



SCREENING DECISION REPORT NIRB FILE No.: 16QN071

NPC File No.: 148382

April 13, 2017

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Agnico Eagle Mines Ltd.'s "Itivia Quarry" is not required pursuant to paragraph 92(1)(a) of the *Nunavut Planning and Project Assessment Act* (NuPPAA).

Subject to the Proponent's compliance with the terms and conditions as set out in below, the NIRB is of the view that the project proposal is not likely to cause significant public concerns, and it is unlikely to result in significant adverse environmental and social impacts. The NIRB therefore recommends that the responsible Minister(s) accepts this Screening Decision Report.

OUTLINE OF SCREENING DECISION REPORT

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REGULATORY FRAMEWORK

The primary objectives of the NIRB are set out in Section 12.2.5 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement) as follows:

"In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area."

These objectives are confirmed under section 23 of the NuPPAA.

The purpose of screening is provided for under section 88 of the NuPPAA:

“The purpose of screening a project is to determine whether the project has the potential to result in significant ecosystemic or socio-economic impacts and, accordingly, whether it requires a review by the Board...”

To determine whether a review of a project is required, the NIRB is guided by the considerations as set out under subsection 89(1) of NuPPAA:

“89. (1) The Board must be guided by the following considerations when it is called on to determine, on the completion of a screening, whether a review of the project is required:

- (a) a review is required if, in the Board’s opinion,*
 - i. the project may have significant adverse ecosystemic or socio-economic impacts or significant adverse impacts on wildlife habitat or Inuit harvest activities,*
 - ii. the project will cause significant public concern, or*
 - iii. the project involves technological innovations, the effects of which are unknown; and*
- (b) a review is not required if, in the Board’s opinion,*
 - i. the project is unlikely to cause significant public concern, and*
 - ii. its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.”*

It is noted that subsection 89(2) provides that the considerations set out in paragraph 89(1)(a) prevail over those set out in paragraph 89(1)(b).

Where the NIRB determines that a project may be carried out without a review, the NIRB has the discretion to recommend specific terms and conditions to be attached to any approval of the project proposal. Specifically, paragraph 92(2)(a) of NuPPAA provides:

“92. (2) In its report, the Board may also
(a) recommend specific terms and conditions to apply in respect of a project that it determines may be carried out without a review.”

PROJECT REFERRAL

On December 22, 2016 the Nunavut Impact Review Board (NIRB or Board) received a referral to screen Agnico Eagle Mines Ltd.’s (Agnico Eagle) “Itivia Quarry” project proposal from the Nunavut Planning Commission (NPC or Commission), with an accompanying positive conformity determination with the Keewatin Regional Land Use Plan.

Pursuant to Article 12, Sections 12.4.1 and 12.4.4 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (Nunavut Agreement)

and section 87 of the *Nunavut Planning and Project Assessment Act* (NuPPAA), the NIRB commenced screening this project proposal and assigned it file number 16QN071.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Project Scope

The proposed “Itivia Quarry” project is located within the Kivalliq region, approximately 500 metres from Rankin Inlet. The Proponent intends to develop a quarry to support infrastructure to be established in the Itivia harbour area for the Meliadine Gold Project (NIRB File No. 11MN034). The project is proposed to take place from March to December 2017.

As required under subsection 86(1) of the NuPPAA, the Board accepts the scope of the Itivia Quarry project as set out by Agnico Eagle in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Mobilization of 12 personnel to the project site;
- Extraction of quarry material from existing and new quarry areas using a drill-and-blast method [use of a drill and explosives that are prepared at the Meliadine Gold Project site];
- Transportation of diesel and emulsion for quarrying operations from the Meliadine Gold Project site;
- Transportation of approximately 300,000 cubic meters of quarried solid rock to laydown area and bypass road;
- Disposal of all waste generated at the Itivia quarry site at approved facilities at the Meliadine Gold Project site, including hazardous, combustible and non-combustible wastes;
- Decommissioning of quarry site upon completion of operations; and
- Use of existing infrastructures at the Meliadine Project Site, including camp, fuel, emulsion plant, landfill, landfarm, and incinerator.

2. Inclusion or Exclusion to Scoping List

The NIRB has identified no additional works or activities in relation to the project proposal.

3. Key Stages of the Screening Process

The following key stages were completed:

Date	Stage
December 22, 2016	Receipt of project proposal and positive conformity determination (Keewatin Land Use Plan) from the NPC
January 6, 2017	Information request(s)
January 23, 2017	Proponent responded to information request(s)
January 23, 2017	Scoping pursuant to subsection 86(1) of the NuPPAA
January 30, 2017	Public engagement and comment request
February 17, 2017	Receipt of public comments
March 16, 2017	Proponent responded to comments/concerns raised by public
March 8, 2017	Ministerial extension requested from the Minister of Community and Government Services, Government of Nunavut

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on January 30, 2017 to community organizations in Rankin Inlet, as well as to relevant federal and territorial government agencies, Inuit organizations and other parties. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by February 17, 2017 regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project proposal is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (please provide any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal, specifically but not limited to:
 - *Recommended terms and conditions for the Itivia Quarry project, if necessary referencing the conditions in relation to the quarry's linkage to the Meliadine Gold Mine Project and possible interplay with the terms and conditions of Project Certificate No. 006, or if not sufficient to address the Party's concerns, justification to amend the Meliadine Gold Mine Project Certificate.*

The following is a summary of the comments and concerns received by the NIRB:

Government of Nunavut – Department of Community and Government Services (GN-CGS)

- Had no concerns and indicated that it was in support of the proposed project.

Environment and Climate Change Canada (ECCC)

- Had no concerns about the proposed project.

Fisheries and Oceans Canada (DFO)

- Indicated that information provided was not sufficient with respect the buffer zone. Requested that the Proponent provide reasons for the proposed implementation of a standard 31 meter buffer between quarry activities, such as blasting, and the shoreline, and confirm whether this buffer would be sufficient to prevent harm to fish, fish habitat and marine mammals.
- Indicated that information was not provided with respect to detonation and blasting activities, and requested specific plans including:
 - The maximum amount of holes drilled and used for blasting at any time.
 - The maximum total weight of explosive charge to be used at any time.
 - Whether the explosives will be confined or unconfined.

- Requested information on the marine environment in Melvin Bay, including type of fish species, marine mammals and habitat.
- Requested clarifications on drainage plans at the quarry site to ensure no deleterious substances are deposited into Melvin Bay.

Indigenous and Northern Affairs Canada (INAC)

- Had no concerns or additional terms and conditions to offer for the proposed project.

5. Comments and Concerns with respect to Inuit Qaujimaningit, Traditional, and Community Knowledge

No concerns or comments were received with respect to Inuit Qaujimaningit or traditional and community knowledge in relation to the proposed project.

6. Proponent's Response to Public Comments and Concerns

The following is a summary of the Proponent's response to concerns as received on March 16, 2017:

- In response to concerns regarding the adequacy of the buffer zones proposed for the protection of fish and marine mammals from blasting activities, the Proponent indicated that blasting activities will comply with DFO's *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters*. The Proponent also committed to not using explosives that could damage the swim bladder of fish and spawning beds during the period of incubation. Agnico Eagle also committed to not detonating explosives within 500 metres of any marine mammals.
- In response to a request for specific plans for detonation and blasting activities, Agnico Eagle indicated that it plans to manage the use of ammonium nitrate, a key ingredient in the explosives, to prevent spillage during blasting operations. The Proponent also committed to adjusting the blast design to prevent impacts to fish during fish spawning periods by limiting the weight of explosives to be used at any time and confining blasting activities to a minimum of 31 metres from freshwater bodies.
- In response to requests for information on the marine environment in Melville Bay, the Proponent indicated that it had conducted field programs (including bathymetry, water and sediment chemistry, and fish and fish habitat) at two (2) sites within Melville Bay near the proposed project area. The Proponent also presented data on water depths in the Melvin Bay and on the relative abundance of six (6) species of marine fish identified in the project area.
- In response to concerns regarding potential for the deposition of deleterious substances from blasting operations into Melvin Bay, the Proponent committed to maintaining a minimum buffer of 31 metres between quarries/borrow pits and water bodies. The Proponent also committed to monitoring the quality of water in contact with its operations and diverting water with contaminant levels above guidelines/regulations away from natural waterbodies. The Proponent also committed to using sediment control logs to control suspended sediments in water from quarries/borrow pits. The Proponent also committed to conducting Acid Rock Drainage and Metal Leaching tests to support mitigation measures to be implemented for the project.

FACTORS FOR DETERMINING SIGNIFICANCE OF IMPACTS

In determining whether a review of the project is required, the Board considered whether the project proposal had potential to result in significant ecosystemic or socio-economic impacts.

Accordingly, the assessment of impact significance was based on the analysis of those factors that are set out under section 90 of the NuPPAA. The Board took particular care to take into account Inuit Qaujimaningit, traditional and community knowledge in carrying out its assessment and determination of the significance of impacts.

The following is a summary of the Board's assessment of the factors that are relevant to the determination of significant impacts with respect of this project proposal:

1. *The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.*

The proposed "Itivia Quarry" project would occur within the municipal boundaries of Rankin Inlet, approximately 500 metres south of the community. The footprint of the proposed quarry and borrow pit site encompasses approximately 7,500 square metres in addition to existing on-land routes to be used for the transportation of quarried material to a laydown area and bypass road in proximity to the Itivia harbour area. Although the proposed project would occur in an established industrial area within the municipal boundaries of Rankin Inlet, the project footprint and zone of influence may overlap habitat for various species of migratory and non-migratory birds and small terrestrial wildlife. The proposed project area is also adjacent to the marine environment, which could result in impacts to fish and marine mammals. Caribou movement could be affected by the transport of materials and personnel to and from the Meliadine site; however, the disturbance would be intermittent.

2. *The ecosystemic sensitivity of that area.*

Although the project would occur in an industrial subdivision within the Municipality, the project footprint and zone of influence may overlap areas identified as having value and priority to local communities for:

- i. Commercial and subsistence fishing.
- ii. Migration routes for marine mammals, including beluga whales.

3. *The historical, cultural and archaeological significance of that area.*

Neither the Proponent nor any parties that submitted comments for this project identified any known areas of historical, cultural and archaeological significance associated with the project area. Should the project be approved to proceed, the Proponent would be required to conduct an archaeological assessment of the project area, and contact the Government of Nunavut-Department of Culture and Heritage if any sites of historical, cultural or archaeological significance are encountered.

4. *The size of the human and the animal populations likely to be affected by the impacts.*

The proposed project would occur within the municipal boundaries of the Hamlet of Rankin Inlet; as such, there is potential for impacts to human populations in the community. The natural ranges of various species of wildlife overlap the proposed project area; however, no specific animal populations have been identified as likely to be affected by proposed project activities as the project is to occur in an area with existing industrial activities.

5. *The nature, magnitude and complexity of the impacts; the probability of the impacts occurring; the frequency and duration of the impacts; and the reversibility or irreversibility of the impacts.*

As the “Itivia Quarry” project is a proposed quarry operation, the nature of potential impacts is considered to be well-known. Based on the type of activities associated with the project (e.g. drilling and use of explosives for quarry operations) and the volume of quarry material (300,000 cubic meters) to be excavated and transported to the laydown area and bypass road near the Itivia harbour area, there is potential for the project to result in measurable change in the environment during operations. However, the potential adverse impacts from operations are likely to be localized, medium term, infrequent, and reversible with due care. The quarry project will alter the landscape permanently, but with due care in closure and decommissioning of the site, the excavated area will be returned to a reasonably naturalized state.

6. *The cumulative impacts that could result from the impacts of the project combined with those of any other project that has been carried out, is being carried out or is likely to be carried out.*

The proposed project would take place within a 100 kilometre (km) radius of other projects that have been or are being assessed by the Board. These projects include: “Committee Bay Fuel Storage Facility” (NIRB File No. 07EN021) located in the Itivia industrial subdivision in Rankin Inlet; “Quarry Project” (NIRB File No. 09QN046) located approximately 6 km northwest of the town centre in Rankin Inlet; “Fuel Supply Pipeline Replacement Project” (NIRB File No. 15FN027) located within the municipal boundaries of Rankin Inlet; the “Meliadine Gold Mine Project” (NIRB File No. 11MN034); and other industrial activities and mineral exploration programs within a 100 km radius of the proposed project area.

The quarrying activities to support development of the Itivia Harbour bypass road were initially considered as part of the Review conducted under Article 12, Part 5 of the Nunavut Agreement for the Meliadine Gold Mine Project (NIRB File No. 11MN034); however, during the Review the operations were expected to be undertaken by the Hamlet, not by Agnico Eagle. Cumulative effects concerns were not raised during the NIRB’s Review process related to this activity in the area.

Considering the additional detail provided by Agnico Eagle on its proposed management of the site, it is noted that this project is not likely to result in residual or cumulative impacts.

The potential for cumulative impacts to terrestrial wildlife and migratory birds, fish and fish habitat, water and soil quality, ground stability, noise and vibration, air quality, archaeological resources, and traditional land use resulting from the proposed quarry activities and other projects occurring in the region has been identified and considered in the development of the NIRB's recommendations. Terms and conditions recommended for each of these projects are expected to reduce any residual impacts, and as such would limit or eliminate the potential for cumulative effects to occur.

7. *Any other factor that the Board considers relevant to the assessment of the significance of impacts.*

No other specific factors have been identified as relevant to the assessment of this project proposal.

Although no significant public concerns were raised during the public commenting period, the NIRB notes that the location of the proposed activities within the municipal boundaries of Rankin Inlet could potentially contribute to public concern developing. A term and condition has been recommended to direct engagement with the community, Hunters and Trappers Organizations, as well as the posting of public notices to ensure residents are aware of the quarrying activities being or to be conducted.

Views of the Board

In considering the factors as set out above in the screening of the project proposal, the NIRB has identified a number of issues below and respectfully provide the following views regarding whether or not the proposed project has the potential to result in significant impacts. In addition, the NIRB has proposed terms and conditions that would mitigate the potential adverse impacts identified.

Administrative Conditions:

To encourage compliance with applicable regulatory requirements and assist the Board and responsible authorities with compliance and effects monitoring for project activities, the following project-specific terms and conditions have been recommended: 1-4.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Issue 1: Potential adverse impacts to surface water quality, fish and fish habitat, and marine mammals from the use of explosives, surface run-off and dust generated with extraction of quarry material at the Itivia site, the use of fuel and potential spills as a result of re-fuelling activities, and increased noise activities in the area.

Board Views: There is potential for the project to cause a measurable changes in the marine and freshwater environments, including injury or mortality to fish and marine mammals, from fuel spills; dispersal of material to be used for explosives (ammonium nitrate fuel oil) offsite; acid rock drainage and metal leaching (ARD/ML) from exposed rock surfaces; deposition of sediment into fish-bearing waterbodies during site preparation and removal of aggregate from the quarry area; and detonation of explosives in

proximity to fish-bearing waterbodies. To mitigate these potential adverse impacts, the Proponent has committed to implementing a Spill Contingency Plan for spill events; preventing the discharge of explosives material and sediment to the external environment by following its Borrow Pits and Quarries Management Plan; and conducting ARD/ML tests to confirm the acid generation potential of the host rocks prior to quarrying to inform adaptive management measures. The Proponent has also committed to maintaining adequate buffers between project areas and surrounding waterbodies, and complying with DFO's *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters*. With the implementation of mitigation measures proposed and committed to by the Proponent, adverse impacts to surface water quality, fish and fish habitat, and marine mammals are likely to be infrequent, of low magnitude, and reversible.

The Proponent would require a licence from the Nunavut Water Board for waste disposal associated with the quarry activities. In addition, the Proponent would be required to follow the *Fisheries Act*, *Transportation of Dangerous Goods Act*, *Guidelines for the use of Explosives in or near Canadian Fisheries Waters* and the *Arctic Waters Pollution Prevention Act* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that potential adverse impacts may be mitigated by measures such as requiring the Proponent to ensure all project personnel are properly trained in fuel, explosives, and hazardous waste handling procedures, as well as spill response and waste management. The Board recommends terms and conditions 6 through 10, 12, 15, 22, 25, 26, and 29 through 31 to mitigate the potential adverse impacts to surface water quality, fish and fish habitat, and marine mammals.

Issue 2: Potential for adverse impacts to terrestrial wildlife, including birds, during site preparation, operations at the quarry area and increased noise from the associated activities.

Board Views: There is potential for adverse impacts to terrestrial wildlife, including migrating caribou, and migratory and non-migratory birds, with natural ranges overlapping or in proximity to the area proposed for project activities and roads. Specifically, fuel spill events, air pollution (hydrocarbon vapour and dust emission from quarrying and heavy equipment use), noise pollution, and onsite buildup of waste materials during the construction and operation phases of the project may result in adverse impacts to local wildlife populations. However, considering that the project is proposed at a site that is part of an established industrial area in the Municipality of Rankin Inlet, the probability of large local terrestrial wildlife populations inhabiting the project footprint or surrounding areas is considered to be low. To mitigate potential adverse impacts to terrestrial wildlife and birds, the Proponent has committed to managing wastes on site by implementing a Borrow and Quarries Management Plan, a Hazardous Waste Management Plan, and a Closure and Reclamation Plan. With the implementation of mitigation measures proposed and committed to by the Proponent, the adverse impacts to terrestrial wildlife and birds are likely to be of low magnitude and reversible.

The Proponent would also be required to follow the *Nunavut Wildlife Act*, *Migratory Birds Convention Act*, *Species at Risk Act*, and the *Transportation of Dangerous Goods Act* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that the potential adverse impacts to terrestrial wildlife, including birds, may be mitigated by such measures as ensuring all wastes are kept inaccessible to wildlife at all times and avoiding disturbance or destruction of nests or eggs of any birds. The Board recommends terms and conditions 5, 13 through 20, and 33 to mitigate the potential adverse impacts to terrestrial wildlife, including birds.

Issue 3: Potential adverse impacts to vegetation, soil quality and ground stability from quarrying activities, including the use of heavy equipment and spills from re-fuelling activities.

Board Views: There is potential for adverse impacts to vegetation, soil quality and ground stability from site preparation activities and operation of the quarry site. Specifically, the use of heavy equipment, including drills, crusher, and trucks for quarrying and transport of quarry material, and the detonation of explosives may result in seasonal rutting and soil erosion, and increase the risk of rock falls. In addition, spills of fuel or chemicals for explosives may result in soil contamination. To mitigate potential adverse impacts to vegetation, soil quality and ground stability, the Proponent intends to implement a Borrow Pits and Quarries Management Plan and a Spill Contingency Plan. The potential adverse impacts to soil quality and ground stability would likely be limited to the project footprint (7,500 square metres) and the potential for soil contamination may be mitigated if measures identified in the Proponent's Spill Contingency Plan for fuel handling and spill management are implemented.

The Proponent would also be required to follow the *Northern Land Use Guidelines Pits and Quarries* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that potential adverse impacts to vegetation, soil quality and ground stability be mitigated by measures such as requiring the Proponent to treat any contaminated soil and establish heavy equipment, such as the crusher, on stable ground. The Board recommends terms and conditions 11, 21, and 32 through 34 to mitigate the potential adverse impacts to vegetation, soil quality and ground stability.

Issue 4: Potential adverse impacts to public and traditional land use activities in the area from operations at the quarry area and on-land transport of quarry material.

Board Views: There is potential for the proposed project to disrupt traditional and recreational land use activities of residents in Rankin Inlet. Specifically, activities associated with the construction and operation of the proposed project, including traffic from heavy machinery on existing public roads and the quarry site, may limit options for movement of community members to surrounding areas for traditional and recreational activities and may also create a nuisance. The Proponent has committed to meeting requirements

of the Municipality of Rankin Inlet in the execution of the project including adherence to applicable bylaws.

Recommended Mitigation Measures: The Board recommends terms and conditions 27, 28, and 37 to ensure that project activities do not interfere with Inuit wildlife harvesting activities and term and condition 35 to ensure that available Inuit Qaujimaningit can inform project activities to avoid interference with traditional land use activities. In addition terms and conditions 18 through 20 have been recommended to minimize interference with the movements of wildlife.

Socio-economic effects on northerners:

Issue 5: Potential adverse impacts to historical, cultural and archaeological sites during site preparation and operation at the quarry area.

Board Views: The Proponent has not identified sites of historical, cultural and archaeological importance in the proposed project area; however, the Proponent has committed to surveying the proposed quarry area for archaeological sites prior to commencement of operations. The probability of impacts to historical, cultural and archaeological sites is considered to be low as the project is to be located in an established industrial area within the Municipality of Rankin Inlet. However, it is recommended that the Proponent consult with community members in Rankin Inlet prior to executing the project.

The Proponent is also required to follow the *Nunavut Act* (as recommended in the Regulatory Requirements section) and would be required to contact the Government of Nunavut-Department of Culture and Heritage if sites of historical, cultural and archaeological importance are encountered.

Recommended Mitigation Measures: The Board recommends terms and condition 35 to ensure that the affected communities and organizations are informed about the project proposal and that available Inuit Qaujimaningit can inform project activities and reduce the potential for adverse impacts occurring to any historical, cultural, and archaeological sites.

Issue 6: Potential adverse impacts to human health and safety from the development and operation of the quarry area, including noise from project activities in the area.

Board Views: There is potential for adverse impacts to human health and safety from exposure to dust from quarrying activities, noise pollution from blasting activities, vibration, and fire or accidental explosion hazards from the handling of explosives on site. To mitigate these potential adverse impacts to humans, the Proponent has committed to using dust suppression for all drill equipment and crushers for quarrying, conducting blasting activities during daytime only, monitoring blasts for vibration and adjusting intensity of blasting activities accordingly, and implementing a Borrow Pits and Quarries Management Plan. With the implementation of mitigation measures proposed

and committed to by the Proponent, the adverse impacts to human health and safety are likely to be infrequent and of low magnitude.

Recommended Mitigation Measures: It is recommended that potential adverse impacts to human health and safety be mitigated by measures such as requiring the Proponent to inform community members of the timing for project activities including project-related traffic on public roads and for detonation of explosives. The Board recommends terms and conditions 23, 24, 27, and 35 to mitigate the potential adverse impacts to human health and safety.

Issue 7: Potential benefits as Proponent has committed to local employment for the quarrying activities.

Board Views: Proponent has committed to implementing an Inuit Employment Plan to support Inuit content in employment associated with the project. The execution of the proposed project is likely to also increase revenues to the Municipality and is considered to likely result in benefits to the local economy.

Recommended Mitigation Measures: Term and condition 36 is recommended by the Board to ensure the Proponent meets its commitment to procure local services for the project and inform community members of local hiring opportunities.

Significant public concern:

Issue 8: No significant public concern was expressed during the public commenting period for this file.

Board Views: It is noted that there is potential for public concern developing due to the location of the proposed activities within the Municipality of Rankin Inlet and near routes that may be used to access surrounding lands for recreational and traditional land use activities. Follow up consultation and involvement of the local community in Rankin Inlet is expected to mitigate any potential for public concern resulting from project activities.

Recommended Mitigation Measures: The Board recommends term and condition 35 to ensure that the affected communities and organizations are informed about the proposed project and that the Proponent is able to proactively address or mitigate any concerns that may arise from the project activities.

Technological innovations for which the effects are unknown:

No specific issues have been identified associated with this project proposal.

In considering the above factors and subject to the Proponent's compliance with the terms and conditions necessary to mitigate against the potential adverse environmental and social effects, the Board is of the view that the proposed project is unlikely to cause significant public concern

and its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS

The Board is recommending the following specific terms and conditions to apply in respect of the project:

General

1. Agnico Eagle Mines Ltd. (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.
3. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (Application to Determine Conformity, December 22, 2016), and the NIRB (Online Application Form, January 23, 2017; and the Proponent's supplementary application information, January 23, 2017 and March 16, 2017).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Waste Disposal

5. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.

Fuel and Chemical Storage

6. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
7. Unless otherwise authorized by the Nunavut Water Board, the Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment.
8. The Proponent shall ensure that re-fueling of all equipment occurs a minimum of thirty-one (31) metres away from the high water mark of any water body, unless otherwise authorized by the Nunavut Water Board.
9. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.
10. The Proponent shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available during any transfer of fuel or hazardous substances, at all fuel storage sites, at all refuelling stations.
11. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.

12. The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24 hour Spill Line at (867) 920-8130.

Wildlife - General

13. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
14. The Proponent shall not harass wildlife. This includes persistently circling, chasing, hovering over pursuing or in any other way harass wildlife, or disturbing large groups of animals.
15. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
16. The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.

Migratory Birds and Raptors Disturbance

17. The Proponent shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, the Proponent shall take precaution to avoid further interaction and or disturbance (e.g., a 100 metres buffer around the nests). If active nests of any birds are discovered (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have left the nest.
18. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.

Caribou Disturbance

19. The Proponent shall cease activities that may interfere with the migration of caribou, until the caribou have passed or left the area.
20. The Proponent shall not block or cause any diversion to caribou migration, and shall cease activities likely to interfere with migration such as drilling or movement of equipment or personnel until such time as the caribou have passed.

Road and Ground Disturbance

21. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs.
22. The Proponent shall implement suitable erosion and sediment suppression measures on all areas before, during and after conducting activities in order to prevent sediment from entering any waterbody.
23. All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices and engine idling is to be minimized.

Aggregate Removal within Existing Quarries

24. The Proponent shall use water or other non-toxic and biodegradable additives for dust suppression as necessary to maintain ambient air quality without causing water to pool or runoff.
25. The Proponent shall not remove any material from below the ordinary high water mark of any lake or stream.
26. The Proponent shall not deposit or permit the deposit of sediment into any water body.

Establishment of New Quarries

27. The Proponent shall clearly stake and flag pit and quarry boundaries so they remain visible to other land users.
28. The Proponent shall locate quarry/pit facilities so as to avoid all recreational sites and public use areas, and to protect unique geographical features and natural aesthetics.
29. The Proponent shall ensure there is no obstruction of natural drainage, flooding or channel diversion from quarry/pit access, stockpiles, or other structures or facilities.
30. The Proponent shall ensure that silt fences/curtains are installed down gradient of any quarry activities.
31. The Proponent shall maintain an undisturbed buffer zone of at least 100 metres between quarry site and any high water mark of any water body. Alternately: The Proponent shall maintain an undisturbed buffer zone between the periphery of quarry sites and the high water mark of any water body that is of an adequate distance to ensure erosion control.
32. The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.

Restoration of Disturbed Areas

33. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
34. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or upon abandonment of site.

Other

35. The Proponent should engage with local residents regarding planned activities in the area and should solicit available Inuit Qaujimaningit and information regarding current recreational and traditional usage of the project area which may inform project activities. Posting of translated public notices, including on the timing for detonation of explosives, and direct engagement with potentially interested groups and individuals prior to and during the project activities is strongly encouraged.
36. The Proponent should, to the extent possible, hire local people.
37. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Annual Report

1. The Proponent shall submit a comprehensive annual report to the NIRB with copies provided to the Nunavut Water Board, Government of Nunavut-Department of Community and Government Services, and the Municipality of Rankin Inlet by March 31st of each year of permitted activities. The annual report must contain, but not limited to, the following information:
 - a. A summary of activities undertaken for the year, including: a map showing the approximate location of active quarry and borrow sites and buffer zones;
 - b. A summary of additional studies and environmental management activities undertaken in the year, including any corrective actions implemented, for wildlife, soil, and acid rock drainage/metal leaching potential, and marine and freshwater resources. The summary should also include the results of monitoring of the quality of water in contact with its operations and any water diversions implemented;
 - c. A summary of activities undertaken to ensure blasting activities comply with DFO's *Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters*; including commitments made during the assessment of the project such as:
 - i. Use of explosives only during non-critical periods for the protection of fish and marine mammals;
 - ii. Map showing detonation locations and locations of any marine mammals and associated habitat;
 - d. A summary of reclamation activities undertaken in the year, including progressive reclamation, and an updated Closure and Reclamation Plan with timing for final site closure;
 - e. An updated blast design protocol that includes:
 - i. Management of the use of ammonium nitrate to prevent spillage during blasting operations;
 - ii. Preventative measures to ensure minimum impacts to fish during fish spawning periods by limiting the weight of explosives to be used at any time, and confining blasting activities to a minimum of 31 metres from freshwater bodies; and
 - f. A description of local hires and initiatives associated with the project.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Change in Project Scope

1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission (NPC) and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Bear and Carnivore Safety

2. The Proponent should review the Government of Nunavut's booklet on Bear Safety, which can be downloaded from this link: http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf. Further information on bear/carnivore detection and deterrent techniques can be found in the "*Safety in Grizzly and Black Bear Country*" pamphlet, which can be downloaded from this link: http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.pdf.
3. There are polar bear and grizzly bear safety resources available from the Bear Smart Society with videos on polar bear safety available in English, French and Inuktitut at <http://www.bearsmart.com/play/safety-in-polar-bear-country/>. Information can also be obtained from Parks Canada's website on bear safety at the following link: <http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx> or in reviewing the "*Safety in Polar Bear Country*" pamphlet, which can be downloaded from the following link: http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx.
4. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Rankin Inlet, phone: (867) 645-8084).

Species at Risk

5. The Proponent review Environment and Climate Change Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf. The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

Migratory Birds

6. The Proponent review Canadian Wildlife Services' "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut", available at the following link: <http://publications.gc.ca/site/eng/317630/publication.html> and "Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories", available at the following link: <http://publications.gc.ca/site/eng/392824/publication.html>. The guide provides information to the Proponent on key terrestrial and marine habitat areas that are essential to the welfare of various migratory bird species in Canada.
7. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment and Climate Change Canada's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" available at <http://www.ec.gc.ca/paom-itmb/>.

Transport of Dangerous Goods and Waste Management

8. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.

9. The Proponent shall ensure that proper shipping documents (waste manifests, transportation of dangerous goods, etc.) accompany all movements of dangerous goods. Further, the Proponent shall ensure that the shipment of all dangerous goods is registered with the Government of Nunavut Department of Environment, Department of Environment Manager. Contact the Manager (867) 975-7748 to obtain a manifest if dangerous goods including hazardous wastes will be transported.

Nunavut Water Board

10. The Nunavut Water Board impose mitigation measures, conditions and monitoring requirements pursuant to the Water Licence, which require the Proponent to respect the sensitivities and importance of water in the area. These mitigation measures, conditions and monitoring requirements should be in regard to use of water, snow and ice; waste disposal; access infrastructure and operation for camps; drilling operations; spill contingency planning; abandonment and restoration planning; and monitoring programs.

Indigenous and Northern Affairs Canada – Water Resources Division

11. INAC – Water Resources Division should consider the importance of conducting regular inspections, pursuant to the authority of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, while the project is in operation. Inspectors should focus on ensuring the Proponent is in compliance with the conditions imposed through the Water Licence.

REGULATORY REQUIREMENTS

The Proponent is also advised that the following legislation may apply to the project:

Acts and Regulations

1. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>).
2. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://laws-lois.justice.gc.ca/eng/acts/n-28.8/>).
3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>).
4. The *Species at Risk Act* (<http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html>). Attached in **Appendix A** is a list of Species at Risk in Nunavut.
5. The *Wildlife Act* (<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>) which contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.
6. The *Nunavut Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-28.6/>). The Proponent must comply with the proposed terms and conditions listed in the attached **Appendix B**.
7. The *Transportation of Dangerous Goods Regulations* (<http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm>), *Transportation of Dangerous Goods Act* (<http://laws-lois.justice.gc.ca/eng/acts/t-19.01/>), and the *Canadian Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>).
8. The *Arctic Waters Pollution Prevention Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-12/>).

9. The *Nunavut Mining Safety Ordinance* and the *Territorial Quarrying Regulations* (<http://www.canlii.org/en/ca/laws/regu/crc-c-1527/latest/crc-c-1527.html>) or equivalent.

Other Applicable Guidelines

10. The *Guidelines for the use of Explosives in or near Canadian Fisheries Waters* (<http://publications.gc.ca/site/eng/82558/publication.html>).
11. The *Northern Land Use Guidelines Pits and Quarries* (<http://www.aadnc-aandc.gc.ca/eng/1100100023585>) provide guidelines for progressive reclamation applicable to establishment of pits and quarries.

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to Agnico Eagle Mines Ltd.'s "Itivia Quarry". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated April 13, 2017 at Arviat, NU.



Elizabeth Copland, Chairperson

Attachments: Appendix B: Species at Risk in Nunavut
Appendix C: Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders

Appendix A

Species at Risk in Nunavut

Due to the requirements of Section 79(2) of the Species At Risk Act (SARA), and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of SARA, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- Schedule 1 is the official legal list of Species at Risk for SARA. SARA applies to all species on Schedule 1. The term “listed” species refers to species on Schedule 1.
- Schedule 2 and 3 of SARA identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are “pending” addition to Schedule 1 of SARA. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the species at risk Registry at <http://www.sararegistry.gc.ca> for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

Schedules of SARA are amended on a regular basis so it is important to check the SARA registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: October 2016

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Migratory Birds			
Eskimo Curlew	Endangered	Schedule 1	ECCC
Buff-breasted Sandpiper	Special concern	Pending	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	GN
Peregrine Falcon	Special Concern (<i>anatum-tundrius</i> complex ³)	Schedule 1 - Threatened (<i>anatum</i>) Schedule 3 – Special Concern (<i>tundrius</i>)	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Red Knot (<i>rufa</i> subspecies)	Endangered	Schedule 1	ECCC
Red Knot (<i>islandica</i> subspecies)	Special Concern	Schedule 1	ECCC
Horned Grebe (Western population)	Special Concern	Pending	ECCC
Red-necked Phalarope	Special concern	Pending	ECCC
Vegetation			
Felt-leaf Willow	Special Concern	Schedule 1	GN
Blanket-leafed Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Terrestrial Wildlife			
Peary Caribou	Endangered	Schedule 1	GN
Peary Caribou (High Arctic Population)	Endangered	Schedule 2	GN
Peary Caribou (Low Arctic Population)	Threatened	Schedule 2	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Marine Wildlife			
Polar Bear	Special Concern	Schedule 1	GN/DFO
Grizzly Bear	Special Concern	Pending	GN
Wolverine	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Pending	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Arctic population)	Special Concern	Schedule 2	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Grey Whale (Eastern North Pacific population)	Special Concern	Schedule 1	DFO

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Humpback Whale (Western North Atlantic population)	Special Concern	Schedule 3	DFO
Narwhal	Special Concern	Pending	DFO
Fish			
Northern Wolffish	Threatened	Schedule 1	DFO
Atlantic Wolffish	Special Concern	Schedule 1	DFO
Bering Wolffish	Special Concern	Schedule 3	DFO
Fourhorn Sculpin	Special Concern	Schedule 3	DFO
Roundnose Grenadier	Endangered	Pending	DFO
Spotted Wolffish	Threatened	Schedule 1	DFO
Thorny Skate	Special Concern	Pending	DFO
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Blackline Prickleback	Special Concern	Schedule 3	DFO

Notes: DFO: Fisheries and Oceans Canada; ECCC: Environment and Climate Change Canada; GN: Government of Nunavut

¹The Department of Fisheries and Oceans has responsibility for aquatic species.

²Environment and Climate Change Canada has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

³The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern.

Appendix C

Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders



INTRODUCTION

The Department of Culture and Heritage (CH) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Indigenous and Northern Affairs Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut's archaeological and palaeontological resources.

TERMS AND CONDITIONS

- 1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

	Types of Development (See Guidelines below)	Function (See Guidelines below)
a)	Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b)	Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/ Palaeontological Inventory
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/ Palaeontological Inventory or Assessment or Mitigation

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CH is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*¹ to issue such permits.

- 2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.

¹ P.C. 2001-1111 14 June, 2001

- 3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 4) The permittee/proponent shall immediately contact CH at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.
- 5) The permittee/proponent shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation until permitted to proceed with the authorization of CH.
- 6) The permittee/proponent shall follow the direction of CH in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act Indigenous and Northern Affairs Canada directions will also be followed.
- 7) The permittee/proponent shall provide all information requested by CH concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.
- 9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CH as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.
- 10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

Legal Framework

As stated in Article 33 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement):

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology

Under the *Nunavut Act*², the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under

² s. 51(1)

the *Nunavut Archaeological and Palaeontological Sites Regulations*³, it is illegal to alter or disturb any palaeontological or archaeological site in Nunavut unless permission is first granted through the permitting process.

Definitions

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

“archaeological site” means a place where an archaeological artifact is found.

“archaeological artifact” means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement).

“palaeontological site” means a site where a fossil is found.

“fossil” includes:

Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:

- (a) natural casts;*
- (b) preserved tracks, coprolites and plant remains; and*
- (c) the preserved shells and exoskeletons of invertebrates and the preserved eggs, teeth and bones of vertebrates.*

Guidelines for Developers for the Protection of Archaeological Resources in the Nunavut Territory

(Note: Partial document only, complete document at: www.ch.gov.nu.ca/en/Archaeology.aspx)

Introduction

The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns. Effective collaboration between the developer, the Department of Culture, and Heritage (CH), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

CH is the Nunavut Government agency which oversees the protection and management of heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals

³ P.C. 2001-1111 14 June, 2001

prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CH provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement)), and the Indigenous and Northern Affairs Canada, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations*.

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*
- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*

- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources.*

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project. Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and
- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required.

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a

heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture and Heritage. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.