

**BRONZITE EXPLORATION CORP.**

# Environmental Protection Plan

**Somerset Trough Project**

**Somerset Island**

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## REVISION HISTORY

The table below is a revision history table that outlines the revisions made by Bronzite Exploration Corporation to this document.

Version	Date	Section	Summary of Changes
0	July 1, 2023	All	Support document to assist camp and project personnel.
1	December 18, 2023	All	Support document for project proposal submission to the NPC.

## 1. Purpose

The purpose of the Environmental Protection Plan (EPP) is to identify potential environmental issues or concerns and provide guidance and control measures to minimize adverse environmental effects of the Somerset Trough Project (Project). Guidance provided in this document is based on current best practices in the mining industry, as well as applicable federal and territorial legislation. This document is only intended to cover the early exploration phase of the Project and will be updated and revised as operations evolve.

## 2. Environment Standards

### 2.1 Cultural Heritage and Archaeological Resources

During the field season, personnel may happen across archaeological sites. It is against territorial law to disturb known or suspected archaeological sites in Nunavut. The following protection measures shall be taken to prevent disturbance and to respect the sites:

- Minimize disturbed area caused by the camp footprint.
- Do not touch archaeological sites or human remains. Stop and immediately report the chance find to the Nunavut Heritage Division at **(867) 934-2040**.
- Keep the find confidential, except for the regulatory body the find is reported to.

Common archaeological finds in Nunavut include stone structures, often representing shelters (e.g., tent rings), hunting blinds, caches, and stone tools.

### 2.2 Avoiding Disturbance to Local Land Users

The land in and near the Project site may be used by local populations for hunting, trapping, fishing, and recreation. Project operations may interrupt, impede, or disturb these pursuits. To whatever extent possible, project personnel must minimize disturbance to land users.

The following measures will be taken to minimize the disturbance to local land users:

- Hovering or circling aircraft over or near land users is strictly prohibited.
- Disruptions to land use by the project will be documented to inform future phases of the project's development.
- Should a hunter or land user approach the site area, site personnel should record their presence and any concerns they raise in relation to Project activities.

## 2.4 Water Use and Deposit of Waste

A requirement of Nunavut Water Board Authorizations is to record the daily use of water and deposit of waste during the field program. Please see Water Use and Waste Log (Appendix A) which can be used for tracking purposes in the field. These records must be available to the Inspector while in the field. The following must be tracked:

- Quantity of water (m<sup>3</sup>) used each day
- Quantity of wastes (m<sup>3</sup>) deposited each day
- Type of wastes deposited each day and where it is deposited
- Methods used to calculate the quantities of water and wastes
- Measures taken to avoid adverse impacts of the deposit of wastes

Within 30 days of closing the camp, submit a report to the Nunavut Water Board summarizing the restoration of the site. Include supporting photographs showing that the land is free of debris, equipment, or hydrocarbon staining.

## 2.5 Fuel Storage and Handling

Improper fuel storage or poor handling procedures can cause uncontrolled releases of hydrocarbons to the environment. The following protective measures should be put in place to protect the environment:

- All fuel will be stored at least 31 m from the ordinary high-water mark (OHWM) of any water body.
- All equipment will be refueled at least 31 m from the OHWM of any water body.
- Equipment, fuel containers, and fuel drums inspected daily to ensure there are no undetected fuel leaks.
- All refueling activities will be supervised during transfer and not left unattended.
- Fuel containers such as jerry cans will be placed within secondary containment and fuel drums will be stored in accordance with helicopter company policy.
- Fueling of the helicopter will only be completed by qualified personnel such as the pilot or engineer.
- Waste oils, lubricants, or other hydrocarbon products must be placed in drums or other sealed containers, labelled, and removed from site.
- Spill kits should be made available on-site for the purpose of spill control and clean-up. Contaminated spill kit supplies and any other contaminated materials such as wood, soil, etc. should be contained in bags or drums and shipped off site for disposal at an accredited waste disposal or recycling facility.

## 2.6 Spill Control Measures and Reporting

Flammable liquids such as aviation fuel (Jet A), diesel, and gasoline will be staged at the Somerset Trough Project camp. All precautions should be taken to prevent the release of these products to the environment. Basic mitigations include:

- Secondary containment beneath flammable liquid containers and equipment such as generators to prevent leaks.
- Storing flammable liquids more than 31 m away from the OHWM of any water body,
- Locating fully-stocked spill kit(s) in easily accessible location(s) in the event of an emergency.

All spills should be recorded internally for tracking purposes. The following details should be tracked: Date, time, approximate location, substance, estimated volume, personnel involved, and immediate cause of the spill. If possible, take photos of the spill before and after clean-up. See Appendix B for Spill Tracker.

As per Schedule B of the *Spill Contingency Planning and Reporting Regulations*, spills of flammable liquids greater than or equal to 100 L, or spills of any quantity near or into a water body, must be reported externally within 24 hours of the spill to:

24-Hour Spill Report Line (NWT and Nunavut): **(867) 920-8130**

and

CIRNAC Inspector: **(867) 975-4284**

**It is good policy to report all minor spills to the Spill Line and CIRNAC Inspector, even those spills less than the 100 L minimum.**

Please refer to the Somerset Trough Project Spill Contingency Plan for further details.

## 2.7 Aircraft Flights

The Somerset Trough Project will involve the use of helicopter and fixed wing aircraft to conduct airborne surveys and to resupply the camp site. Aircraft can cause disturbance to land users, and cause stress to wildlife or force them to migrate away from natural habitat.

The following steps should be taken to minimize the adverse effects of air travel on wildlife populations:

- Where possible, minimize the number of flights taken to and around the Project.
- Should any concentration of wildlife be identified, pilots will be informed of their location and travel routes will be modified to avoid those areas wherever possible.
- Travel routes will be planned to avoid sensitive wildlife areas and minimize the likelihood of encountering wildlife.
- If avoidance is not possible for safety reasons, a flying elevation of at least 300 m above ground level must be maintained if flying around caribou.
- Hovering or circling aircraft over wildlife should be avoided unless necessary.
- All wildlife sightings will be recorded in the Wildlife Observation Log (Appendix C).
- Actions specific to caribou can be found in Section 2.9.

## 2.8 Polar Bear Encounters

Polar bears are common in the Project area and present an immediate risk to the lives and safety of project personnel. Extreme caution must be taken to prevent polar bear encounters. All employees and contractors working on site must watch the training video *Working in Bear Country* to learn the basics of dealing with a bear encounter.

The following precautions should be taken to reduce the likelihood of encountering a polar bear:

- All food scraps and garbage must be disposed of properly and promptly; site and working areas must be kept clean to reduce the likelihood of attracting wildlife. Waste will be incinerated or retrieved by aircraft and disposed of off site.
- A bear fence will be erected and maintained around the site perimeter.
- One person should be assigned to act as a Bear Monitor during field activities in areas considered high risk for polar bear encounters.
- Always maintain awareness of your surroundings when outside and conduct regular scans of the horizon during field activities.

Should a polar bear be spotted at or near the site or if an animal approaches camp or work areas or personnel, the following immediate actions must be taken (as appropriate):

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- If safe to do so, retreat to camp, the helicopter, or other safe areas as soon as a bear is spotted.
- If unsafe to retreat, follow the steps detailed in *Working in Bear Country* to discourage the bear and avoid interaction.
- If necessary, deter an approaching bear using noisemakers or bear bangers.
- If the bear presents an immediate risk to human life or safety, bear spray or rubber bullets can be used. **A defensive kill should only be used as a last resort.**

Under the *Nunavut Wildlife Act*, it is legal to deter or destroy a polar bear, if necessary, for the defense of life or property. If lethal action is taken against a polar bear, this must be reported to the local Conservation Officer (Resolute: 867-252-3879; Taloyoak: 867-561-6231) and immediate steps should be taken to preserve the hide.

## 2.9 Fox, Wolf, and Wolverine Encounters

Carnivores, including foxes, wolves, and wolverines, may become habituated to sites where there is consistent access to food or food waste. Improper waste management or intentional feeding can result in habituation. Once accustomed to non-natural food sources, wild animals may become aggressive or indifferent to the presence of humans. Of particular concern is the potential for rabies, as the disease is endemic to Arctic fox populations and may present in other animals as well. Should any animal be observed acting aggressively or unusually, proper precautions must be taken.

- All food scraps and garbage must be disposed of properly and promptly; site and working areas must be kept clean to reduce the likelihood of attracting wildlife. Waste will be retrieved by helicopter and disposed of off site.
- Under no circumstances will food be intentionally provided to wildlife, nor will wildlife be approached by personnel.
- Totes, drums, and other fuel containers should be kept sealed when not in use, and any spills should be cleaned immediately to minimize attractants.
- Where possible, a bear fence should be installed around camp infrastructure to prevent wildlife incursions.
- All sightings of foxes, wolves, wolverines, and other wildlife on site will be recorded digitally and in the Wildlife Observation Log (Appendix B).
- Wildlife attempting to approach personnel will be deterred by shouting, noisemakers such as bear bangers, and rubber bullets if required. If these methods do not prevent the animal's approach, personnel should assess the situation and determine the likelihood of danger, and what further action may be necessary. In most cases, wolves and wolverines will respond to the initial deterrents.



- Foxes may be less responsive to deterrents. Due to high incidence of rabies in foxes in Nunavut, any fox acting aggressively or failing to respond to deterrence should be assumed to be rabid and thus present a significant risk to personnel in the field.

Any wildlife incidents should be reported to the local Conservation Officer (Resolute: 867-252-3879; Taloyoak: 867-561-6231), and to the local Hunters and Trappers Organization (Resolute HTO: 867-252-3170; Taloyoak HTO: 867-561-5066). In the unlikely event that it becomes necessary to euthanize a fox, wolf, or wolverine due to suspected rabies or aggressive behaviour, approval to proceed should be sought from the local Conservation Officer. Head shots should be avoided. Contact with the carcass should be avoided where possible, and only done following the direction of the Conservation Officer.

## 2.10 Caribou Protection Measures

Peary Caribou are endemic to the project area but have been in decline in recent years and are currently listed as a threatened species in the *Species at Risk Act*. Caribou are important to Inuit communities and should be treated with respect. If caribou are spotted during project activities, the following actions should be taken:

- Always give caribou the right of way and delay working in any locations where they are present.
- Avoid landing the helicopter in areas where caribou are present as the helicopter could stress the animals or force them to move out of the area.
- Record any caribou sightings in the Wildlife Observation Log (Appendix B).

## 2.11 Bird Protection Measures

Project activities risk disrupting or disturbing the nesting and migratory patterns of birds in the region, and care must be taken to minimize these risks. As per the *Migratory Bird Convention Act* and its regulations, it is against the law to disturb or destroy an active migratory bird's nest.

The following measures must be implemented by project personnel to minimize disturbances toward bird populations:

- Active nests will be avoided, and project activities relocated if possible.
- Record bird sightings, particularly large concentrations, in the Wildlife Log.
- A visual scan of the work area for active nests will be conducted prior to any land disturbance.

Please refer to the Somerset Trough Project Wildlife Management Plan for further details on wildlife management.

## 2.12 Solid Waste Management

Waste generated at the camp site should be bagged and stored out of the elements. If possible, bagged waste should be sealed inside a solid container such as a drum to make it inaccessible to wildlife and reduce the scent of the food waste. Waste should be stored within the perimeter of the bear fence to keep it away from wildlife. Burnable waste should be incinerated daily, and non-burnable waste should be routinely removed from site by aircraft to prevent accumulation of wildlife attractants in camp.

The NWB Authorization authorizes the use of a sump to dispose of greywater. The location of the sump(s) should be greater than 31 m from the OHWM of any water bodies and the exact location of the sump(s) must be recorded. The sumps should only be used for camp greywater, not for any other types of solid or hazardous waste. The sump must be buried prior to abandoning the camp area at the end of the field season. Photos of the sump both before and after burial should be taken to include in future reporting of site reclamation referred to in Section 2.4.

Please refer to the Somerset Trough Project Waste Management Plan for further details.

## 2.13 Compliance Inspections

To maintain a clean, safe, and environmentally sound project area, and to comply with all federal and territorial laws, regulations, and guidelines, the following actions should be taken:

- Personnel will conduct daily inspections of site infrastructure, noting any spills, improper fuel storage, open containers, or waste issues. See Appendix D for the Daily Inspection Checklist.
- Any issues noted during inspections should be rectified as soon as practicable.
- If a spill is identified, personnel will report the incident to the 24-hour territorial spill line (897-920-8130) and Inspector as soon as possible, and the spill should be cleaned up immediately.

## Appendix A – Water Use and Waste Log

Date	Water Used (m <sup>3</sup> )	Water Source (Lat/Long)	Waste Deposited (m <sup>3</sup> )	Waste Location (Lat/Long)	Comments

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## Appendix B – Spill Tracker

Date	Time	Location (Lat/Long)	Substance Spilled	Estimated Volume (L)	Spill # (externally reportable only)	Comments

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## Appendix C – Wildlife Observation Log

Date	Name of Observer	Location	Species, number, and description	Comments (direction of movement, unusual behaviour, deterrents used etc.)

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## Appendix D – Daily Inspection Checklist

Inspected by:

Date:

### MAIN CAMP AREA

Good housekeeping (free of debris or litter, supplies well organized, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Waste properly sorted and securely stored	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Fuel containers free of damage	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Fuel within secondary containment	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Area free of spills or hydrocarbon staining	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Pacto toilets well maintained and hygienic	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Generator operating properly	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Bear fence operating properly	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Signs of wildlife (tracks, scat, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Safety hazards around camp?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

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## INCINERATOR

Good housekeeping (free of loose food waste, supplies well organized, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
PPE in good working condition	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Incinerator running properly	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Ash removed and stored properly	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Incinerator fuel supply properly contained	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Signs of wildlife (tracks, scat, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Safety hazards at the incinerator?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

## FUEL CACHE

Drums sealed and free of damage	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Drums contained within secondary containment	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Containment berms in good working order	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Area free of spills and hydrocarbon staining	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Fuel cache flagged to increase visibility	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Signs of wildlife (tracks, scat, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
Safety hazards at the fuel cache?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Comments:

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General comments:

Inspector signature	Date
Supervisor signature	Date

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