



*“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 OVERVIEW & THE NIRB ASSESSMENT PROCESS

### 1. Project Description

The proposed “Amaruq, Meadowbank and White Hills” project is located within the Kivalliq region, between 40 to 140 kilometres (km) north of the community of Baker Lake. The Proponent intends to conduct exploration activities for gold mineralization. The program is proposed to take place from 2016 to 2018 with potential for additional years of exploration.

According to the project proposal, the scope of the project includes the following undertakings, works or activities:

- Exploration activities to include ground or aerial geophysical survey, prospecting and diamond drilling (on-land and on-ice drilling activities);

- Use of water for drilling activities;
- Development of winter accesses (not winter trails) to transport equipment to drill sites;
- Use of helicopters to transport drills, equipment and workers;
- Use of Dozer D6 in winter to move drills to exploration areas near existing facilities;
- Use of snowmachines for transport;
- Use of fuel for drilling activities with minimum amounts (up to 160,000 L diesel fuel) stored at the drill site(s);
- Use of propane for heat (up to 200 pounds stored at drill site(s));
- Use of hazardous materials and chemicals including drilling additives;
- Wastes generated at sites transported daily to either Amaruq or Meadowbank camps for proper disposal;
- Ongoing archaeological investigations within the planned exploration area; and
- Use of existing facilities at Amaruq or Meadowbank sites.

## 2. Scoping

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
October 21, 2015	Receipt of project proposal from the NPC
October 21, 2015	Scoping pursuant to subsection 86(1) of the NuPPAA
October 30, 2015	Information request(s) received
November 10, 2015	Proponent responded to information requests
November 13, 2015	Public engagement and comment request
December 1, 2015	Ministerial extension
December 7, 2015	Receipt of public comments
December 28, 2015	Proponent responded to comments/concerns raised by public
December 29, 2015	Request for clarification regarding responses
January 4, 2016	Proponent provided clarification

## 4. Public Comments and Concerns

From November 13, 2015 to December 7, 2015 the NIRB provided opportunity for the public to provide comments and concerns regarding the project proposal. The following is a summary of the comments and concerns received:

### Government of Nunavut (GN)

- Required confirmation on the specific drill locations and associated layout locations, and the number of drill holes per location/area.
- Could not provide comments on the following due to a lack of information in the application:

- Whether the project was likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities as no assessment was provided.
- Whether the project was likely to arouse significant public concern as no record of community consultations was provided.
- No cumulative effects assessment was provided.
- Noted concerns related to impacts of the project activities to archaeological resources and provided recommendations for the assessment of the exploration sites related to archaeological and palaeontological sites.
- Noted the Department of Culture and Heritage must be consulted on the proposal as an application for an Archaeology permit is required.
- Recommended AEM have a professional archaeologist and/or palaeontologist perform functions associated with specific types of activities listed and confirm whether the locations of the drill sites would be assessed for potential archaeological resources prior to the snow-covered season.
- Noted that the proposed project would spatially and temporally overlap with the range of the Ahiak, Lorillard, and Wager Bay caribou herds, and expressed concerns that:
  - The proposed project area overlaps with critical calving, post calving areas and migration routes and provided maps showing the project overlap with migration corridors, rut range and winter range.
  - Disturbances from project activities have the potential to impact sensitive life stages for caribou and negatively impact the long-term survival of caribou.
  - Recommended seasonal restrictions be put in place on project activities to avoid risks to migrating and rutting caribou.
- Noted potential disturbance to all wildlife (caribou, muskoxen and birds) from project activities, specifically:
  - Aerial traffic interfering with wildlife movement, and recommended raising flight altitudes and the development of a mitigation and monitoring plan to reduce impacts to wildlife.
  - Potential interaction of muskox with project activities with potential displacement from calving areas could have negative effects on muskox breeding.
  - High probability of encounters with grizzly bears in the project area with bears attracted to human installations. Recommended proponent put in place plans to avoid human-bear conflicts, meet with local hunters to discuss local traditional knowledge of bears, and ensure staff are aware and trained in human-bear conflicts.
  - Potential disturbance of raptors and nesting raptors by project activities with *Species at Risk Act* listing species in the area to include Peregrine Falcon and Short-eared Owl. Avoidance of raptors nesting during critical periods is required with a minimum distance of at least 100 metres from a nest site recommended.
- Recommended that AEM monitor and report any wildlife sightings in the area during the time of operations, with reports sent to the Wildlife Research department in Igloolik.

### **Indigenous and Northern Affairs Canada (INAC)**

- Could not provide comments on several issues due to a lack of information in the application, specifically:
  - Whether or not the project was likely to arouse significant public concern as it was not clear whether consultation has been conducted as no records of community consultations was provided.
  - Whether current proposed activities at the White Hills area would occur on the Crown land portion, or on both Crown land and Inuit-owned land.
  - Whether the current water licence (2BE-MEA1318) would cover what is currently being proposed and whether it includes the White Hills area.
  - Information required regarding the use of “normally, flexible berms” as secondary containment facilities.
  - Absence of cumulative effects assessment in application limited options for feedback.
- Additional information on the contingency plans was requested, specifically:
  - Wildlife mitigation and monitoring plan was not provided, nor outline of potential impacts to wildlife from the proposal. This plan should be provided to assist with identifying impacts to all wildlife, including those used for country foods.
  - Clarification needed on the source of peat moss that would be used to absorb film of petroleum products (as noted in the Spill Contingency Plan).
- Prior to commencing operations, information should be provided on the proposed winter access routes.

### **Environment and Climate Change Canada (ECCC)**

- Referred Proponent to *Fisheries Act*, Subsection 36(3) noting that the Act makes no allowance for mixing or dilution zone at the point of deposit.
- Recommended the following operational considerations be made to reduce impacts:
  - Appropriate sediment/erosion control measures be in place to ensure no materials including drilling additives or drilling muds enter the water and no surface erosion occur.
  - If artesian flow is encountered, that the core-drill holes be plugged and permanently sealed.
  - All hazardous wastes receive proper treatment and disposal at an approved facility.
  - Food, domestic wastes and chemicals be inaccessible to wildlife at all times.
  - Recommended standard measures be implemented to reduce disturbance to migratory birds from aircraft disturbance.
- Proponent is referred to Paragraph 6(a) of the *Migratory Birds Regulations*, which states no one shall disturb or destroy the nests or eggs of migratory birds. Recommended that if active nests are encountered, the nesting area be avoided until nesting is complete. A nesting zone map was provided.
- Provided standard comments and recommendations when encountering Species at Risk and migratory birds. Further noted that the Red-necked Phalarope has recently been assessed by COSEWIC as Special Concern and proponent should avoid any disturbance.

- Noted Section 5.1 of the *Migratory Birds Convention Act* that prohibits persons from depositing substances that are harmful to migratory birds in waters or areas frequented by migratory birds.
- Recommended any incidental observations of birds be submitted to eBird.

### **Fisheries and Oceans Canada (DFO)**

- Noted no additional approvals under the *Species at Risk Act* (SARA) would be required.
- Indicated that the proposal should not result in serious harm to fish or contravene sections of SARA as long as AEM implements the required mitigation measures and follow the DFO measures.
- Reminded AEM that it is their responsibility to consult the DFO's website or a qualified environmental consultant if plans changed or the description of the proposal changes.
- Reminded AEM that it should notify DFO (*Duty to Notify*) if it has caused or is about to cause serious harm to fish.

### **Baker Lake Hunters and Trappers Organization (HTO)**

- Believes that these projects are already having significant cumulative impacts and has caused public concern.
- Noted impacts will worsen unless new and stricter terms and conditions are applied.
- Concerns over impacts from road dust on vegetation and Inuit use of the land.
- Concerns that dust will worsen with ongoing exploration work north of Baker Lake.
- The HTO referred to the term and condition within the Meadowbank project certificate noting that AEM is not following the condition and instead has chosen to monitor road dust. The HTO does not agree with AEM's assessment that dust is not having a significant impact.
- Recommended the NIRB explore further options and actions for enforcing the terms and conditions in the project certificate, including that the Board contact responsible parties requesting they enforce the condition.
- Requested the NIRB provide information regarding which party is responsible for enforcement of the condition.
- Noted that the HTO previously recommended a condition prohibiting all activities and personnel within a 500 metre radius of the grave during the screening of the Amaruq all-season road but was not included by the NIRB in the screening report. The HTO requested the NIRB put in place new terms and conditions on these exploration projects related to graves.

### **Kivalliq Wildlife Board (KWB)**

#### **Heritage Resources and Inuit Land Use**

- Based on the report by the NPC, projects are located in areas of important historic land use for Inuit from the Gary Lakes and Back River areas. Concerns have been expressed repeatedly by the Baker Lake HTO regarding preservation of heritage resources; particular concern has been expressed regarding potential damages to gravesites.
- Recommended that project activities and personnel be prohibited within 100 metres of gravesites.
- Noted importance of area north of Baker Lake to the Baker Lake Inuit for hunting and traditional activities.

- Recommended AEM provide a summary of the known heritage resources in the area, its knowledge of Inuit land use in/near the project area, and explain how it has changed project activities to mitigate impacts on heritage resources and Inuit land use.

#### Caribou Habitat

- Recommended seasonal restrictions be put in place on project activities that are most disruptive to caribou.
- Recommended all other activities should cease when caribou approach during the early fall period, migratory season, rutting period and late fall migration.

#### Road dust

- Noted hunters in Baker Lake have repeatedly raised concerns with the NIRB regarding levels of dust produced from the Meadowbank all-weather access road. Further, the Baker Lake HTO raised concerns that the problem will be made worse by the approval of the Amaruq all-season road and increased exploration in the area.
- Recommended AEM comply with the NIRB's terms and conditions and apply dust suppressants to both roads or at a minimum suppress dust on the sections of the Meadowbank road, which is adjacent to important areas of Inuit land use.

#### Marine Shipping

- Noted hunters in Chesterfield Inlet have repeatedly notified the NIRB and other parties regarding concerns with the impacts from increased marine shipping through the inlet on marine mammals. Concerned that if further mineral development takes place near Baker Lake and the volume of shipping increases, then the impact to Chesterfield Inlet hunters may increase.
- Recommended regulators consider imposing a limit on the total number of ships and barges travelling between Baker Lake and Chesterfield Inlet each season.
- Recommended regulators and the proponent explore other technical mitigation measures to reduce the impacts of shipping on marine mammals.

### **5. Comments and Concerns with respect to Inuit Qaujimaningit**

The following is a summary of the comments and concerns received with respect to Inuit Qaujimaningit:

#### **Government of Nunavut (GN)**

- Scientific research (including telemetry and monitoring) and *Inuit Qaujimajatuqangit* have shown that barren ground caribou annually and predictably use core calving and post-calving habitats as they are known to offer spatial and temporal segregation from factors that may decrease survival, including predation and industrial activities.

#### **Baker Lake Hunters and Trappers Organization (HTO)**

- From the perspective of hunters and Elders from Baker Lake, dust from the road is causing significant impacts. Road dust settling on vegetation is part of the reason why caribou migration routes north of Baker Lake have changed.

### **Kivalliq Wildlife Board (KWB)**

- Hunters in Chesterfield Inlet have indicated that the increased marine shipping through Chesterfield Inlet is having a significant seasonal impact on marine mammals.

## **6. Proponent's Response to Public Comments and Concerns**

The following is a summary of the Proponent's response to concerns as received on December 28, 2015:

### **General**

- AEM to provide shapefiles associated with the proposed drilling area and noted that the final number of drill sites per location would be highly dependent on results obtained from the core analysis.
- Public consultation to be completed by AEM prior to start of proposal.
- Provided clarification regarding that the proposed exploration activities are included within, and dependent on, the current water licence amendment being analyzed by the Nunavut Water Board.
- Provided clarification that the proposed activities would only be undertaken on Crown lands.
- Provided clarification that the Meadowbank all-weather access road would not be used for the proposed activities.

### **Culture, Heritage and Traditional Activities**

- Outlined its archaeological assessment process, including communication with the GN and made related commitments.
- Would undertake archaeological assessments of the exploration areas prior to any exploration work to be conducted.

### **Wildlife, Fish and Fish Habitat**

- Commitments made related to mitigation and reporting measures for caribou, muskox, and migratory birds.
- AEM noted that it is confident that there would be no significant impacts on migratory birds and caribou by following the Wildlife Protection and Response Plan.

### **Fuel and Chemical Storage**

- Provided clarification that that flexible berms (e.g., insta-berms) or rigid berms (i.e., using plastic or wood) would be utilized as secondary containment facilities.
- Provided clarification that industrial bagged peat moss would be used as a hydrocarbon absorbent to be used to absorb film of petroleum products.

### **Marine Shipping**

- Clarification provided that the proposed exploration activities would use the same ship as for the Meadowbank operations and would not result in increased shipping activities.

In determining whether a review of the project is required, the Board considered whether the project proposal had a 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 NuPPAA. The Board took particular attention to take into account traditional knowledge and Inuit Qaujimaningit 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 size of the geographic area for the project proposal encompasses three exploration sites near the Proponent's existing Meadowbank Gold Mine project and includes one area near the Thelon Heritage River. The proposed activities may take place within habitat for many far-ranging wildlife species, including areas that overlap the range of Ahiak, Lorillard and Wager Bay caribou herds. In addition, the proposed project would include helicopter-assisted mineral exploration taking place over mineral leases and potential winter accesses (not winter trails) to transport equipment to drill sites.

2. *The ecosystemic sensitivity of that area.*

The proposed project would occur in an area with no particular identified ecosystemic sensitivity, with the exception of a portion of the exploration areas which would occur within the range of Ahiak, Lorillard and Wager Bay, though activities would occur outside of the critical calving/key access corridor range.

This area has also been identified as having value and priority to local communities for:

- i. Caribou (critical calving and post calving areas, as well as migration routes),
- ii. General wildlife (migratory birds, and raptors), and
- iii. Muskox.

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

The proposed project would occur north of Baker Lake and in areas that have been identified by community members to be areas of importance for Inuit from the Gary Lakes and Back River areas, are culturally significant and continue to be used for traditional land use activities.

The project proponent did not indicate that there are any known areas of historical, cultural and archaeological significance associated with the project area. Should the project be approved to proceed, the Proponent has committed to undertaking further archaeological/paleontological surveys. Further, the Government of Nunavut has

recommended that the proponent conduct additional surveys prior to exploration and the proponent has agreed to this recommendation.

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

The proposed project would occur 40 to 140 km from Baker Lake, the nearest community; as such no human populations are likely to be affected by project impacts. Terrestrial species at risk have been identified as potentially occurring within the project area and may be impacted by the project proposal.

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 “Amaruq, Meadowbank and White Hills” project is a proposed mineral exploration project, the nature of potential impacts is considered to be well-known, with potential for infrequent, localized impacts to the biophysical environment that are temporary in nature, reversible and mitigable with due care.

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 areas would take place in proximity to other active mineral interests nearby (including advanced exploration) that are currently being explored/assessed by the Proponent. This includes the Greyhound Properties (AEM currently has an option agreement with Aura Silver – NIRB File No. 10EN022) and the IVR properties (part of the Amaruq lease – NIRB File No. 11EN010).

Potential for cumulative impacts to caribou migration, muskox and general wildlife resulting from exploration activities (noise and presence of people and equipment), and transportation of equipment and personnel to exploration sites via helicopter and/or ground transportation has been identified and considered in development of the recommended mitigation measures set out in the following section. Further, this project proposal could induce additional exploration activities in the area.

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.

In considering the factors as set out above in the screening of the project proposal, the NIRB has identified a number of issues and provides the following views regarding whether or not the proposed project has the potential to result in significant impacts, and 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.

#### **1. Ecosystem, wildlife habitat and Inuit harvesting activities:**

**Issue 1:** Potential negative impacts to caribou and caribou calving habitat from aerial geophysical surveys, and daily transport of personnel and equipment to project sites by helicopter and transport of equipment via potential winter accesses to drill sites.

**Board views:** As discussed above in the assessment of factors relevant to this project proposal, the proposed activities may take place within habitat for the Ahiak, Lorillard and Wager Bay caribou herds. The impacts from the project may be negative though the Proponent has identified that activities would occur outside the critical calving/key access corridor range. Minimum flight altitudes and seasonal restrictions have been recommended and are expected to further mitigate potential adverse impacts to caribou. It is expected that any resulting impacts would be temporary in nature.

**Noted Traditional Knowledge or Inuit Qaujimaningit:** As noted by the GN, *Inuit Qaujimajatuqangit* has shown that barren ground caribou annually and predictably use core calving and post-calving habitats. The Kivalliq Wildlife Board has noted the importance of the area north of Baker Lake for hunting and traditional activities. The Baker Lake HTO has noted that dust settling on vegetation may be part of the reason why caribou migration routes north of Baker Lake have changed.

**Recommended Mitigation Measures:** It is recommended that the potential negative impacts may be mitigated by measures such as requiring the Proponent to maintain minimum flight altitudes and seasonal restrictions. The following terms and conditions are recommended to mitigate the potential adverse impacts: 20 through 27.

**Issue 2:** Potential negative impacts to wildlife and wildlife habitat and migratory birds from conducting project activities. This includes potential impacts from noise generated from ground or aerial geophysical survey, prospecting and diamond drilling activities, from daily transport of personnel and equipment to project sites by helicopter and/or transport of equipment via potential winter accesses to drill sites. Further, cumulative impacts have also been identified.

**Board views:** As discussed in the assessment of impacts section, the areas have been identified as having value and priority to the residents of Baker Lake for wildlife such as muskox and migratory birds. The potential for impacts is applicable to a limited geographic area and the probability of impacts occurring is considered to be low, with potential adverse effects anticipated to be low in magnitude and it is unlikely that the proposed activities would interact significantly with identified wildlife and wildlife habitat. However, specific and general measures have been recommended to mitigate any potential negative impacts.

In addition, as discussed above in the assessment of factors, the proposed activities may have the potential for cumulative impacts to caribou migration, muskox and general wildlife from the exploration activities as the project proposal could induce additional exploration activities in the area.

The Proponent will be required to follow the *Migratory Birds Convention Act* and *Migratory Birds Regulations*. Further, the Proponent has provided a wildlife mitigation and monitoring plan which addressed the potential impacts noted here and parties concerns.

Noted Traditional Knowledge or Inuit Qaujimaningit: The Kivalliq Wildlife Board has noted the importance of the area north of Baker Lake for hunting and traditional activities.

Recommended Mitigation Measures: It is recommended that the potential negative impacts may be mitigated by measures such as requiring the Proponent to maintain minimum flight altitudes and seasonal restrictions. The following terms and conditions are recommended to mitigate the potential adverse impacts: 7, 10, & 14 through 23.

Further, recommendations have been made to the Nunavut Planning Commission, territorial and federal agencies, Regional Inuit Associations, co-management boards and industry to develop an action plan to identify and mitigate potential cumulative effects of human land use activities, including mineral exploration, on barren-ground caribou. The Board is also recommending that a plan be developed that identifies appropriate land use in these areas prior to potential mineral exploration (see Other NIRB's Concerns and Recommendations).

**Issue 3:** Potential negative impacts to surface and ground water quality and quantity, fish and fish habitat from storage and use of fuel and drilling additives, from drilling activities (on-land and on-ice), and development of winter accesses to drill sites in the winter.

Board views: The probability of negative impacts occurring is considered to be low, infrequent in occurrence and reversible in nature and while the magnitude of impacts resulting from a potential spill is unknown, the Proponent has provided a comprehensive spill contingency plan. The Proponent has also committed to conduct monitoring program related to the potential impacts from the exploration activities on the waterbodies.

Further, the Proponent will require a water licence from the Nunavut Water Board for the use of water for the project activities and for the storage of fuel (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that operational procedures for storing and transfer of materials, use of secondary containment, and spill response equipment would reduce the risk of uncontrolled releases of fuel or hazardous materials resulting in negative impacts to surface and ground water quality and quantity. Further, the potential negative impacts are also issues relevant for consideration by the Nunavut Water Board. In addition, the following terms and conditions are recommended to

mitigate the potential adverse impacts to waterbodies in addition to ensuring no wastes enter surrounding lakes or waterbodies from drilling activities: 5, 6, 8, 9, 11, 12, 13, 30 through 37, and 41 through 45.

**Issue 4:** Potential negative impacts to vegetation, soils and land from storage and use of fuel and drilling additives from on-land drilling activities, and development of winter accesses to drill sites in the winter.

**Board views:** The potential for negative impacts is applicable to a small geographic area and the probability of impacts occurring is considered to be low, with potential adverse effects anticipated to be low in magnitude, infrequent in occurrence and reversible in nature. While the magnitude of negative impacts resulting from a potential spill is unknown, the Proponent has provided a comprehensive spill contingency plan.

**Recommended Mitigation Measures:** It is recommended that operational procedures for storing and transfer of materials, use of secondary containment, and spill response equipment would reduce the risk of uncontrolled releases of fuel or hazardous materials resulting in negative impacts to soils and vegetation. The following terms and conditions are recommended to mitigate the potential adverse impacts to the land in addition to ensuring that transportation occurs only during appropriate conditions and that site remediation activities are undertaken: 7, 11 through 14, 28, 29, 35, 37 to 40, 42, 46 & 47.

## **2. Socio-economic effects on northerners:**

**Issue 5:** Potential negative impacts to historical, cultural and archaeological sites. The Proponent is proposing to work in areas of known historical significance, which may cause potential negative impacts.

**Board Views:** The Proponent has provided a mitigation plan (see Proponent response to parties concerns) and committed to the protection of Inuit heritage sites in the area by conducting ongoing archaeological investigations. Further the Proponent is required to contact the Culture and Heritage Department when encountering historical sites.

**Noted Traditional Knowledge or Inuit Qaujimaningit:** The Baker Lake HTO and the KWB noted significant historical sites north of the project area and recommended Proponent avoid these areas.

**Recommended Mitigation Measures:** The Proponent is required to follow the *Nunavut Act*. Term and condition 48 is recommended to ensure that available Inuit Qaujimaningit can inform project activities.

**Issue 6:** Continued potential positive socio-economic effect on northerners from employment opportunities as the Proponent has committed to continue to hire beneficiaries.

**Board Views:** It is noted that the Proponent will continue to hire local beneficiaries, which is considered a continued positive impact.

Recommended Mitigation Measures: Term and condition 48 has been recommended to ensure the Proponent continues to hire local people.

**Issue 7:** Potential negative impacts to traditional land use activities in the project area.

Board Views: The areas identified for exploration activities are known for traditional land use activities, however, due to the low-intensity and intermittent nature of the proposed project components, standard measures would be expected to mitigate any potential negative impacts.

Noted Traditional Knowledge or Inuit Qaujimaningit: The Baker Lake HTO and the KWB noted that the areas north of Baker Lake to be important for hunting and traditional land use activities.

Recommended Mitigation Measures: Term and condition 49 has been recommended to mitigate potential negative impacts to traditional land use activities and Inuit wildlife harvesting.

### **3. Significant public concern:**

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

Board Views: Follow up consultation and involvement of local community members is expected to mitigate any potential for public concern resulting from project activities.

Recommended Mitigation Measures: Term and condition 48 is recommended to ensure that the affected community and organizations are informed about the project proposal and to mitigate any concerns that may arise from the project activities.

### **4. 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, October 21, 2015), to the NIRB (additional information submitted November 10, 2015 including NIRB Part 1 form in Inuktitut, Flight Route, Spill Contingency Plan and Waste Management Plan) and to Indigenous and Northern Affairs Canada (Application for Class B Land Use Permit).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

### **Water Use**

5. The Proponent shall not extract water from any fish-bearing waterbody unless the water intake hose is equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish. Small lakes or streams should not be used for water withdrawal unless approved by the Nunavut Water Board.
6. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board.

### **Waste Disposal/Incineration**

7. 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**

8. 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.
9. The Proponent shall ensure that re-fuelling 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.
10. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
11. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks), when storing barrelled fuel and chemicals at all locations.
12. The Proponent shall use drip pans or other equivalent device when refuelling equipment on-site. Appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) must be readily available during any transfer of fuel or hazardous substances.
13. 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**

14. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
15. The Proponent shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals. 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 metre 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.
19. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

### **Aircraft Flight Restrictions**

20. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum altitude of 610 metres above ground level unless there is a specific requirement for low-level flying, which does not disturb wildlife and migratory birds.
21. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 metres and a horizontal distance of 1500 metres from any observed groups (colonies) of migratory birds. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
22. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
23. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over the project area, including flight paths to/from the project area.

### **Caribou and Muskoxen Disturbance**

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

26. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within 10 kilometres, or conduct any drilling operation within 5 kilometres of any paths or crossings known to be frequented by caribou (e.g. designated caribou crossings).
27. During the period of May 15 to July 15, when caribou are observed within 1 kilometre of project operations, the Proponent shall suspend all operations, including low-level over flights, blasting, and use of snow mobiles and all terrain vehicles outside the immediate vicinity of the camps. Following July 15, if caribou cows or calves are observed within 1 kilometre of project operations, the Proponent shall also suspend all operations in the vicinity, including low-level over flights, blasting, and use of snow mobiles and all terrain vehicles, until caribou are no longer in the immediate area.

### **Ground Disturbance**

28. 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.
29. The Proponent shall implement suitable erosion and sediment suppression measures on disturbed areas before, during and after construction in order to prevent sediment from entering any waterbody.

### **Winter Trail/Access**

30. The Proponent shall select a route that maximizes the use of frozen water bodies.
31. The Proponent shall ensure that no disturbance of the stream bed or banks of any definable watercourse be permitted.
32. The Proponent shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the lake is in a state capable of fully supporting the equipment or vehicles.
33. The Proponent shall ensure that bank disturbances are avoided and no mechanized clearing carried out immediately adjacent to any watercourse.
34. The Proponent shall ensure that stream crossings and/or temporary crossings constructed from ice and snow, which may cause jams, flooding or impede fish passage and or water flow, are removed or notched prior to spring break-up.
35. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.

### **Drilling on Land**

36. The Proponent shall not conduct any land based drilling or mechanized clearing within thirty-one (31) metres of the normal high water mark of a water body.
37. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.
38. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.

39. The Proponent shall ensure that all drill areas are constructed to facilitate minimizing the environmental footprint of the project area. Drill areas should be kept orderly with garbage removed daily to an approved disposal site.
40. The Proponent shall ensure that all sump/depression capacities are sufficient to accommodate the volume of waste water and any fines that are produced. The sumps shall only be used for inert drilling fluids, and not any other materials or substances.
41. The Proponent shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body. Sumps and areas designated for waste disposal shall be sufficiently bermed or otherwise contained to ensure that substances do not enter a waterway unless otherwise authorized.
42. The Proponent shall ensure all drill holes are backfilled or capped prior to the end of each field season. All sumps must be backfilled and restored to original or stable profile prior to the end of each field season.

### **Drilling on Ice**

43. If drilling is conducted on lake ice, the Proponent shall ensure that any return water is non-toxic, and will not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life (i.e., 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).
44. The Proponent shall ensure that drill muds and additives are not used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
45. The Proponent shall ensure that all drill cuttings are removed from ice surfaces daily.

### **Restoration of Disturbed Areas**

46. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
47. 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**

48. The Proponent should, to the extent possible, hire local people and consult with local residents regarding their activities in the area and available Inuit Qaujimaningit that can inform project activities.
49. 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 with copies provided to the Nunavut Impact Review Board and Government of Nunavut – Department of Environment,

by March 31<sup>st</sup> of each year of permitted activities beginning March 31, 2016. The annual report must contain at least the following information:

- a) A summary of activities undertaken for the year, including:
  - i) a map showing the approximate location of drill sites;
  - ii) a map showing the location of the fuel cache;
  - iii) a description of local hires, contracting opportunities and initiatives;
  - iv) flight altitudes, frequency of flights and anticipated flight routes;
  - v) site photos;
- b) A summary of the overview assessment conducted of the exploration areas;
- c) A map with details of the winter travel routes that would be used for equipment transportation;
- d) A work plan for the following year, including any progressive reclamation work undertaken;
- e) A summary of community consultations undertaken throughout the year, providing copy of materials presented to community members, a description of issues and concerns raised, discussions with community members and advice offered to the company as well as any follow-up actions that were required or taken to resolve any concerns expressed about the project proposal;
- f) A log of instances in which community residents occupy or transit through the project area for the purpose of traditional land use or harvesting. This log should include the location and number of people encountered, activity being undertaken (e.g., berry picking, fishing, hunting, camping, etc.), date and time, and any mitigation measures or adaptive management undertaken to prevent disturbance;
- g) A discussion of issues related to wildlife and environmental monitoring, including the number of cease-work orders required as a result of proximity to caribou;
- h) A brief summary of Wildlife Monitoring and Mitigation Plan (WMMP) results as well as any mitigation actions that were undertaken. In addition, the Proponent shall maintain a record of wildlife observations while operating within the project area and include it as part of the summary report. The summary report based on wildlife observations should include the following:
  - (1) Locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible.
  - (2) Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting).
  - (3) Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites.

- i) An analysis of the effectiveness of mitigation measures for wildlife as proposed in the WMMP;
- j) Summary of any heritage sites encountered during the exploration activities, any follow-up action or reporting required as a result and how project activities were modified to mitigate impacts on the heritage sites;
- k) Summary of its knowledge of Inuit land use in/near the project area and explain how project activities were modified to mitigate impacts on Inuit land use;
- l) A summary of how the Proponent has complied with conditions contained within this Screening Decision, and all conditions as required by other authorizations associated with the project proposal.

#### OTHER NIRB CONCERNS AND RECOMMENDATIONS

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

##### **Bear and Carnivore Safety**

1. The Proponent review the bear/carnivore detection and deterrent techniques outlined in “Safety in Grizzly and Black Bear Country” 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](http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.pdf). There are polar bear and grizzly bear safety resources available from the Government of Nunavut at the following link: <http://env.gov.nu.ca/wildlife/resources/polarbearsafety> and a “You are in Polar Bear Country” pamphlet from Parks Canada at the following link <http://www.pc.gc.ca/eng/lhn-nhs/mb/prince/securite-safety/ours-bear.asp> following link <http://www.pc.gc.ca/eng/pn-np/nu/auyuittuq/visit/visit6/d/i.aspx>.
2. 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 Baker Lake, phone: 867-793-2944).

##### **Species at Risk**

3. 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://epe.lac-bac.gc.ca/100/200/301/environment\\_can/cws-scf/environmental\\_assessment-ef/ea\\_best\\_practices\\_2004\\_e.pdf](http://epe.lac-bac.gc.ca/100/200/301/environment_can/cws-scf/environmental_assessment-ef/ea_best_practices_2004_e.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**

4. 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.

5. 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/>.

### **Change in Project Scope**

6. Responsible authorities or the Proponent shall notify the NPC and the NIRB of any changes in operating plans or conditions associated with this project prior to any such change.

### **Caribou Management**

7. Territorial and federal government agencies in Nunavut should work together with Regional Inuit Associations, co-management boards and industry to develop an action plan to identify and mitigate potential cumulative effects of human land use activities, including mineral exploration, on barren-ground caribou. This assessment of cumulative effects should occur at a regional scale (i.e., larger than individual project areas).
8. Territorial and federal government agencies update the Caribou Protection Map with updated data and information from the Beverly Qamanirjuaq Caribou Management Board (BQCMB).
9. As a result of expressed concerns regarding mineral exploration and the associated potential for cumulative effects on caribou and caribou habitat within the Kivalliq region, the Nunavut Planning Commission, territorial and federal government agencies should work together with Regional Inuit Associations, co-management boards, the public, and industry to develop a plan that identifies appropriate land use in these areas prior to potential mineral exploration. The plan should identify and mitigate potential cumulative effects of human land use activities on barren-ground caribou on both localized and regional scales.
10. The Nunavut Planning Commission should be aware of the public concerns regarding a perceived lack of protection for caribou and caribou habitat within the Kivalliq Region of Nunavut. In developing a Nunavut-wide land use plan, the NPC may wish to consider formalized protection of important caribou habitat, and seasonal restrictions on potentially disruptive activities in these areas to minimize disturbance to caribou lifecycles and Inuit harvesting activities.

### **Indigenous and Northern Affairs Canada**

11. Indigenous and Northern Affairs Canada (INAC) impose mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require the Proponent to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to the location and area; type, location, capacity and operation of facilities; use, storage, handling and disposal of chemical or toxic material; wildlife and fisheries habitat; and petroleum fuel storage.
12. INAC consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the conditions imposed through the Federal Land Use Permit.

### **Nunavut Water Board**

13. The Nunavut Water Board (NWB) 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.
14. In particular, mitigation measures, conditions and monitoring requirements should be considered for the use of water, snow and ice for the development and maintenance of the winter access for this project.

## REGULATORY REQUIREMENTS

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

1. The Proponent is advised that the *Canadian Environmental Protection Act* (<http://laws.justice.gc.ca/en/C-15.31/>) lists calcium chloride (CaCl) as a toxic substance. The Proponent should assess alternatives to the use of CaCl as a drill additive, including biodegradable and non-toxic additives.
2. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>).
3. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://www.canlii.org/ca/sta/n-28.8/whole.html>).
4. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>).
5. 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.
6. 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.
7. 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**.
8. The *Transportation of Dangerous Goods Regulations, Transportation of Dangerous Goods Act* (<http://www.tc.gc.ca/eng/tdg/safety-menu.htm>), and the *Canadian Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>). The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with the Government of Nunavut, Department of Environment Manager of Pollution Control and Air Quality at 867-975-7748.
9. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>).

## CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Agnico Eagle Mines Ltd.'s "Amaruq, Meadowbank and White Hills".

Dated January 15, 2016 at Arviat, NU.



---

Elizabeth Copland, Chairperson

Attachments:   Appendix A: Species at Risk in Nunavut  
                  Appendix B: 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](http://www.sararegistry.gc.ca)) to get the current status of a species.

Updated: June 2015

<b>Species at Risk <sup>1</sup></b>	<b>COSEWIC Designation</b>	<b>Schedule of SARA</b>	<b>Government Organization with Primary Management Responsibility <sup>2</sup></b>
Eskimo Curlew	Endangered	Schedule 1	Environment Canada (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	Government of Nunavut (GN)
Peregrine Falcon	Special Concern ( <i>anatum-tundrius</i> complex <sup>3</sup> )	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
Buff-breasted Sandpiper	Special concern	Pending	ECCC
Felt-leaf Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Peary Caribou	Endangered	Schedule 1	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	GN/Fisheries and Oceans Canada (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	Schedule 2	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)		Schedule 2	DFO
Killer Whale (Northwest	Special Concern	Pending	DFO

Species at Risk <sup>1</sup>	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility <sup>2</sup>
Atlantic / Eastern Arctic populations)			
Narwhal	Special Concern	Pending	DFO

<sup>1</sup>The Department of Fisheries and Oceans Canada has responsibility for aquatic species.

<sup>2</sup>Environment and Climate Change Canada (ECCC) 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.

<sup>3</sup>The *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 B:**  
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 Aboriginal Affairs and Northern Development 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:

	<b>Types of Development</b> (See Guidelines below)	<b>Function</b> (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*<sup>1</sup> to issue such permits.

<sup>1</sup>P.C. 2001-1111 14 June, 2001

- 2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.
- 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 Aboriginal Affairs and Northern Development 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 *Nunavut Land Claims 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*<sup>2</sup>, the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*<sup>3</sup>, 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 Nunavut Land Claims 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.*

---

<sup>2</sup> s. 51(1)

<sup>3</sup> P.C. 2001-1111 14 June, 2001

## *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](http://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, Language, Elders and Youth (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 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 Nunavut Land Claims Agreement), and the Aboriginal Affairs and Northern Development 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*

## **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.