



SCREENING DECISION REPORT NIRB FILE No.: 21EN008

NPC File No.: 149461

May 25, 2021

Following the Nunavut Impact Review Board’s (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Solstice Gold Corporation’s (Solstice) “Kahuna Gold Property” is not required pursuant to Article 12, Section 12.4.4(a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

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

OUTLINE OF SCREENING DECISION REPORT

REGULATORY FRAMEWORK.....	2
PROJECT REFERRAL	3
PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS.....	3
ASSESSMENT OF THE PROJECT PROPOSAL IN ACCORDANCE WITH PART 3 OF <i>NUPPAA</i>.....	9
VIEWS OF THE BOARD	11
RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS	17
MONITORING AND REPORTING REQUIREMENTS.....	23
OTHER NIRB CONCERNS AND RECOMMENDATIONS	24
CONCLUSION	26

APPENDICES

APPENDIX A: SPECIES AT RISK IN NUNAVUT	27
APPENDIX B: ARCHAEOLOGICAL AND PALAEOLOGICAL RESOURCES TERMS AND CONDITIONS FOR LAND USE PERMIT HOLDERS	30

The primary objectives of the NIRB are set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and are confirmed by s. 23 of the *NuPPAA*:

Nunavut Agreement, Article 12, Section 12.2.5: In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

The purpose of screening is provided for under Article 12, Section 12.4.1 of the *Nunavut Agreement* and s. 88 of the *NuPPAA* which states:

NuPPAA, s. 88: 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 Article 12, Section 12.4.2(a) and (b) of the *Nunavut Agreement* and s. 89(1) of *NuPPAA* which states:

NuPPAA, s. 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 under Article 12, Section 12.4.2(c) and s. 89(2) of the *NuPPAA* provides that the considerations set out in s.89(1)(a) prevail over the considerations set out in s. 89(1)(b) of the *NuPPAA*.

As set out under Article 12, Section 12.4.4 of the *Nunavut Agreement* and s. 92(1) of the *NuPPAA*, upon conclusion of the screening process, the Board must provide its written report the Minister. The contents of the NIRB's report are specified under *NuPPAA*:

NuPPAA, s. 92(1): The Board must submit a written report to the responsible Minister containing a description of the project that specifies its scope and indicating that:

- (a) a review of the project is not required;
- (b) a review of the project is required; or
- (c) the project should be modified or abandoned.

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 pursuant to paragraph 92(2)(a) of *NuPPAA* as follows:

NuPPAA, s. 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 February 17, 2021 the NIRB received a referral to screen Solstice Gold Corporation's "Kahuna Gold Property" project proposal from the Nunavut Planning Commission (Commission), with an accompanying positive conformity determination with the Keewatin Regional Land Use Plan.

Pursuant to Article 12, Sections 12.4.1 and 12.4.4 of the *Nunavut Agreement* and s. 87 of the *NuPPAA*, the NIRB commenced screening this project proposal and assigned it file number **21EN008**.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Screening Process Timelines

The following key stages were completed for the screening process:

Date	Stage
February 17, 2021	Receipt of project proposal and positive conformity determination (Keewatin Regional Land Use Plan) from the Commission.
February 17, 2021	Request to complete public registry online and provide information pursuant to s. 144(1) of the <i>NuPPAA</i>
February 17, 2021 and March 4, 2021	Requests to Proponent for additional information in order to carry out screening pursuant to s. s. 144(1) of the <i>NuPPAA</i>
March 12, 2021	Proponent responded to information requests and provided additional information
March 12, 2021	Scoping pursuant to s. 86(1) of the <i>NuPPAA</i>
March 25, 2021	Public engagement and comment request
April 15, 2021	Receipt of public comments
April 21, 2021	Proponent provided with an opportunity to address comments/concerns raised by public

Date	Stage
May 5, 2021	Proponent responded to comments/concerns raised by public
April 22, 2021	Ministerial extension requested from the Minister of Northern Affairs
May 25, 2021	Issuance of Screening Decision Report

2. Project Scope

All documents received and pertaining to this project proposal can be accessed from the NIRB's online public registry at www.nirb.ca/project/125583.

Project:	Kahuna Gold Property				
Region:	The project would be located in the same area as previously approved and would be located within the Kivalliq region.				
Location:	Solstice Gold Corporation has primary rights on 9,022 ha of the jointly held claims with Kodiak Copper Corp. (formerly Dunnedin Ventures Inc.) for a total property area of 88,589 ha.				
Closest Community:	Chesterfield Inlet	Distance (approximate)	10 kilometres (km)	Direction	Southwest
Summary of Project Description:	The Proponent intends to apply for exploration activities, a permanent camp with fuel storage, an amendment to both the NWB type "B" water license 2BE-KGP1823, and CIRNAC Class "A" Land Use Permit N2018C0020 held by Solstice Gold Corporation and renew licences with the Kivalliq Inuit Association for prospecting, exploration, drilling and use of the Kahuna Winter Road.				
Project Proposed Timeline:	February 25, 2021 to September 25, 2025				

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the project as set out by Solstice in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

- Use of a Fixed Wing Aircraft to transport equipment, and personal to camp;
- Use of a Helicopter to transport equipment, supplies, and personnel;
- Use of two (2) snowmobiles to transport crew, supplies and equipment;
- Use of two (2) all terrain vehicles to transport crew, supplies and equipment;
- Use of a small aluminum boat for lake bottom bathymetry survey and transportation;
- Use of a Caterpillar Challenger 65s with steel sled(s) to mobilize/transport equipment and supplies;
- Use of a winter road to transport equipment and supplies;
- Use of generator(s) to provide electricity for camp and drill sites;
- Establishment of a permanent 40 person camp;
- Undertaking of general exploration activities such as rock, soil, and till geochemical sampling, geological mapping, ground and/or airborne geophysical surveys;

- Use of one (1) or two (2) drill rig(s) to conduct coring/sampling for drilling up to 20,000 meters;
- Movement of fuel cache from Kodiak Copper Corp.'s Kahuna camp and establishment of a new fuel cache adjacent to Solstice Camp for the following:
 - 29,725 liters (145 drums) of diesel fuel;
 - 29,725 liters (145 drums) of aviation fuel;
 - 2050 liters (10 drums) of gasoline;
 - 20 tanks (2,000 lb) of propane;
 - Other hazardous materials found at Solstice main fuel cache and drill sites may include small quantities of various lubricants/oil/grease for drilling and maintenance of motorized equipment, cleaning products, waste oil and 75,000 lbs of calcium chloride;
 - Spill kits will be located at the drill sites and fuel caches;
- Daily withdrawal of water from water bodies for camp use and to support ongoing exploration activities;
- Use of Pecto toilets for human waste;
- Use of incinerator to burn combustible waste with ash backhauled for appropriate disposal;
- Transportation of hazardous, combustible and non-combustible waste to approved facilities offsite for disposal;
- Disposal of greywater from camp into a sump; and
- Inspection and seasonal shutdown of camp, fuel cache and drilling would be documented prior to leaving the site.

3. Inclusion or Exclusion to Scoping List

At this time, the NIRB has identified no additional works or activities in relation to the project proposal. However, the NIRB notes that Solstice Gold Corporation had previously applied to the Commission to conduct the exploration activities in conjunction with Kodiak Copper Corp. in 2018 and the Commission determined that these activities were exempt from screening by the NIRB because the Commission was of the understanding that an agreement to split previous authorizations between two companies, and the additional fuel cache and drilling does not change the general scope of the original or previously amended project activities (NPC File No. 148971) As a result, the NIRB will proceed with screening the project based on the scope as described above.

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on March 25, 2021 to community organizations in Chesterfield Inlet and Rankin Inlet, as well as to relevant federal and territorial government agencies, Inuit organizations and other parties. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by April 15, 2021 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; and if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (and providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before April 15, 2021 the NIRB received comments from the following interested parties:

- **Kangiqliniq Hunters and Trappers Organization (KHTO)**
- **Government of Nunavut (GN)**
- **Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**

a. Summary of Public Comments and Concerns Received during the Public comment period of this file

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

KHTO

- Concerns regarding lack of community consultation with the affected communities about project activities.

GN

- Notes that additional information and details that are lacking include:
 - The identification of Projects overlaps with known areas of ecological significance and their associated timing windows (i.e., caribou calving, pos-calving grounds and migratory routes and periods);
 - The identification of potential impacts, including cumulative impacts, of the proposed exploration activities on caribou and other wildlife;
 - The detailed and precise timeframes, durations, and intensities of project activities (including the use of the winter trail) with potential to cause disturbance in the identified areas of ecological significance;
 - An up-to-date Wildlife Emergency Contact list.
- Notes that the following information is requested from the Proponent for the GN to complete its review of the Proposal:
 - A description of the actions that employees and contractors will carry out when encountering wildlife;
 - A description of the caribou alert system that will be established, the surveillance methods that will be used to detect caribou, and the details of the wildlife log (report on wildlife sightings);
 - A description of how impacts, including cumulative impacts, will be mitigated and the precise manner in which activities will be planned to:
 - Avoid caribou.
 - Avoid causing interference with calving caribou, and
 - Avoid causing diversion(s) to the migratory patterns of any caribou;

- Justification and supporting evidence for the arbitrary application of reduced flight restrictions in the presence of caribou cows and calves versus elevated flight restrictions in the presence of wildlife;
- Justification and supporting evidence for the arbitrary reduction in buffer zones around activities with the potential to disturb caribou from 5 km on IOL to 2 km elsewhere on the Property;
- Justification and supporting evidence for the arbitrary increase in caribou concentrations (i.e., fifty caribou at all times) to trigger activity cessation elsewhere on the Property versus a range of season dependant concentrations on IOL.
- Recommends the Proponent amend the Environmental Management Plan – Caribou Mitigation and Monitoring measures to reflect the following:
 - Areas such as ridge tops, elevated areas, and the downwind shores of lakes will be avoided in the period of July 4 to September 16;
 - Flights will be restricted to 610 metres above ground level in the presence of calving or post-calving caribou;
 - Buffer zones of 5 km surrounding activities with the potential to disturb caribou will be established throughout the Property, regardless of whether activities are taking place on IOL;
 - Activities with the potential to disturb caribou will cease if concentrations of caribou
 - Ten (10) or more approach the buffer zone between the period of June 1 and July 15,
 - Twenty-five (25) or more approach the buffer zone between the period of July 16 and September 30, and
 - Fifty (50) or more approach the buffer zone between the period of October 1 and May 31.
- Recommends the Proponent amend the Spill Prevention and Response Plan to include the following:
 - The spill kits available at fuel caches and during overland transport will be sized to address a spill equivalent to 110% of the largest container of fuel or hazardous materials stored or being transported at that time;
 - The spill kits available at fuel caches and during overland transport will be sized to address the largest possible spill volume being stored or transported at that time;
 - Spill kits will include FIBC-type bags suitable for transporting contaminated materials by helicopter;
 - All drill fluids will be treated as hazardous wastes and will be captured in properly constructed excavated sumps and disposed of accordingly;
 - Ethylene glycol will be addressed in the Plan, treated as hazardous material/waste, and disposed of accordingly;
 - The Spill Prevention and Response measures along the Winter Trails will be added to the Plan.
- Requests that additional detail be provided on the Seasonal Shutdown Inspections:
 - What exactly is being inspected in each area;
 - Which criteria and standards are used in the inspection; and
 - What aspects will be included in the Annual Report.
- Requests the Proponent provide a record of its engagement on the 2021 work program.

CIRNAC

- Recommends standard terms and conditions regarding local employment and contracting, incorporation of Inuit Qaujimaningit, and consultation with the community and other stakeholders.

b. 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.

5. Proponent's Response to Public Comments and Concerns

On April 15, 2021, due to the concerns and questions identified in the comments received from parties, the NIRB provided an opportunity for the Proponent to respond to the concerns raised during the commenting period. The following is a summary of the Proponent's response to concerns as received on May 5, 2021:

- In response to concerns regarding local employment and training opportunities, the Proponent noted that they are committed to whenever possible, purchasing local, contracting northern/local businesses and to hiring local community members to assist in many aspects of the project.
- In response to concerns regarding community consultation, the Proponent noted that they are committed to consulting with local residents and also notes that they conduct regular visits to Kangiqliniq and Igluligaarjuk to discuss available Inuit Qaujimajatuqangit.
- The Proponent notes that in person consultations in both Kangiqliniq and Igluligaarjuk were scheduled in 2020 but were cancelled at the request of the communities due to the outbreak of COVID-19.
- In response to concerns regarding caribou mitigation measures, the Proponent noted that as part of their Caribou and Monitoring and Disturbance Mitigation, the Proponent employs Wildlife Monitors recommended by the Igluligaarjuk HTO. The Proponent also notes that while personnel are in the field, the Wildlife Monitors communicate with their HTO and community members on a daily basis to get updates and information on the caribou migration in the Project area.
- The Proponent notes that they are currently working on updating the Caribou and Monitoring and Disturbance Mitigation and has contacted Government of Nunavut's Wildlife Research section Regional Biologist for the Kivalliq Region for the most up to date caribou data.
- In response to concerns regarding spill prevention and response plans, the Proponent noted that they are currently updating their Spill Prevention and Response Plan to include additional containment and cleanup procedures for potential for larger, multi-barrel spills along the winter road.
- In response to concerns regarding drill fluids and fuel storage, the Proponent notes that all drill fluids will be contained in an appropriately excavated sump or equivalent natural depression, preventing the drill fluids from entering water bodies. The Proponent also notes that all fuel and other hazardous chemicals, materials and wastes will be stored within

“Arctic Insta-Berms”, or similar products, for secondary containment. The Proponent also noted that all project

- The Proponent notes that all project personnel will be required to review and be familiar with the Kahuna Gold Project Spill Prevention and Response Plan.
- In response to concerns regarding the Proponents Abandonment and Restoration Plan, the Proponent noted that they are updating the plan to include additional information regarding the criteria and standards used during the inspections, what aspects will be included in the annual report and what will be inspected in each area.

On May 10, 2021 the Proponent submitted a public magazine that included references to the Proponent and the proposed project for further information.

6. Time of Report Extension

As a result of the time required to accommodate the opportunity for the Proponent to respond to concerns raised during the public commenting period, the NIRB was not able to provide its screening decision report to the responsible Minister within 45 days as required by Article 12, Section 12.4.5 of the *Nunavut Agreement* and s. 92(3) of the *NuPPAA*. Therefore, on April 22, 2021 the NIRB wrote to the Minister of Northern Affairs, Government of Canada, seeking an extension to the 45-day timeline for the provision of the Board’s Report.

ASSESSMENT OF THE PROJECT PROPOSAL IN ACCORDANCE WITH PART 3 OF *NuPPAA*

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 s. 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:

Factor	Comment
The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.	<ul style="list-style-type: none">▪ The physical footprint of the proposed project components is 886 square kilometres (km²)▪ The proposed activities may take place within habitat of far-ranging wildlife species such as migratory and non-migratory birds, terrestrial wildlife such as caribou (Beverly and Qamanirjuaq and Lorillard Herds), muskoxen, wolves, wolverine, Arctic fox, Arctic hare, and Species at Risk (Grizzly Bear, Wolverine, Peregrine Falcon, Short-eared Owl and Red-necked Phalarope). As such, project

Factor	Comment
	activities may potentially affect terrestrial habitat and migratory patterns.
The ecosystemic sensitivity of that area.	<ul style="list-style-type: none"> No specific areas of ecosystemic sensitivity have been identified by the Proponent within the physical footprint of the proposed project.
The historical, cultural and archaeological significance of that area.	<ul style="list-style-type: none"> No specific areas of historical, cultural and archaeological significance have been identified by the Proponent within the physical footprint of the proposed project.
The size of the human and the animal populations likely to be affected by the impacts.	<ul style="list-style-type: none"> Human populations may be affected due to increase in noise and dust from drilling, material transportation, and construction activities at the drill site. As well as the close proximity to the community of Chesterfield Inlet.
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.	<ul style="list-style-type: none"> A zone of influence of up to 100 km from the most potentially-disruptive project activities was selected for the NIRB's assessment. With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the NIRB, no significant residual effects are expected to occur.
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.	<ul style="list-style-type: none"> The mitigation measures recommended by the NIRB have been designed with consideration for the potential for cumulative effects to result from the impacts of the project combined with other past, present and reasonably foreseeable projects.
Any other factor that the Board considers relevant to the assessment of the significance of impacts.	<ul style="list-style-type: none"> No other relevant factors were identified.

Other past, present and reasonably foreseeable projects considered in this assessment:

NIRB Number	Project	Project Title	Project Type
<i>Present Projects – approved or in operation</i>			
19XN042		Rankin Inlet and Baker Lake Meteorological Towers	Infrastructure
20QN016		Rankin Inlet Sand Pit	Pits and Quarries
20QN022		Quarry Sites KM 8, 15, 16, 18, 20	Pits and Quarries
<i>Past Projects</i>			
19DN049		OP NANOOK-NUNALIVUT 2020	Defence

VIEWS OF THE BOARD

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

The NIRB has listed specific Acts and Regulations below that may be applicable to the project proposal but this list should not be considered as a complete list and the Proponent is responsible to ensure that it follows all Acts and Regulations that may be applicable to the project proposal.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Valued Component	Caribou, Caribou Calving and Post-Calving Habitat, and Caribou Migration Corridors
Potential effects:	Potential adverse effects to caribou and caribou habitat particularly calving, post-calving and migration areas of the Beverly and Qamanirjuaq, as well as the Lorillard Herds from disturbance and disruption of movement from project-related noise, including the development and operations of a permanent camp, the use of the Kahuna winter road, movement of fuel cache, drilling, exploration and air transportation activities. Project activities would occur during May through October when the caribou are the most sensitive to noise disturbance. Further, there is potential for cumulative effects on disturbance to the caribou from other projects in the area.
Nature of Impacts:	Potential long-term adverse effects are possible from increased stress to caribou. If the mitigation measures proposed by the Proponent and the terms and conditions recommended by the NIRB are adhered to, the potential adverse effects to caribou and caribou habitat are considered to be of moderate magnitude, over the short-term and reversible upon cessation of activities.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the adverse effects to caribou and has developed an <i>Environmental Management Plan</i> . In addition to the Proponent's proposed mitigation measures, it is expected that the terms and conditions including measures such as requiring the Proponent to cease activities that may interfere with the migration or calving of caribou until the caribou have left the area would mitigate any potential adverse impacts to caribou in the direct project area and areas adjacent to the proposed project.
Proposed Terms and Conditions:	Wildlife General – 23 through 28 Aircraft Flight Restrictions – 31 through 36 Caribou and Muskox – 37 through 43 Road and Ground Disturbance – 44 and 48
Related Acts and/or Regulations:	1. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations (http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html).

Valued Component	Terrestrial wildlife including muskoxen, wolves, wolverine, Arctic fox, Arctic hare, migratory and non-migratory birds and Species at Risk (Grizzly Bear, Wolverine, Peregrine Falcon, Short-eared Owl and Red-necked Phalarope)
Potential effects:	Potential adverse effects to terrestrial wildlife, migratory and non migratory birds, and their associated habitats due to increased noise and dust generated from the project activities, including the development and operations of a permanent camp, the use of the Kahuna winter road, movement of fuel cache, drilling, exploration and air transportation activities.
Nature of Impacts:	The potential adverse effects of the proposed project activities to terrestrial wildlife and birds is considered to be of low magnitude, of short duration and reversible.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the adverse effects to wildlife and has developed an <i>Environmental Management Plan</i> . The Board is also recommending terms and conditions that ensure that the potential adverse impacts can be mitigated by measures such as minimizing activities when wildlife and birds are particularly sensitive to disturbance especially during denning periods, migration, nesting and moulting, that minimum flight heights and restrictions are adhered to, and ensuring that all project personnel are made aware of the measures to protect wildlife.
Proposed Terms and Conditions:	Waste Disposal – 10 and 11 Fuel and Chemical Storage – 12 through 21 Wildlife General – 23 through 28 Migratory Birds and Raptors Disturbance – 29 and 30 Aircraft Flight Restrictions – 31 through 36 Caribou and Muskox – 37 through 43 Road and Ground Disturbance – 44 and 48
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. The <i>Migratory Birds Convention Act</i> and <i>Migratory Birds Regulations</i> (http://laws-lois.justice.gc.ca/eng/acts/M-7.01/). 2. The <i>Species at Risk Act</i> (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. 3. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations (http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html). 4. The <i>Aeronautics Act</i> (http://laws-lois.justice.gc.ca/eng/acts/A-2/).

Valued Component	Surface water quality, fish and fish habitat
Potential effects:	Potential adverse effects on surface water quality, and fish and fish habitat, from the establishment and operation of the camp, the storage, transportation, and use of fuel, exploration drilling activities and the seasonal use of the winter road.

Nature of Impacts:	It is expected that standard operational considerations would mitigate any potential adverse impacts to water quality, fish, and fish habitat. As such, potential impacts would be considered to have a low magnitude, be mostly reversible and temporary in nature, and would have a low probability of extending beyond the immediate project area.
Mitigating Factors:	The Proponent has developed a <i>Spill Prevention and Response Plan</i> for the project and has committed to adequate spill response equipment materials and personnel during fuel transfer, and to maintain fuel storage and transfer within secondary containment. The Board is also recommending terms and conditions such as requiring the Proponent to employ mitigation measures related to water protection during operations; fuel storage, use, and spill response; waste management; and personnel training related to fuel and waste. It is expected that these terms and conditions would mitigate any potential adverse impacts to water quality, fish and fish habitat in the direct project area and areas adjacent to the proposed project.
Proposed Terms and Conditions:	Water Courses/Water bodies – 6 and 9 Fuel and Chemical Storage – 12 through 21 Road and Ground Disturbance – 44 through 48 Drilling – General – 49 through 51 Drilling on Land – 52 through 56 Land Use and Restoration of Disturbed Areas – 57 through 61 Camps – 62
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 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 <i>Fisheries Act</i> (http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html). 3. The <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> (http://laws-lois.justice.gc.ca/eng/acts/n-28.8/). 4. The <i>Transportation of Dangerous Goods Regulations</i> (http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm), <i>Transportation of Dangerous Goods Act</i> (http://laws-lois.justice.gc.ca/eng/acts/t-19.01/), and the <i>Canadian Environmental Protection Act</i> (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/). 5. The <i>Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations</i> (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/FullText.html). The Proponent must identify their tank system to Environment and Climate Change Canada and installation of new systems must comply with the regulations' design requirements.

Valued Component	Terrestrial vegetation, land, soil quality, terrain stability and permafrost
Potential effects:	Potential adverse effects to ground stability, vegetation health, soil quality, terrain, and permafrost from the establishment and operation of the camp; the storage, transportation, and use of fuel; exploration drilling activities; and the seasonal use of the winter road.
Nature of Impacts:	The potential for adverse effects is limited to the project footprint and the probability of long-term impacts occurring is considered to be low, and with proper remediation is reversible.
Mitigating Factors:	The Board is recommending terms and conditions such as requiring the Proponent to employ mitigation measures related to the vegetation, soil, permafrost and surface water quality, spill response, personnel training related to fuel and waste; use appropriate measures to prevent unplanned deposition of sediment and runoff. The Board is also recommending terms and conditions to ensure that the potential adverse effects are minimized should they be observed.
Proposed Terms and Conditions:	Fuel and Chemical Storage – 12 through 21 Road and Ground Disturbance – 44 through 48 Drilling – General – 49 through 51 Drilling on Land – 52 through 56 Land Use and Restoration of Disturbed Areas – 57 and 61 Camps - 62
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. The <i>Transportation of Dangerous Goods Regulations</i> (http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm), <i>Transportation of Dangerous Goods Act</i> (http://laws-lois.justice.gc.ca/eng/acts/t-19.01/), and the <i>Canadian Environmental Protection Act</i> (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/). 2. The <i>Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations</i> (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/FullText.html). The Proponent must identify their tank system to Environment and Climate Change Canada and installation of new systems must comply with the regulations' design requirements. 3. <i>Environmental Guidelines for the Management of Hazardous Waste, Government of Nunavut, Revised October 2010</i> (https://www.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20%28revised%20Oct%202010%29_0.pdf).

Valued Component	Air Quality
Potential effects:	Potential adverse impacts to air quality including dust and emissions generated by site activities including the use of heavy equipment for

	excavation and drilling activities, vehicles traffic and the incineration of combustible wastes.
Nature of Impacts:	The potential adverse impacts to air quality would be limited to within the project footprint with a low probability of extending beyond the geographic area. The potential adverse impacts to air quality are considered to be of low magnitude, short-term, and reversible.
Mitigating Factors:	It is recommended that the potential adverse impacts may be mitigated by ensuring the Proponent undertakes appropriate dust suppression measures and that the incineration of combustible wastes comply with the <i>Canadian Wide Standards for Dioxins and Furans</i> , and the <i>Canadian Wide Standards for Mercury</i> .
Proposed Terms and Conditions:	Waste Management – 10 and 11 Air Quality - 22 Road and Ground Disturbance – 44 through 48
Related Acts and/or Regulations:	<i>Canadian Wide Standards for Mercury</i> <i>Canadian Wide Standards for Dioxins and Furans</i>

Valued Component	Wildlife harvesting and traditional land use activities.
Potential effects:	Potential adverse effects to traditional land use pursuits in the area from caribou migration disruptions and other wildlife disturbances from increased noise associated with the operational and drilling activities at the Kahuna site, the transportation of personnel and equipment to and from the drill locations, the construction of a new permanent camp, and the mineral exploration activities. The Proponent is proposing to work in an area in proximity to caribou calving, post-calving and caribou migration routes and the potential for disruption may cause stress and avoidance of critical caribou habitat. As a result, local caribou populations may be reduced and subsequently the availability of caribou as country food.
Nature of Impacts:	Although the proposed project would include temporary and intermittent activities that would have limited potential for direct interaction with traditional land use activities, potential long-term impacts are possible from increased stress to wildlife (particularly to caribou) in key habitat areas. Unmitigated project impacts could affect the migratory patterns of the caribou herds and could result in indirect impacts.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the negative effects to wildlife and has developed an <i>Environmental Management Plan</i> and has committed to adopting mobile caribou protection measures. The Board is also recommending terms and conditions that ensure that the affected communities and organizations are informed about the project proposal, and that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities in the area.

Proposed Terms and Conditions:	Other – 63 and 64
Related Acts and/or Regulations:	N/A

Socio-economic effects on northerners:

Valued Component	Local hiring, contracting and economic impact
Potential effects:	Potential positive impacts from the hiring of local community members for various projects and activities.
Nature of Impacts:	Potential for impacts is considered to be positive if the Proponent adheres to its commitment to hiring locally to the extent possible.
Mitigating Factors:	The Board is recommending terms and conditions to ensure that the Proponent continues to inform the communities of the ongoing site activities and to ensure community members are aware of and best able to successfully connect with hiring opportunities.
Proposed Terms and Conditions:	Other – 63 and 65
Related Acts and/or Regulations:	N/A

Significant public concern:

Valued Component	Public Concern
Potential effects:	Public concern was expressed over the potential impacts on the Beverly and Qamanirjuaq and Lorillard caribou herds calving and post-calving areas and the resultant adverse impacts on communities which rely on harvesting of this herd. Additional concerns were expressed over the timing of project operation, during summer months, from May to August which is the most sensitive time for caribou.
Nature of Impacts:	Proposed project activities are located in proximity to the calving, post-calving and migration areas of the Beverly and Qamanirjuaq and Lorillard Caribou Herds; this is also an area that may be used for traditional activities, such as hunting and camping. There is also the potential for cumulative effects of the proposed with other projects in the area which may cause cumulative effects on both the Beverly and Qamanirjuaq and Lorillard Caribou herds' abundance and habitat quality.
Mitigating Factors:	Follow up consultation and involvement of local community members is expected to mitigate any potential for public concern resulting from project

	activities. The Board has recommended a term and condition to ensure that available Inuit Qaujimaningit and community knowledge of the area can inform project design. Additionally, the Board is recommending that the Proponent provide an annual report that includes wildlife observations and an evaluation of the success of the mitigative measures applied.
Proposed Terms and Conditions:	Other – 63 and 64
Related Acts and/or Regulations:	n/a

Technological innovations for which the effects are unknown:

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

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: 1-5.

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. Solstice Gold Corporation (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times and make it accessible to enforcement officers upon request.
2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (NPC File No.: 149461) and the NIRB (Online Application Form, March 12, 2021). This information should be accessible to enforcement officers upon request.
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.
4. The Proponent shall ensure that it meets the standards and/or limits as set out in the authorizing agencies' permits or licences as required for this project.

5. The Proponent shall ensure that all personnel, staff and contractors are adequately trained prior to commencement of all project activities, and shall be made aware of all operational plans, management plans, guidelines and Proponent commitments relating to the project.

Water courses/Water bodies (including fresh and marine waters)

6. The Proponent shall not extract water from any fish-bearing water body 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 otherwise authorized by the appropriate authorizing agency.
7. The Proponent shall ensure that no disturbance of the stream bed, lakebed or the banks of any definable watercourse be permitted, except where deemed necessary for maintaining project-specific operational commitments or approved by a responsible authority in cases of spill management.
8. The Proponent shall implement erosion and sediment suppression measures on all areas during all project activities in order to prevent sediment or fugitive dust from entering any water body or surrounding environment. Erosion prevention measures may include berms or silt fences.
9. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including wastewater) or sediment into any water body. The Proponent should have in place an Emergency Spill Response Plan that is approved by the appropriate authorizing agency(ies).

Waste Management

10. The Proponent shall manage all hazardous and non-hazardous waste including food, domestic wastes, debris and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) in such a manner to avoid release into the environment and access to wildlife at all times until disposed of appropriately or at an approved facility.
11. The Proponent shall incinerate all combustible wastes as needed and dispose of as required by the appropriate authorizing agencies. All non-combustible wastes from the project site shall be removed to an approved facility for disposal.

Fuel and Chemical Storage

12. The Proponent shall locate all fuel and other hazardous materials a minimum distance away from the high-water mark of any water body and environmentally sensitive areas as required by the appropriate authorizing agencies. The materials shall be stored in such a manner as to prevent their release into the environment.
13. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.
14. The Proponent shall ensure that re-fuelling of all equipment occurs a minimum distance away from the high-water mark of any water body as required by the appropriate authorizing agencies.

15. Fuel and hazardous material storage areas and fuel lines should be clearly marked with signs or flagging to avoid accidental breaks and punctures, and to ensure areas remain visible during the winter months.
16. All fuel and chemical storage containers must be clearly marked with the Proponent's name for ease of identification.
17. The Proponent shall routinely inspect and document the conditions of fuel and hazardous material storage containers and containment areas as required by the appropriate authorizing agencies. Fuel containment areas shall be kept clear of debris, water and snow to facilitate inspections for leaks.
18. The Proponent shall have a Spill Contingency Plan in place at all fuel storage or transfer locations and shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available.
19. The Proponent shall follow the authorizing agencies' direction for management and removal of hazardous materials and wastes (e.g., contaminated soils, sediment and waste oil).
20. The Proponent shall ensure that wildlife deterrent systems are utilized at the time of a spill incident in order to avoid wildlife (terrestrial or marine) and migratory birds from being contaminated.
21. The Proponent shall ensure that all spills of fuel or other deleterious materials of 100 litres or more must be reported immediately to the 24-hour Spill Line at (867) 920-8130.

Air Quality

22. The Proponent shall take appropriate dust suppression measures in conducting all activities for this Project including using approved dust suppression additives and techniques as necessary to maintain ambient air quality.

Wildlife – General

23. The Proponent shall not substantially alter or damage or destroy any wildlife habitat in conducting this operation unless otherwise authorized by the appropriate authorizing agencies.
24. The Proponent shall not chase, weary, harass or molest wildlife. This includes persistently circling, chasing, hovering over, pursuing or in any other way harass wildlife, or disturbing large groups of animals.
25. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
26. The Proponent shall ensure that all wildlife have the right-of-way on any roads or trails. Vehicles are required to slow down or stop and wait to permit the free and unrestricted movement of wildlife across roads or trails at any location.
27. The Proponent shall enforce safe speed limits for vehicles travelling along the road to ensure drivers have sufficient time to react in a safe manner if wildlife are encountered on or adjacent to the road or trail.

28. The Proponent shall ensure that drivers maintain spacing appropriate for driving and road conditions, and speed limits, to ensure drivers have time to safely react to any wildlife on the road.

Migratory Birds and Raptors Disturbance

29. The Proponent shall carry out all phases of the project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines*. The Proponent's actions in applying the *Avoidance Guidelines* shall be in compliance with the *Migratory Birds Convention Act, 1994* and with the *Species at Risk Act*.
30. The Proponent shall not disturb or destroy the nests or eggs of any birds. If active nests of any birds are discovered or located (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have naturally left the vicinity of the nest by establishing a protection buffer zone¹ appropriate for the species and the surrounding habitat.

Aircraft Flight Restrictions

31. The Proponent shall not alter flight paths to approach wildlife and avoid flying directly over animals.
32. The Proponent shall plan flight paths that minimize flights over known habitat likely to have birds or concentrations of wildlife. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
33. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum flight altitude of 610 metres (2,100 ft) above ground level except during landing, take-off or if there is a specific requirement for low-level flying, which does not disturb wildlife or migratory birds.
34. The Proponent shall avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of 1.5 kilometre.
35. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
36. 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

37. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration as identified by current land use plans in place and/or by Inuit Qaujimaningit.
38. The Proponent shall not locate any operation or undertake activities that could block or cause any diversion to migration of caribou or muskoxen.

¹ Recommended setback distances to define buffer zones have been established by Environment and Climate Change Canada for different bird groups nesting in tundra habitat and can be found at www.ec.gc.ca/paom-itmb.

39. The Proponent shall implement mobile caribou conservation measures and immediately cease activities that may interfere with the migration or calving of caribou or muskox, until the caribou or muskox have passed.
40. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within ten (10) kilometres, or conduct any drilling operation within five (5) kilometres of any designated caribou water crossings.
41. During the period of May 15 to July 15, the Proponent shall suspend all project operations, the Proponent shall suspend all operations and activities outside the immediate vicinity of the camps. Restricted activities include, but are not limited to, air and vehicle traffic, loud or repetitive noise or vibration disturbances, low-level over flights, blasting, and use of mobile equipment including snowmobiles and all terrain vehicles, and personnel walking within sight of the caribou group(s), until the caribou are no longer in the immediate area. Should the results of localized monitoring satisfy the land use inspector the project operations may resume without disturbing pregnant caribou cows or cows with young calves the suspension may be lifted for the periods specified.
42. Should pregnant caribou cows, cows with young calves, or groups of 50 or more caribou be observed within one (1) kilometer of project operations at any time, the Proponent shall suspend all operations in the vicinity, including low level overflights, drilling, blasting/trenching, and use of snowmobiles and all terrain vehicles outside the immediate vicinity of the camp, until caribou are no longer in the immediate area.
43. During the period of April 14 to June 1 when muskoxen are present, the Proponent shall not approach muskoxen closer than one (1) kilometer. This includes all operations, including low-level over flights, blasting, and use of snowmobiles and all-terrain vehicles outside the immediate vicinity of the camps.

Road and Ground Disturbance

44. 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.
45. The Proponent shall ensure snowbank heights along the road/trail are managed to allow wildlife visibility and passage. Further, the Proponent shall ensure breaks are created along snowbanks along the road/trail at regular intervals to allow wildlife passage.
46. The Proponent shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the lake, river or stream is in a state capable of fully supporting the equipment or vehicles.
47. 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.
48. The Proponent shall ensure sufficient thickness of snow and ice is present on the winter road to prevent unnecessary erosion of the underlying ground surface and impact on underneath vegetation.

Drilling – General

- 49. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.
- 50. The Proponent shall ensure that any deleterious substances (as defined in the *Fisheries Act*) resulting from its activities do not enter into any water bodies frequented by fish.
- 51. The Proponent shall ensure that all drill areas are constructed to facilitate minimizing the environmental footprint of the project area.

Drilling on Land

- 52. The Proponent shall not conduct any land-based drilling or mechanized clearing activities a minimum distance of the normal high-water mark of any water body as required by an authorizing agency.
- 53. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.
- 54. The Proponent shall ensure that all sump/depression capacities are sufficient to accommodate the volume of wastewater and any fines that are produced. The sumps shall only be used for inert drilling fluids, and not any other materials or substances.
- 55. The Proponent shall not locate any sumps within a minimum distance of the normal high-water mark of any water body as required by an authorizing agency.
- 56. 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.

Land Use and Restoration of Disturbed Areas

- 57. The Proponent shall use existing trails where possible during project activities on the land.
- 58. The Proponent shall ensure that the land use area is kept clean and tidy at all times.
- 59. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.
- 60. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
- 61. The Proponent shall ensure that all disturbed areas are restored to a stable or pre-disturbed state using Best Available Technology Economically Achievable (BATEA) upon completion of work and/or abandonment.

Camps

- 62. The Proponent shall ensure that all camps are located durable surfaces, such as gravel or sand that is consolidated and can withstand repeated, heavy use. Measures shall be put in place to prevent erosion, trail formation and damage to the ground.

Other

- 63. 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.

64. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
65. The Proponent should, to the extent possible, hire local people and access local services where possible.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Community Consultation Report

1. The Proponent shall submit a public consultation report prior to the commencement 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.

Annual Report

2. The Proponent shall submit a comprehensive annual report with copies provided to the Nunavut Impact Review Board and the Government of Nunavut, by March 31st of each year of permitted activities beginning March 31, 2022. The annual report must contain at least the following information:
 - a) A summary of activities undertaken for the year, including:
 - a map showing the approximate location of drill sites;
 - a map showing the location of the fuel cache;
 - a description of local hires, contracting opportunities and initiatives;
 - flight altitudes, frequency of flights and anticipated flight routes;
 - site photos;
 - b) A work plan for the following year, including any progressive reclamation work undertaken;
 - c) 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;
 - d) 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;
- e) 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 and any other wildlife;
 - f) A brief summary of 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.
 - g) An analysis of the effectiveness of mitigation measures for wildlife;
 - h) 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;
 - i) 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; and
 - j) 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:

Change in Project Scope

- 1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission and/or Parks Canada as appropriate, and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Copy of licences, etc. to the Board and Commission

2. The NIRB respectfully requests that responsible authorities submit a copy of each licence, permit or other authorization issued for the Project to the NIRB to assist in enabling possible project monitoring that may be required. Please forward a copy of the licences, permits and/or other authorizations to the NIRB directly at info@nirb.ca or upload a copy to the NIRB's online registry at www.nirb.ca.

Use of Inuit Qaujimaningit

3. The Proponent is encouraged to work with local communities and knowledge holders to inform project design, to carry out the project, and to confirm or validate the perspectives represented in publications produced as part of the project. Care should be taken to ensure that Inuit Qaujimaningit and local knowledge collected for the project is used with permission and is accurately represented.

Bear and Carnivore Safety

4. 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: https://www.enr.gov.nt.ca/sites/enr/files/resources/safety_in_grizzly_and_black_bear_country_english.pdf.
5. 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.
6. 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 Chesterfield Inlet, phone: (867) 898-9130).

Species at Risk

7. 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

8. 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.
9. 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://publications.gc.ca/collections/collection_2013/ec/CW66-324-2013-eng.pdf.

Incineration of Wastes

10. 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.

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Solstice Gold Corporation's "Kahuna Gold Property". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated May 25, 2021 at Baker Lake, NU.



Kaviq Kaluraq, 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) to get the current status of a species.

Updated: September 2019

Terrestrial Species at Risk ²	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ³
Migratory Birds			
Buff-breasted Sandpiper	Special Concern	Schedule 1	Environment and Climate Change Canada (ECCC)
Common Nighthawk	Threatened	Schedule 1	ECCC
Eskimo Curlew	Endangered	Schedule 1	ECCC
Harlequin Duck	Special Concern	Schedule 1	ECCC
Harris's Sparrow	Special Concern	Schedule 1	ECCC
Horned Grebe	Special Concern	Schedule 1	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Olive-sided Flycatcher	Threatened	Schedule 1	ECCC
Peregrine Falcon	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
Vegetation			
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
Arthropods			
Transverse Lady Beetle	Special Concern	No Schedule	GN
Terrestrial Wildlife			
Caribou (Dolphin and Union Population)	Endangered	Schedule 1	GN
Caribou (Barren-ground Population)	Threatened	No Schedule	GN
Caribou (Torngat Mountains Population)	Endangered	No Schedule	GN
Grizzly Bear (Western Population)	Special Concern	Schedule 1	ECCC
Peary Caribou	Endangered	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	ECCC
Wolverine	Special Concern	Schedule 1	GN
Marine Wildlife			
Atlantic Walrus (High Arctic Population)	Special Concern	No Schedule	Fisheries and Oceans Canada (DFO)
Atlantic Walrus (Central/Low Arctic Population)	Special Concern	No Schedule	DFO
Beluga Whale (Cumberland Sound Population)	Threatened	Schedule 1	DFO
Beluga Whale (Eastern Hudson Bay Population)	Endangered	No Schedule	DFO

² The Department of Fisheries and Oceans has responsibility for aquatic species.

³ 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.

Terrestrial Species at Risk²	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility³
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO
Beluga Whale (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
Fish			
Atlantic Cod (Arctic Lakes Population)	Special Concern	No Schedule	DFO
Fourhorn Sculpin (Freshwater Form)	Data Deficient	Schedule 3	DFO
Lumpfish	Threatened	No Schedule	DFO
Thorny Skate	Special Concern	No Schedule	DFO

APPENDIX B: ARCHAEOLOGICAL AND PALAEOONTOLOGICAL 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 Overview Assessment and/or Inventory and Documentation and/or Mitigation
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/Palaeontological Overview Assessment and/or Inventory and Documentation and/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*⁴ to issue such permits.

⁴P.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 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*⁵, the federal government can make regulations for the protection, care and preservation of paleontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*⁶, it is illegal to alter or disturb any paleontological 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, paleontological 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

⁵ s. 51(1)

⁶ P.C. 2001-1111 14 June, 2001

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 paleontologist 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 paleontologist is hired to perform the required study and that provisions of the contract with the archaeologist or paleontologist 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 paleontologist 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 paleontologist 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 paleontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Paleontological 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.