. Statement of consultation principles and practices
d. Significant effects analysis
e. Sustainability analysis
f. Interactions with Valued Ecosystem Components and Valued Socio-Economic Components
g. Discussion of similar resource development projects in other jurisdictions
h. Planned future development and the associated level of uncertainty