

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 April 6, 2017 the Nunavut Impact Review Board (NIRB or Board) received a referral to screen Crystal Cruises LLC’s (CCLLC) “MS Crystal Serenity – Crystal Cruises LLC Northwest Passage 2017” project proposal from the Nunavut Planning Commission (NPC or Commission), with an accompanying positive conformity determination with the North Baffin Regional Land Use Plan. The NPC noted that the previous conformity determination issued on June 7, 2016 for the activities associated with the current proposal continues to apply and determined that the project proposal is a significant modification to the project because the proponent has added two

additional locations to visit (Bylot Island and Prince Leopold Island) that require a permit from Canadian Wildlife Services.

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. Due to the proposal containing activities that were sufficiently related to previously assessed activities under NIRB file number **16TN039**, the NIRB viewed this project proposal as an amendment to the previously screened project and assigned this proposal with this previous file number. A summary of the previously screened project activities can be found in **Appendix A**.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Project Scope

The “MS Crystal Serenity - Crystal Cruises LLC Northwest Passage 2017” project was previously screened in 2016 and proposed to sail the Northwest Passage traversing Nunavut waters in both the Qikiqtani (North Baffin) and Kitikmeot regions. In 2017 the Proponent intends to conduct a modification of the sailing route by adding two (2) additional stops in Nunavut. The program is proposed to take place from August to September 2017. The scope of activities previously approved for this ongoing cruise (NIRB File No. 16TN039) has been included within **Appendix A**.

As required under subsection 86(1) of the NuPPAA, the Board accepts the scope of the MS Crystal Serenity – Crystal Cruises LLC Northwest Passage 2017 project as set out by CCLLC in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Two (2) additional land based stops at Bylot Island Migratory Bird Sanctuary/Sirmilik National Park and Prince Leopold Island Migratory Bird Sanctuary;
- Potential opportunity for guests to travel by helicopter to the research camp on Prince Leopold Island; and
- Hiking and observation of birds at these two additional stops

2. Inclusion or Exclusion to Scoping List

The NIRB has identified no additional works or activities in relation to the project proposal. As a result, the NIRB proceeded with screening the project based on the scope as described above.

3. Key Stages of the Screening Process

The following key stages were completed:

Date	Stage
April 6, 2017	Receipt of project proposal and positive conformity determination (North Baffin Land Use Plan) from the NPC
April 6, 2017 & April 20, 2017	Information request(s)

May 4, 2017	Proponent responded to information request(s)
May 4, 2017	Scoping pursuant to subsection 86(1) of the NuPPAA
May 9, 2017	Public engagement and comment request
May 19, 2017	Receipt of public comments

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on May 9, 2017 to community organizations in Arctic Bay, Pond Inlet and Cambridge Bay, 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 the NIRB's *proposed* project-specific terms and conditions, and provide the Board with any comments or concerns by May 19, 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.

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

Government of Nunavut – Department of Culture and Heritage (GN-CH)

- Requested the Proponent follow the requirements of the archaeological permits if/when they are issued and pay attention to the following concerns during landings and exploration of the areas:
 - Current issues with the landing of thousands of visitors each year at archaeological and historical sites in Nunavut without the knowledge of the GN-CH or Inuit Heritage Trust.
 - Concerns expressed by archaeologists, tourists and local residents about site protection arising from ship borne tourism.
 - Incidents of site disturbance.
 - Potential cumulative effects of large-scale and unregulated site visitations.
 - The need for accountability with respect to site disturbance arising from tourist activities.
- Noted the following benefits of the permit process:
 - Provides a mechanism through which the GN can obtain information concerning current site conditions (monitoring and reporting).
 - Protects visitor groups from being held responsible for damages to a site that occurred before and after their visit.

Environment and Climate Change Canada (ECCC)

- No comments to offer.

Fisheries and Oceans Canada (DFO)

- Recommended that watercraft should survey the area for marine mammals to avoid disturbing them; and
- Noted that if marine mammals are encountered, effort should be made to avoid disturbing them by rerouting, reducing speed and maintaining their distance. The marine mammals should not be approached closer than 100 metres at any time.

Indigenous and Northern Affairs Canada (INAC)

- No comments or additional terms and conditions

Transport Canada

- Noted that the Proponent must comply with the *Canadian Shipping Act, 2001, Arctic Waters Pollution Prevention Act, Marine Liability Act, and the Coasting Trade Act*;
- Recommended the Proponent comply with the draft Guidance Document for Passenger Vessels Operating in the Canadian Arctic which sets out regulations to be observed, how to prepare for the Northwest Passage, and indigenous permitting requirements; and
- Recommended the Proponent comply with the Ballast Water Control and Management Regulations which protect waters under Canadian jurisdiction from non-indigenous aquatic organisms.

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.

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 size of the geographic area includes marine and coastal areas along the Northwest Passage with travel beginning in the Kitikmeot region and ending in the Qikiqtani (North Baffin) region. The proposed project would also include: short land-based excursions along the proposed route; stops in the communities of Pond Inlet and Cambridge Bay; and visits to bird sanctuaries on Prince Leopold Island and Bylot Island. The proposed activities during these visits include zodiac cruising in the ocean surrounding the Bylot Island Migratory Bird Sanctuary (at the Cape Hay location) and Prince Leopold Island (along the South East cliffs). As identified by the Proponent and mapping sources, the proposed project may take place within habitat and seasonal ranges of marine wildlife, marine fish, terrestrial wildlife, migratory and non-migratory birds, far ranging and local wildlife. Marine animals that may be encountered during the project activities could include Atlantic walrus, Beluga Whale, Bowhead Whale, grey whale, Polar Bear, killer whale, and narwhal. Additionally, land-based activities may also take place within habitats for many far-ranging wildlife species such as caribou, muskox, wolves, Polar Bears, wolverine, grizzly bears, migratory birds, and Species at Risk (Ivory Gull). As such, project activities may potentially affect both marine and terrestrial animal migratory patterns.

2. *The ecosystemic sensitivity of that area.*

The proposed project would occur near areas that have identified ecosystemic sensitivities such as the Prince Leopold Island Migratory Bird Sanctuary, the Bylot Island Migratory Bird Sanctuary, and the Queen Maud Gulf Migratory Bird Sanctuary. Further, the various areas that would be visited throughout the project have been identified as having value and priority to the local community for:

- i. Marine mammals including various whale species, walrus, and seals;
- ii. Shoreline ecosystems;
- iii. Fish species including arctic char;
- iv. Drinking water;
- v. Terrestrial wildlife including caribou, muskox, wolves, and grizzly bears;
- vi. Migratory birds including duck species and geese; and
- vii. Polar Bears.

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

The Proponent has applied for a Class 1 Archaeological Permit from the Government of Nunavut – Department of Culture and Heritage (GN-CH) for the visitation of the following known archaeological sites in Nunavut: Prince Leopold Island Migratory Bird Sanctuary. During the public commenting period for this file, the GN-CH stressed that the Proponent respect the requirements and conditions of the permits issued and pay particular attention to the key concerns which were referenced (i.e. accountability of permit holder, site disturbance and cumulative effects to the site) to reduce impacts during the project's landings and exploration of the proposed tourist areas. The proposed project could also interact with historically and culturally significant areas for traditional activities, such as hunting and fishing, while touring areas adjacent to the communities to be visited.

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

The proposed project would include stops in the communities of Cambridge Bay and Pond Inlet, within the Kitikmeot and Qikiqtani (North Baffin) regions, respectively. As such, human populations are likely to be affected by project impacts. The Proponent has indicated that community consultation has taken place with both communities since 2014 and that community concerns revealed through ongoing discussions have been addressed and considered within the project plans. The proposed project could interact with, and affect, various marine and terrestrial species, including migratory and non-migratory birds and Species at Risk, throughout project activities. The Proponent has committed to employing various management protocols for the protection of wildlife and the environment throughout the project (see Proponent Commitments section).

Although no significant public concerns were raised during the public commenting period, the NIRB notes that the close proximity of the proposed activities to the community of Pond Inlet and an area used by residents for recreational/traditional pursuits could potentially contribute to public concern developing. A term and condition has been recommended to direct engagement with the community, hunters and trappers organization and interested parties, as well as the posting of public notices to ensure residents are aware of the cruise/tourism activities being or to be conducted.

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 “MS Crystal Serenity – Crystal Cruises LLC Northwest Passage 2017” project is a proposed cruise tourism 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 would take place within a 100 kilometre radius to a number of other projects that are currently active, in addition to other projects proposed and currently undergoing assessment by the Board as listed in Table 1 below. However, it is noted that this project is not likely to result in residual or cumulative impacts. The potential for cumulative impacts to marine mammals, fish species, terrestrial wildlife, migratory birds and polar bears resulting from the tourism 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.

As such, the potential for cumulative impacts to community infrastructure, marine and terrestrial wildlife, and historical sites resulting from tourism activities 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 tourism activities in the proposed project areas.

Table 1: Project List

NIRB Number	Project	Project Title	Project Type
<i>Proposed Developments – undergoing assessment</i>			
17TN054		Complete Expeditions Tourist Operations – Yacht Silver Cloud interpretive trip	Tourism
13AN028		Le Soleal 2017 – Cruise Kangerlussuaq, Greenland to Kangerlussuaq, Greenland	Tourism
17XN030		Pond Inlet Marine Infrastructure	Infrastructure
17YN050		Preservation of Organic Matter in Early Diagenetic Chert	Research
<i>Active Projects</i>			
08YN010		Ice Dynamics and Cryospheric Changes in Northern Canada	Research (seasonal)
13AN028		L’AUSTRAL 2016 – Cruise Kangerlussuaq Greenland to Nome Alaska	Tourism (seasonal)
15AN029		Navy Board Tourist Camp	Tourism (seasonal)
16YN046		Geotechnical and Environmental Baseline Studies – Pond Inlet Small Craft Harbour Development	Research (seasonal)
17YN003		GEM-2 North Baffin Bedrock Mapping Project	Research
17AN009		Our Planet – Arctic Bay Floe Edge Filming	Filming
17YN014		Onshore Stratigraphy Studies, Northwest Baffin Bay	Research (seasonal)
17AN031		Canada C3 led by Students on Ice Foundation	Tourism
17YN033		Westbaff-MSM66	Research
17YN041		A Coastal, Pan-Canadian Collection of plants, microalgae and marine invertebrates for the Canadian Museum of Nature, as part of Canada C3	Research
<i>Past Projects</i>			
16YN002		Lake Ice in the Canadian High Arctic	Research
16YN043		Past climate reconstruction using annually-layered carbonate	Research
16TN050		MY GALILEO G Northwest Passage 2016	Tourism
16YN054		Baseline Monitoring of Marine Productivity and Oceanography Spanning the Northwest Passage Using Ships of Opportunity	Research
17AN007		Bear Witness Arctic Expedition	Tourism

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.

IEWS 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 Board has previously recommended terms and conditions 1 through 4. The Board is also recommending term and condition 33 to ensure complete reference to applicable regulatory requirements.

The Board would also note that, as justified in its previous decision (NIRB File No. 16TN039 dated August 23, 2016), terms and conditions 1 through 32 remain applicable to the project tourism activities, while the additional impacts identified for the new visits to Prince Leopold Island and Bylot Island warrant mitigation measures as justified below.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Issue 1: Potential negative impacts to migratory and non-migratory birds, terrestrial wildlife and their respective habitats from shore-based and tourism activities at Bylot Island Migratory Bird Sanctuary/Sirmilik National Park and Prince Leopold Island Migratory Bird Sanctuary, and potential negative impacts from increased noise activities from helicopter, vessel and zodiac travel to and from the landing sites.

Board views: As discussed above in the assessment of factors relevant to this project proposal, the potential for impacts is applicable to shoreline and land-based excursion sites along the proposed route through the Kitikmeot and Qikiqtani (North Baffin) regions. The areas potentially affected include Migratory Bird Sanctuaries to be visited as part of the Proponent's voyage plans, including Prince Leopold Island and Bylot Island. Potential impacts would be considered temporary due to the intermittent nature of tourism activities. It is expected that by adhering to the measures recommended in the following section, as well as the operational procedures detailed in the project application, potential negative impacts to affected wildlife would be low in magnitude, intermittent in nature, and mitigable.

The Proponent would also be required to follow the *Migratory Birds Convention Act*, *Migratory Birds Regulations*, *Species at Risk Act*, the *Wildlife Act (Nunavut)*, the *Arctic*

Waters Pollution Prevention Act, and the Canada Shipping Act (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that potential negative impacts to terrestrial wildlife and migratory birds may be mitigated by requiring the Proponent to employ general and specific measures for the protection of wildlife during operations, and to ensure that project personnel and passengers are properly briefed on wildlife protocols, sensitivities, and management procedures prior to undertaking project activities. The Board previously recommended the following terms and conditions to reduce potential negative impacts migratory and non-migratory birds, terrestrial wildlife and their respective habitats: 9 through 12, and 23 through 26. In addition, terms and conditions 34 and 35 are recommended to mitigate the potential negative impacts from tourism activities in the Bird Sanctuaries.

Issue 2: Potential negative impacts to soil quality and migratory bird ecosystem integrity from land-based tourism excursions on Prince Leopold Island and Bylot Island Migratory Bird Sanctuaries.

Board Views: The potential for impacts is applicable to shoreline and land-based excursion sites at Prince Leopold Island and Bylot Island. With the adoption of mitigation measures proposed within the project application, in addition to those previously recommended in the following section, the probability of impacts occurring is considered to be low, with potential adverse effects anticipated to be low in magnitude, infrequent in occurrence due to the intermittent nature of the proposed tourism activities, and reversible in nature.

The Proponent has committed to employing various operational measures for the protection of the terrestrial environment including: limiting group sizes for land-based excursions, passenger briefings on appropriate movement patterns to mitigate soil erosion and impacts to sensitive ecosystems during excursions, measures to mitigate the introduction of foreign and non-native species to local environments, and proper supervision of all expedition participants by experienced guides. The Proponent provided an analysis of potential negative environmental impacts and cumulative environmental impacts from the proposed project within its project application to supplement its various management protocols for the protection of the environment.

Recommended Mitigation Measures: It is recommended that potential negative impacts soil quality and migratory bird ecosystem integrity may be mitigated by requiring the Proponent employ proper waste management procedures, use existing trails where possible when conducting activities on land, and ensuring that land use areas are properly maintained throughout all operations. The following previously recommended terms and conditions continue to apply to mitigate the potential adverse impacts: 5, 9, 28, and 29.

Issue 3: Potential negative impacts to public and traditional land use activities along the proposed travel route, particularly in Migratory Bird Sanctuaries to be visited from the

tourism activities and potential negative impacts from increased noise activities from helicopter, vessel and zodiac travel to and from the landing sites

Board views: The Proponent has indicated that the proposed project would include visits to Prince Leopold Island and Bylot Island Migratory Bird Sanctuaries along the proposed route through the Qikiqtani (North Baffin) region. It is likely that these areas would be used for traditional activities and noise from vessel, helicopter, and excursion vessel operations may temporarily change distribution of harvested species through avoidance and may affect personal enjoyment of the land and migratory bird areas. The Proponent indicated that community consultation has taken place in Pond Inlet since 2014 to address community concerns and that input received was included in the previous project plans. Nunavut Tourism previously noted during the public commenting period for the original proposal that it supported the project provided it does not impact Inuit subsistence lifestyles and benefits local communities – no other comments were received during the public commenting period regarding potential impacts to traditional land use activities for the amended project.

Recommended Mitigation Measures: Previously recommended terms and conditions 30 and 32 continue to apply to ensure that the affected communities and organizations are informed about the project proposal and to ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities in the project areas.

Socio-economic effects on northerners:

Issue 4: Potential negative impacts to historical, cultural and archaeological sites from tourism activities.

Board Views: The Proponent is proposing to conduct various land-based excursions including visiting known protected archaeological sites on Prince Leopold Island and could encounter additional sites of historical, cultural, or archaeological significance not previously identified. The Proponent has been issued a Class 1 Archaeological Permit by the Government of Nunavut – Department of Culture and Heritage and has committed to adhering to various operational protocols for the protection of all visited areas. Further, the Proponent is required to contact the Government of Nunavut – Department of Culture and Heritage should additional archaeological sites be encountered and is required to follow the *Nunavut Act* (see Regulatory Requirements section). It is considered the impacts occurring would be low, with potential adverse effects anticipated to be low in magnitude and infrequent in occurrence due to the intermittent nature of the proposed activities.

Recommended Mitigation Measures: Previously recommended term and condition 27 continues to apply to ensure that all passengers and crew are aware of the responsibilities and requirements regarding archaeological or palaeontological sites prior to conducting tourism activities. Previously recommended term and condition 30 continues to apply to ensure that available Inuit Qaujimaningit can inform project activities and reduce the potential for negative impacts occurring to any additional historical sites.

Significant public concern:

Issue 5: 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. In addition, it is suggested that the Proponent considers hiring local people for the project activities.

Recommended Mitigation Measures: Previously issued term and condition 30 is recommended to ensure that the affected community and organizations are informed about the project proposal, and to provide the Proponent with an opportunity to proactively address or mitigate any concerns that may arise from the project activities findings.

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 following terms and conditions were previously issued by the NIRB in the August 23, 2016 Screening Decision Report for File No. **16TN039, and continue to apply to the MS Crystal Serenity – Crystal Cruises LLC Northwest Passage 21017 project:**

General

1. Crystal Cruises LLC's (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, June 7, 2016), and the NIRB (Online Application Form, June 14, 2016; Translated NIRB Part 1 Forms, June 28, 2016).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Fuel and Chemical Storage

5. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
6. The Proponent shall use drip pans or other equivalent device when refueling equipment. The Proponent shall also use secondary containment or a surface liner (e.g., self-supporting installments and fold-a-tanks) at all refueling stations.
7. 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 and maintenance areas.
8. 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

9. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
10. 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.

Migratory Birds and Raptors Disturbance

11. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
12. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl by three (3) kilometres.
13. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

Aircraft Flight Restrictions

14. 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.
15. 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.
16. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
17. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over all travel areas, including flight paths to/from the housing vessel.

Caribou and Muskoxen Disturbance

18. 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.

Ship-based Activities

19. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including waste water) or sediment into any marine waters, and shall manage wastes on board the vessel prior to final disposal at approved port facilities.

20. The Proponent shall incinerate all combustible wastes daily, or as per Canadian legislation, and remove the ash from incineration activities and non-combustible wastes from the vessel to an approved facility for disposal.

21. The Proponent shall ensure that the incineration of combustible wastes comply with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*.

22. The Proponent shall ensure that no waste oil/grease is incinerated onboard.

Cruise Ship Tourism

23. The Proponent shall ensure that all passengers (clients and staff) are aware of the Proponent's responsibilities and requirements regarding wildlife and wildlife habitat protection. This should include pre-landing briefings on wildlife sensitivities and potential hazards, proper wildlife viewing techniques and safety practices.

24. While on the cruise ship or zodiacs, the Proponent shall limit viewing time of each concentration of marine mammals to a maximum of thirty (30) minutes in order to minimize disturbance.

25. The Proponent shall not attempt to intersect or interfere with the movements of marine mammals. Strategic positioning of vessels ahead of the path being traveled by mobile whales and waiting for the whales to pass is also prohibited.

26. The Proponent shall ensure that visitation of cliffs used by nesting and breeding birds is restricted to zodiacs only, and then only during morning and early afternoon hours. Noise should be kept to a minimum when visiting these bird colonies.

27. The Proponent shall ensure that all passengers (clients and staff) are aware of the Proponent's responsibilities and requirements regarding archaeological or palaeontological sites that are encountered during land-based activities. This should include pre-landing briefings explaining the prohibitions regarding removal of artifacts, and defacing or writing on rocks and infrastructure.

Land Use

28. The Proponent should use existing trails where possible during project activities on land.

29. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

Other

30. 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 and direct engagement with potentially interested groups and individuals prior to undertaking project activities is strongly encouraged.

31. The Proponent should, to the extent possible, hire local people and develop formalized plans in collaboration with community members for the availability of services and artistic goods during tourist activities.
32. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

In addition to the previously issued terms and conditions, the Board recommends the following project-specific terms and conditions:

General

33. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (Application to Determine Conformity, April 6, 2017), and the NIRB (Online Application Form, May 4, 2017).

Migratory Birds and Raptors Disturbance

34. 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.

Aircraft Flight Restrictions

35. The Proponent shall not alter flight paths to approach wildlife, and avoid flying directly over animals.

MONITORING AND REPORTING REQUIREMENTS

The Board has previously recommended the following on August 23, 2016:

Community Consultation Report

1. The Proponent shall submit a public consultation report to the Nunavut Impact Review Board (NIRB) and to Indigenous and Northern Affairs Canada prior to each season of project activities. The report shall include a copy of materials presented to community members, a description of issues and concerns raised, 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.

Wildlife Interaction Report

2. The Proponent shall submit a Wildlife Interaction Report to the NIRB and the Government of Nunavut - Department of Environment within 30 days upon completion yearly activities. The report must contain a description of all wildlife interactions including: the date, time of day, location, and species of wildlife encountered; the age, class, and gender of wildlife encountered; group size and behavior of wildlife at detection. Further, the Proponent shall

include details regarding the species, date, and location of any deceased animals encountered during project activities.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board has previously recommended the following on August 23, 2016:

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 (Conversation Officer of Resolute Bay, phone: (867) 252-3879; Conservation Officer of Cambridge Bay, phone: (867) 983-4164).

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/>.

Incineration of Wastes

8. The Proponent review Environment and Climate Change Canada’s “Technical Document for Batch Waste Incineration”, available at the following link: <http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1>. The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.

Transport of Waste/Dangerous Goods and Waste Management

9. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.
10. The Proponent shall ensure that a waste manifest or the appropriate transportation of dangerous goods (TDG) documentation accompany all potential hazardous samples and/or materials that are transported off site. Further, the Proponent shall ensure that the shipment of waste is registered with the Government of Nunavut Department of Environment (GN-DoE). Contact the Manager of Pollution Control and Air Quality at (867) 975-7748 to obtain a manifest if hazardous waste will be generated during project activities.
11. The Proponent shall provide an authorization or letter of conformation of disposal from the owner/operator of the landfill to be used for disposal of project-related wastes.

Kitikmeot and Qikiqtani Inuit Associations

12. The Kitikmeot and Qikiqtani Inuit Associations impose strict mitigation measures and/or conditions upon the Proponent pursuant to the Inuit Owned Lands License to limit the potential for disturbance to archaeological resource and wildlife on Inuit owned land.

The Board is currently also recommending the following:

Unmanned Air Vehicles (UAV)

13. The Proponent should review Transport Canada’s site on Drone Safety which can be found at the following link: <https://www.tc.gc.ca/eng/civilaviation/drone-safety.html>
14. The Proponent should review Transport Canada’s “Do I have permission to fly my drone?” which can be downloaded from which can be downloaded from this link: https://www.tc.gc.ca/media/documents/ca-opssvs/Infographic-Do_I_need_permission_to_fly_my_drone.pdf. The document provides information on whether or not a Special Flight Operations Certificate (SFOC) would be required or whether

the operator of an unmanned air vehicle qualifies to operate under one of the exemptions to conduct lower risk operation in more remote areas without the need to apply for an SFOC.

REGULATORY REQUIREMENTS

The Board previously recommended in the August 23, 2016 Screening Decision Report(s) for the Northwest Passage 2016 and 2017 project the following legislation, which continues to apply to the current proposal:

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 B** 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 C**.
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/>). 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.
8. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>).
9. The *Arctic Waters Pollution Prevention Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-12/>).
10. The *Canada Shipping Act, 2001* (<http://laws-lois.justice.gc.ca/eng/acts/C-10.15/>).
11. The *Marine Liability Act* (<http://laws-lois.justice.gc.ca/eng/acts/M-0.7/>).
12. The *Navigation Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-22/index.html>).

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Crystal Cruises LLC's "MS Crystal Serenity – Crystal Cruises LLC Northwest Passage 2017". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated June 9, 2017 at Whale Cove, NU.



Elizabeth Copland, Chairperson

Attachments: Appendix A: Previously-Screened Project Proposals
Appendix B: Species at Risk in Nunavut
Appendix C: Archaeological and Palaeontological Resources Terms and Conditions for Land Use
Permit Holders

APPENDIX A: PREVIOUSLY-SCREENED PROJECT PROPOSALS

The original project proposal NIRB (File No. 16TN039), was received by the NIRB from Nunavut Planning Commission on June 7, 2016 and was screened by the Board in accordance with Part 4, Article 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement) and Part 3 of the *Nunavut Planning and Project Assessment Act* (NuPPAA) On August 23, 2016 the NIRB issued a Nunavut Agreement 12.4.4(a) screening decision to then Minister of Transport, Government of Canada, Minister of Culture and Heritage, Government of Nunavut, and Minister of Economic Development and Transportation, Government of Nunavut which indicated that the proposed project could proceed subject to the NIRB's recommended project-specific terms and conditions.

The Crystal Cruises LLC's (Proponent) original "Northwest Passage – 2016 and 2017" project was a cruise ship which proposed to sail the Northwest Passage along Alaska and the Northwest Territories before entering Nunavut waters and completing the cruise in Greenland. The proposed cruise was to travel through both the Kitikmeot and Qikiqtani (North Baffin) regions with stops to include Cambridge Bay, Pond Inlet, Somerset Island, Devon Island, and Beechey Island. The Proponent intended to transit through the Northwest Passage with two (2) vessels: one (1) passenger vessel named the Motor Ship (MS) *Crystal Serenity*, and an icebreaker escort vessel. The cruises were expected to take place seasonally during August and September in both 2016 and 2017.

As set out in the project proposal, the scope of the previously screened project included the following undertakings, works, or activities:

- Transportation and accommodations for approximately 1,625 people aboard the MS *Crystal Serenity* and approximately 44 people onboard the Royal Research Ship (RRS) *Ernest Shackleton*;
- Use of up to two (2) helicopters for ice reconnaissance and flightseeing in selected locations;
- Use of up to 15 zodiacs (small boats) for short sightseeing excursions and ship to shore transportation;
 - Use and storage of approximately 50 litres of gasoline onboard the zodiacs during each excursion;
- Use of up to 16 kayaks and one (1) rigid inflatable boat for site seeing;
- Use of an unmanned aerial vehicle for research and certain commercial uses;
- Landings, via cruise ship or zodiac, within the Nunavut Settlement Area proposed at Cambridge Bay, Pond Inlet, Somerset, Devon, and Beechey Islands;
- The following areas would be visited with no proposed landings:
 - Dolphin and Union Strait, Victoria Strait, and North Baffin Fjords; and
- Research activities associated with the use of the ships for this cruise will be reviewed individually.

Appendix B

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 Risk¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility²
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.