

-
Ontario Ministry of Mines
Category C Environmental Assessment
Project Documentation
Gould Copper Mines Rehabilitation Project



Mine Rehabilitation Section
Mines and Minerals Division

Last Revised: October 23, 2023

Table of Contents

Table of Contents.....	2
1 Introduction.....	4
1.1 Project Background.....	4
1.2 Project Description and Rationale.....	5
1.3 Alternative Methods.....	7
1.3.1 Adit and Adit Crown Pillar.....	7
1.3.2 East and West Raise.....	8
1.4 Ministry of Mines Class Environmental Assessment.....	9
2 Existing Environmental Conditions.....	10
2.1 Ecosystem Setting.....	10
2.2 Vegetation.....	11
2.3 Surface Water and Source Water Protection.....	10
2.4 Fish and Wildlife.....	12
2.5 General land uses.....	12
2.6 Aboriginal land and uses.....	12
3 Consultation Requirements.....	13
3.1 Notice of Opportunity to Provide Input.....	14
3.2 Indigenous Consultation.....	14
3.3 Meetings Held.....	15
3.4 Comments/ Concerns/Issues and Resolution.....	15
4 Technical Studies.....	16
4.1 2019 Bat Monitoring Report.....	17
4.2 2021 Mine Hazard Registry/ Investigation and Rehabilitation Reports.....	17
4.3 2023 Stage II Geotechnical Investigation.....	18
5 Analysis of Environmental Effects and Mitigation Measures.....	18
5.1 Planning and Policy.....	18
5.2 Source Water Protection.....	19
5.3 Climate Change.....	19
5.4 Air Quality, Dust and Noise.....	19
5.5 Ecosystem Protection and Restoration.....	20
5.6 Species at Risk.....	21
5.7 Surface Water.....	22

5.8	Groundwater.....	22
5.9	Excess Materials and Waste Management	23
5.10	Contamination and Contaminated Sites	23
5.11	Servicing, Utilities and Facilities	23
5.12	Archaeological Resources and Cultural Heritage Landscapes	24
6	Approvals and Permits.....	24
7	Monitoring Requirements and Studies.....	25
8	Construction Overview and Schedule.....	25
9	Class EA Requirements.....	26
10	References.....	28

List of Appendices

Appendix A – Project Screening

Appendix B – Notice of Opportunity to Provide Input and Project Description

Appendix C – Environmental Effects and Mitigation Measures

List of Figures in Text

Figure 1	– Site Location Plan. Image source: Golder Associates (2021).	4
Figure 2	– Location of mine hazards proposed for rehabilitation..	6

List of Tables in Text

Table 1	– East and West Raise Rehabilitation options	8
Table 2	- Class Environmental Assessment overview	9
Table 3	– List of parties contacted during consultation stage	13
Table 4	– Summary of meetings held during the consultation stage.	15
Table 5	– Comments/Concerns/ Issues and Resolutions	15
Table 6	- Construction Phases and Schedule.....	26
Table 7	– Class EA Requirements	27

1 Introduction

1.1 Project Background

The Gould Copper Mine (AMIS #07872) is a former high grade, low tonnage copper mine that operated from 1969 to 1976. The mine is situated in Gould Township, approximately 70 km east of Sault Ste. Marie and 45 km north of Thessalon, Ontario. The mine is accessed via a narrow access trail west of Highway 129. The location of the mine is illustrated below on Figure 1.



Figure 1 – Site Location Plan. Image source: Golder Associates (2021).

The mine features two raises to surface, an adit, a mill building, a hydro-substation, and a water tank. There are two crown pillars associated with the underground workings: one related to the development of a stope and another at the adit brow. The mine was historically serviced by an overhead electrical powerline; however, no utilities currently service the property. All electrical transformers associated with the hydro-substation have been removed, with only wood infrastructure and a chain-link fence remaining. There are two steel barrels of unknown material situated within the fenced hydro-substation. The mill building historically housed a small concentrating mill, as well as an assay lab, mechanical shop, and storage area. The building is currently collapsed with only debris and concrete foundations remaining. In addition to the mine workings described above, there is a confined tailings management area situated approximately 200 m northwest of the mill and underground workings. The tailings management area is not included as part of the current assessment and is not discussed further within this report.

1.2 Project Description and Rationale

The purpose of the project is to rehabilitate the mine hazards at the Gould Copper Mine to eliminate the risk to the public and the environment. The mine is known to be frequented by the public and there is a geocache located within fallen timbers at the adit brow. Entering the underground workings of the mine can pose fatal consequences due to dangers associated with unstable ground, insufficient oxygen, or wildlife. Similarly, building debris remaining from historical mine infrastructure may contain hazardous material that may be harmful if handled improperly. The objective of the rehabilitation activities is to permanently prevent inadvertent access to all mine openings to surface and remove remaining building material and debris associated with the historical mining activities. The area will be allowed to revegetate naturally and return to pre-disturbance conditions.

Several studies have been completed to assist with determining the preferred rehabilitation strategy, including a bat acoustic study and geotechnical investigation. The bat acoustic study confirmed the presence of bat species at risk within the underground workings, specifically at the adit location. The study concluded that the underground workings of the mine have the potential to be utilized by bats as a hibernaculum. A geotechnical investigation was completed to determine the long-term stability of the crown pillars and conditions of the openings to surface remaining at the site. The investigation concluded that the crown pillar associated with the adit is not long-term stable and progressive failure of the adit brow and crown pillar have occurred. As a result, bat-friendly rehabilitation measures (i.e., stainless steel gate) are not feasible as it would not address the long-term stability of the adit crown pillar zone. Additional details pertaining to the above-mentioned studies is provided in Section 4. A photograph of the current condition of the adit is provided below as Photograph 1.



Photograph 1 – Adit proposed for rehabilitation. Note the presence of fallen timber and rocks indicating failure of the adit brow and crown pillar (June 28, 2023).

The proposed rehabilitation approach for the adit is to backfill a minimum of 10 m of the adit from the brow to support the crown pillar and prevent it from unravelling. The backfill will also be used as the rehabilitation measure to permanently prevent access to the adit but will result in the permanent loss of potential bat overwintering habitat. The preferred rehabilitation strategy for the two raises is to backfill using a combination of cemented and uncemented material to maintain long-term stability. Mine infrastructure to be decommissioned includes the hydro substation, mill site foundations, water tank, and two steel barrels. Disturbed areas will be allowed to revegetate naturally to match surrounding habitat. The location of mine hazards to be rehabilitated are provided below on Figure 2.



Figure 2 – Location of mine hazards proposed for rehabilitation. Image source: Golder Associates Ltd. (2021).

Some access improvements have been completed as part of previous investigation work along the main access road and to the adit. It is anticipated that only minor vegetation clearing, and grading of existing mine roads will be needed to facilitate the access of heavy equipment to the adit, west raise and remaining infrastructure. The east raise is currently inaccessible by heavy equipment and additional improvements will be needed to allow the execution of the rehabilitation work. The boundary of the project area is defined by the mine access road and area surrounding the mine hazards.

1.3 Alternative Methods

The ministry considered a range of alternative rehabilitation methods during the completion of this Class EA. The rehabilitation options were identified as part of an *Investigation and Rehabilitation Plan* report completed by Golder Associates Ltd. (now WSP Canada Inc.) in 2021 and a *Stage II Geotechnical Investigation* completed by WSP in 2023 (see Section 4). All reasonable options for the permanent rehabilitation of the mine hazards were considered. The alternative methods considered for each mine hazard is detailed in the following subsection.

1.3.1 Adit and Adit Crown Pillar

The installation of a bat gate at the adit was not recommended as it does not address the long-term stability of the adit crown pillar zone. If a bat gate was to be installed, the crown pillar would require ground support that would need to be installed from within the adit. This would require intensive underground refurbishment which would further prolong the closure of the mine opening and ongoing risk to public safety. In addition, this option would require having workers re-entering the unstable workings thereby carrying a high safety risk. As such, the use of a bat gate has been excluded as a feasible rehabilitation option.

The only feasible permanent rehabilitation measure identified for the adit and adit crown pillar is to backfill. The backfill would be placed a minimum of 10 m inside the adit from the brow to support the crown pillar and prevent it from unravelling. The backfill would extend in front of the brow, mounded approximately 2 m above the brow and sloped to ensure the long-term stability of the material. The work will occur in the early summer when bats are not expected to be utilizing the underground workings as a potential hibernaculum and is expected to take approximately three days to complete. The advantages of the above rehabilitation strategy are as follows:

- Backfilling the adit fulfills the requirements of the Mine Rehabilitation Code of Ontario (O. Reg 240/00) for closure of mine openings to surface by permanently preventing inadvertent access to the underground workings.
- The work can be completed over three-days thereby reducing time spent on the property and surrounding land. This efficiency will minimize long-term disturbances to wildlife and disruption to potential hunting, trapping, gathering, and cultural/spiritual activities that may take place by surrounding Indigenous communities.
- The backfill material can be sourced from local suppliers.
- No long-term monitoring or maintenance is required following the completion of the work.

The disadvantage of the proposed rehabilitation strategy for the adit is that it will result in the permanent loss of potential bat over-wintering habitat. The ministry will ensure that the work is completed during a time of year when bats are not expected to be utilizing the habitat and will obtain all necessary approvals under the Endangered Species Act (ESA 2007) prior to proceeding with the work (see Section 6). Although bat-friendly rehabilitation options are not feasible at this location due the stability of the adit crown pillar, the ministry is committed to utilizing bat-friendly options at other abandoned mines sites in the Sault Ste. Marie area where it is feasible to do so.

1.3.2 East and West Raise

Two rehabilitation strategies were identified for the east and west raise to permanently prevent inadvertent access. The rehabilitation strategies are summarized in the following table.

Table 1 – East and West Raise Rehabilitation options

Rehabilitation Option	Description
Engineer Backfill	Backfilling the raises with a combination of clean granular backfill and cemented backfill. The clean granular backfill would be placed up to 5 m below the raise collar and the remaining void filled with reinforced concrete, creating a self-supporting plug within the raise. The self-supporting concrete plug does not rely on the granular backfill for long-term stability and will remain in place in the event the backfill mobilizes within the raise.
Concrete Capping	This method involves creating a concrete cap over the raises that meets the specifications outlined in O. Reg 240/00. Due to the topography of the raise collar and bedrock quality, the concrete caps would require engineering design as a standard cap cannot be built on top of bedrock. The concrete cap can only be constructed if the adit and unstable adit crown pillar are backfilled.

Engineered backfill was selected as the preferred rehabilitation strategy for the two raises largely due to the efficiencies associated with backfill already being used at the adit and adit crown pillar. The work would occur in the early summer, concurrently with the rehabilitation of the adit and adit crown pillar. The advantages of the proposed rehabilitation strategy are as follows:

- Backfilling the raises fulfills the requirements of the Mine Rehabilitation Code of Ontario (O. Reg 240/00) for closure of mine openings to surface by permanently preventing inadvertent access to the underground workings.
- The work can be completed over ten-days thereby reducing time spent on the property and surrounding land. This efficiency will minimize long-term disturbances to wildlife and disruption to potential hunting, trapping, gathering, and cultural/spiritual activities that may take place by surrounding First Nation communities.
- The backfill material can be sourced from local suppliers and hauled concurrently with the adit material. This will reduce the carbon footprint of the project by minimizing the haulage of traffic and materials on public roads.
- No long-term monitoring or maintenance is required following the completion of the work.

Although there is no evidence of bats utilizing the two raises to access the underground workings, the proposed rehabilitation strategy will make the habitat unusable by bats by altering the airflow within the mine.

1.4 Ministry of Mines Class Environmental Assessment

The Gould Copper rehabilitation project is a discretionary rehabilitation activity subject to the Ministry of Mines (MINES) Class Environmental Assessment (EA) process, as prescribed in the *Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the Mining Act* (amended 2018). The purpose of MINES' Class EA is to provide an effective process for screening, evaluating, and mitigating the potential environmental effects of activities and to provide appropriate consultation opportunities to ensure that all potential environmental effects of a project are considered. The MINES Class EA is an approved process that provides a decision-making structure that ensures the requirements of the *Environmental Assessment Act* are met.

The phases of the MINES Class EA process are summarized below in Table 2.

Table 2- Class Environmental Assessment overview

Class EA Phase	Description
Project Screening	The proposed rehabilitation activities have been screened as a Category C project with moderate potential for environmental effects due to the anticipated impacts to bat habitat. The completed screening criteria table is provided in Appendix A.
Consultation	In accordance with Section 4.2.2 of the Class EA, the ministry posted a Notice of Opportunity to Provide Input as a bulletin notice on the Environmental Registry of Ontario (ERO) and on the MINES Class EA website. Consultation letters were additionally distributed to government agencies, aboriginal communities and other persons that may have an interested in the project. Further details about consultation completed as part of this Class EA is provided in Section 3.
Studies and Information Gathering	The ministry reviewed various information sources to document existing conditions in the study area. Technical studies were completed to assist with determining the preferred rehabilitation approach and to inform this Class EA. A summary of all technical studies is provided in Section 4.
Project Documentation and Notice of Completion	This document has been prepared to satisfy the Category C project documentation requirements, as described in Section 4.2.1.2 of the Class EA. All government agencies, aboriginal communities and other persons consulted with as part of the consultation phase were provided this document with a Notice of Completion (NOC) and the opportunity to provide additional comments or concerns related to this project over a 30-day comment period.

Project Implementation	Assuming the ministry does not receive new comments or information following the NOC comment period that would require the proposed project to be reassigned to a higher category, a Statement of Completion will be prepared and posted on the Class EA website and the proposed rehabilitation activities will proceed as described in this document.
------------------------	---

2 Existing Environmental Conditions

A description of the existing environmental conditions in the area surrounding the Gould Copper Mine is provided in the following section.

2.1 Ecosystem Setting

The Gould Copper Mine is situated in the north boundary of the Thessalon Ecodistrict (Ecodistrict 5E-1), within the Georgian Bay Ecoregion (Ecoregion 5E) (Crins et al. 2009; Wester et al. 2018). The regional area is characterized by predominately bedrock terrain, with discontinuous layers of acidic, morainal soil. The bedrock geology underlying the area of the mine consists of conglomerate, sandstone, and argillite of the Huronian Supergroup, Cobalt Group and Gowganda Formation (OGS 2011). According to the available mapping, there are no Areas of Natural or Scientific Interest (ANSI), provincially significant wetlands, or environmentally significant areas situated on or adjacent to the mine (MNRF 2022).

2.2 Air Quality and Climate

The Georgian Bay Ecoregion falls within the Humid High Moderate Temperature Ecoclimate Region (Ecoregions Working Group, 1989), where the climate is generally characterized by cool-temperature and humidity (Crins et al. 2009). Normal activities at the mine and surrounding area do not currently contribute to the release of greenhouse gases or the degradation of ambient air quality.

2.3 Surface Water and Source Water Protection

The Gould Copper Mine is situated in the Great Lakes- St. Lawrence Basin and the Lower Mississagi Watershed (MNRF 2023). Surface water features within this watershed drain southwardly and ultimately empties into North Lake Huron. Surface water features in the vicinity of the mine is limited to an ephemeral creek situated approximately 20 m east of the adit. According to available aerial imagery, the creek originates from a small unevaluated wetland situated approximately 500 m north of the mine (NRCan 2021). The creek transects the mine road and flows in a southerly direction where it empties into Huston Lake. A photograph of the creek is provided as Photograph 2 below. Huston Lake is situated approximately 80 m south of the mine infrastructure.



Photograph 2 – View of the intermittent creek transecting the mine access road facing northeast. The creek flows in a southerly direction and eventually empties in Huston Lake. (June 28, 2023)

A search of the MECP Well Records Interactive Map (2021) indicates that the nearest potable water well is located approximately 2km east of the mine at the Outpost Lodge property. The mine is not situated in an area identified as a source water protection area.

2.4 Vegetation

Vegetation in the regional area consists of a mix of temperate and boreal species associated with the Eastern Temperate Mixed Forest Vegetation Zone (Baldwin et al. 2018) and the Algoma Section (L.10) of the Great Lakes- St. Lawrence Forest Region (Rowe 1972). Tree species typically encountered in the region include sugar maple (*Acer saccharum*) dominated forests in upper slopes and bedrock ridges dominated by yellow birch (*Betula alleghaniensis*), northern red oak (*Quercus rubra*), red maple (*Acer rubrum*), and eastern hophornbeam (*Ostrya virginiana*) (OMNRF 2016; Webster et al. 2018). Trembling aspen (*Populus tremuloides*), large-toothed aspen (*Populus grandidentata*) and paper birch (*Betula papyrifera*) are generally more prevalent in areas of recent disturbance (Webster et al. 2018).

According to the EDDMap Invasive Species Map, several plant invasive species are known to occur in the area including spotted knapweed (*Centaurea stoebe*), purple crown-vetch (*Securigera varia*), and common St. Johnswort (*Hypericum perforatum*) (iNaturalist 2020).

2.5 Fish and Wildlife

Huston Lake is known to provide habitat to variety of fish species including Smallmouth Bass (*Micropterus dolomieu*), White Sucker (*Catostomus commersonii*), Northern Pike (*Esox Lucius*), Pumpkinseed (*Lepomis gibbosus*), and Rock Bass (*Ambloplites rupestris*) (MNRF 2022b). The creek that transects the mine is intermittent and not expected to support fish species. According to available aerial imagery, the creek originates from a small unevaluated wetland situated approximately 500 m north of the mine (NRCan 2021).

The forested habitat surrounding the mine is expected to support a variety of terrestrial wildlife including, but not limited to, American black bear (*Ursus americanus*), moose (*Alces alces*), fisher (*Pekania pennanti*), bats (*Chiroptera sp.*), and migratory birds (Dobbyn 1996; Crins et al. 2009). According to the Ontario Breeding Bird Atlas, there are 32 avian species previously observed within the 10 km square that encompasses the mine (Square 17TLM15) and 131 species known to occur in the region (Region #34, Blind River) (Birds Canada, 2023). The species identified include two forest-dwelling avian species at risk (SAR), Eastern Wood- Pewee (*Contopus virens*, Special Concern) and Olive-sided Flycatcher (*Contopus cooperi*, Special Concern). The Ontario Reptile and Amphibian Atlas has identified previous occurrence of 13 herpetofauna in the 10 km square that encompasses the site, including one species listed as special concern provincially, the Snapping Turtle (*Chelydra serpentina*) (Ontario Nature 2020). Although the NHIC Map does not identify any previous occurrences of SAR or rare species in the 1 km square that encompasses the mine, the Midland Painted Turtle (*Chrysemys picta*) has previously been observed near the southwestern shore of Huston Lake and along Highway 129 (MNRF 2022).

Bat acoustic studies completed in 2019 have confirmed the presence of five bat species in the vicinity of the mine, including one bat species at risk (SAR), the Little Brown Myotis (*Myotis lucifugus*) (Kilgour & Associates 2019). The Little Brown Myotis is currently designated as endangered provincially under the ESA (2007) and receives both habitat and species protection. The study concluded that the adit has the potential to be utilized by bat species at risk to access the underground workings as a hibernaculum. Additional details about the 2019 bat acoustic study are provided in Section 4.

2.6 General Land Uses

The Gould Copper Mine is situated on Crown land, within planning unit G1887 Wakomata/ Tunnel System General Use Area (MNRF 2022c). The land use within this area consists primarily of tourism and recreational uses, with numerous commercial lodges and seasonal camps situated in the area (MNRF 2006). The nearest seasonal camps from the mine are situated approximately 1.2km east on Jobammageeshig Lake. The land use intent in the area aims to benefit the commercial tourism and cottaging sector (MNRF 2006).

2.7 Indigenous Communities and Land Use

The Gould Copper Mine falls within the Robinson- Huron Treaty Area (Treaty #61) and the understood traditional land use area of Batchewana First Nations, Thessalon First Nations and Mississauga First Nations. The mine also falls within the asserted harvesting area of the Historic Sault Ste. Marie Metis community and Bar River Metis community.

3 Consultation Requirements

A summary of all stakeholders, agencies and Indigenous Communities contacted as part of the Class EA is provided below on Table 3. Consultation letters were distributed on June 1, 2023, to provide site- specific information and a summary of potential negative environmental effects and proposed mitigation measures that would negate or reduce the significance of the environmental effects. Comments or concerns received during the consultation stage and resolutions are summarized in Section 3.4.

Table 3 – List of parties contacted during consultation stage

Name of Ministry/ Agency/Department/ Organization	Name and Contact Information	Consultation Method	Comments or Concerns Received
Provincial			
Ministry of Environment, Conservation and Parks – Species at Risk Brank	Mike Allan, Management Biologist Mike.Allan@ontario.ca Lindsay McColm, Northern Species at Risk Biologist Lindsay.McColm@ontario.ca	Email Phone	Concerns detailed in Section 3.4.
Ministry of Environment, Conservation and Parks – Environmental Assessment Branch	Kathleen O’Neil, Director Kathleen.oneil@ontario.ca Jon Orpana, Regional Environmental Planner Jon.orpana@ontario.ca	Email	Comments detailed in Section 3.4
Ministry of Natural Resources and Forestry- Sault Ste. Marie Work Centre	Jon Laidley, District Planner Jon.Laidley@ontario.ca	Email	Comments detailed in Section 3.4
Ministry of Citizenship and Multiculturalism – Heritage Planning Unit	Karla Barboza, Team Lead-Heritage Karla.Barboza@Ontario.ca	Email	No concerns identified
Ministry of Citizenship and Multiculturalism – Archaeology Program Unit	Robert von Bitter Archaeology@ontario.ca	Email	No concerns identified.
Other Interested Stakeholders			
Claim Holder – Claim #683801 and #726824	George Lucuik lucuik@shaw.ca	Email	No response received
Claim Holder – Claim#683801	Clifford hicks Cliff.hicks@sympatico.ca	Email	No response received
Indigenous Communities			
Batchewana First Nations	Vic Bolduc, Mineral Development Advisor Vic_bolduc@hotmail.com	Email	Comments detailed in Section 3.4.
Garden River First Nations	Stephanie Seymour, Lands & Resources Manager sseymour@gardenriver.org	Email	No response received.

Thessalon First Nation	Kathleen Naponse, Lands and Resources Coordinator KNaponse@vianet.ca	Email Phone	Response received but no concerns identified.
Mississauga First Nation	Keith Sayers, Land Resource Manager keith@mississaugi.com	Email	Response received but no concerns identified.
Michipicoten First Nation	Jessica Zadori, Biodiversity Coordinator j.zadori@michipicoten.com	Email	Response received but no concerns identified.
Sault Ste. Marie Historic Métis Community	Dustin Schultz – Mineral Development Advisor (Northeast) DustinS@metisnation.org	Email	Comments and concerns detailed in Section 3.4

The MINES Class EA consultation process has been documented in a detailed *Record of Consultation* that may be made available to the public upon request.

3.1 Notice of Opportunity to Provide Input

A *Notice of Opportunity to Provide Input* was posted as a Bulletin Notice on the ERO (ERO #019-7022) on June 1, 2023, and additionally referenced on the MINES Class EA webpage. The stakeholders identified above in Table 3 were notified about the posting via email. The notice was supported with a description of the project that fulfilled the requirements outlined in Section 4.1.1.2 of the Class EA. A copy of the Notice of Opportunity to Provide Input and Project Description is provided in Appendix B. The public was able to provide input related to the undertaking through the Environmental Registry. The ministry received one comment from the public during the consultation period, as detailed in Section 3.4.

3.2 Indigenous Consultation

Indigenous communities contacted as part of this Class EA are summarized above in Table 3.

Indigenous communities were initially engaged in May 2020 by email regarding the Ministry’s intent to complete preliminary site assessments at a cluster of abandoned mine sites in the Sault Ste. Marie area, including the Gould Copper Mine. The ministry has since maintained regular communication with communities via email/letters to notify them of the preliminary project work completed. Consultation letters for the Class EA were distributed to communities on June 1, 2023. Comments and concerns received from aboriginal communities and resolutions are summarized in Section 3.4. Updates to communities will be provided as the project progresses into construction.

In addition to the Class EA consultation letters, the Ministry has reached out to all communities to provide them with the opportunity for an in-person or virtual meeting to discuss the project and any potential impacts to Aboriginal and treaty rights. At the time of issuance of this report, no concerns have been brought forward by community members. If additional impacts are identified the ministry will ensure mitigation measures are in place through consultation with affected communities.

3.3 Meetings Held

A summary of meetings held during the consultation process is provided below in Table 4. Comments or concerns received during the meetings and resolutions are summarized in Section 3.4.

Table 4 – Summary of meetings held during the consultation stage.

Name of Stakeholder/Agency/Community	Location/ Method of Communication	Date	Description
Ministry of Environment, Conservation and Parks – Species at Risk Branch	Teleconference	April 3, 2023	The purpose of the meeting was to confirm species at risk permitting requirements due to anticipated impacts to bat habitat.
Batchewana First Nations	Site Visit	August 8, 2023	As requested by the community, the Ministry provided a site visit to allow representatives an opportunity to view the site and gain a better understanding of the rehabilitation work proposed.

3.4 Comments/ Concerns/Issues and Resolution

An overview of issues raised from the parties consulted and proposed resolutions is provided below in Table 5.

Table 5 – Comments/Concerns/ Issues and Resolutions

Comments/ Concerns/ Issues	Resolution
<ul style="list-style-type: none"> The MECP – SAR Branch provided input regarding permitting requirements under the ESA (2007). They recommended that the project proceed under a Section 17(2), part A permit under the ESA (2007). They additionally advised that it is the Ministry responsibility to confirm if the project satisfies the conditions any regulatory exemption detailed in Section 23.18. 	<ul style="list-style-type: none"> The work will be completed in accordance with the regulatory exemption detailed in Section 23.18 of O. Reg 242/08. Additional details related to this approval process are provided in <i>Section 6 – Approvals and Permits</i>.
<ul style="list-style-type: none"> The MECP – SAR Branch recommended to complete the rehabilitation work between June and July 31st to minimize impacts to bats during the swarming and hibernation period. 	<ul style="list-style-type: none"> The rehabilitation activities related to the underground workings will be completed between June 10th and July 10th to comply with the timing windows recommended by the MECP. Mitigation measures for bats and bat habitat is provided in <i>Section 5.6 – Species at Risk</i>.
<ul style="list-style-type: none"> The MECP – EA Branch provided an “Areas of Interest” document (updated August 2022) that summarizes the MECP’s interest with respect to the Class EA process. They advised that all areas of interest should be addressed within the EA documentation to 	<ul style="list-style-type: none"> The subheadings included in Section 5 of this document are consistent with the areas of interests identified by the MECP and demonstrates MINES consideration of each criterion.

<p>minimize delays in the project. They also requested that the NOC and subsequent Statement of Completion be provided once the project documentation is finalized.</p>	<ul style="list-style-type: none"> The Ministry of Mines will distribute the NOC and subsequent Statement of Completion to the MECP-EA Branch, as well as all parties identified in Table 3, once finalized.
<ul style="list-style-type: none"> A member of the public indicated concerns related to the previous timing window proposed for the work (i.e., October 2023) and advised that it is possible that some bats may already be hibernating within the mine at that time. 	<ul style="list-style-type: none"> The rehabilitation activities related to the underground workings will be completed between June 10th and July 10th. Mitigation measures for bats and bat habitat is provided in <i>Section 5.6 – Species at Risk</i>.
<ul style="list-style-type: none"> The Metis Nation of Ontario (MNO) recommended that alternative housing such as bat houses or other mitigations be implicated to compensate for the loss of bat habitat. 	<ul style="list-style-type: none"> Bat boxes/house are used by bats as summer roosts and not as a hibernaculum. Maternity roosting habitat will not be impacted by the proposed rehabilitation activities. In accordance with the ESA regulatory exemption (see Section 6), a mitigation plan will be prepared to mitigate potential impacts to bats. The ministry is committed to utilizing bat friendly options and preserving bat habitat at other abandoned mines sites where it is safe and feasible to do so.
<ul style="list-style-type: none"> The MNO expressed concerns related to the management of invasive species during the completion of the rehabilitation work. 	<ul style="list-style-type: none"> Mitigation measures for invasive species management have been included in <i>Section 5.5 – Ecosystem Protection and Restoration</i>
<ul style="list-style-type: none"> Batchewana First Nations recommended that felled trees remaining at the property be mulched and spread over disturbed areas to promote vegetation growth. 	<ul style="list-style-type: none"> The Ministry will ensure that the procurement documents include the requirement to mulch felled trees.
<ul style="list-style-type: none"> The Ministry of Natural Resources and Forestry confirmed that there are no ANSI, significant wetlands, or other significant environmental features at the project location. They did indicate that there is an unevaluated wetland identified adjacent to the mine hazards and that the subject lands are within Crown land use planning unit G1887 (Wakomata/Tunnel System General Use Area). 	<ul style="list-style-type: none"> No additional environmental effects or mitigation measures identified.

4 Technical Studies

This document has been prepared with relevant findings from technical studies that were used to inform this Class EA. The technical reports have not been appended to this document but may be made available to the public upon request. The technical reports reviewed as part of this Class EA include the following:

- 1) Kilgour & Associates Ltd. 2019. Bat Monitoring at the Gould Copper Mine Site. Dated: December 6, 2019
- 2) Golder Associates Ltd. 2021. Mine Hazard Registry – Gould Mine Site, AMIS Site ID:07872, dated: March 5, 2021.

- 3) Golder Associates Ltd. 2021. Investigation and Rehabilitation Plan, Sault. Ste. Marie – Abandoned Mine Sites. Dated: March 30, 2021.
- 4) WSP Canada Inc. 2023. Stage II Geotechnical Investigation for the Sault Ste. Marie Cluster. Gould Mine Site – AMIS Site ID: 07872. Submitted in draft. Dated: March 2, 2023.

Pertinent information gleaned from the abovementioned reports are summarised in the following subsection.

4.1 2019 Bat Monitoring Report

Kilgour & Associates Ltd. was retained to complete bat acoustic studies at all three openings to surface to determine the use of underground workings as a bat hibernaculum. The survey consisted of acoustic and visual monitoring to confirm species presence and evidence of swarming behaviour. Swarming is a behaviour utilized by bats where they congregate at their hibernacula, typically circling in and around the entrance of the site throughout the night. Observation of swarming behaviour generally indicates that the site is likely to be utilized by bats as a hibernaculum. The survey was completed over ten consecutive nights, between August 22nd and August 31st, 2019.

Acoustic monitoring confirmed the presence of five species of bats in the vicinity of the mine, including: Big Brown Bat (*Eptesicus fuscus*), Silver-haired Bat (*Lasionycteris noctivagans*), Hoary Bat (*Lasiurus cinereus*), Eastern Red Bat (*Lasiurus borealis*) and Little Brown Myotis. Evidence of bats accessing the underground workings was limited to the adit, with individual Little Brown Myotis observed flying in and out of the mine. A total of 62 calls from Little Brown Myotis were recorded at the adit over the ten-night monitoring period, with most of the calls (40 passes or 64% of total calls) captured over two consecutive nights. There were no observations of bats flying in and out of the two raises. The study concluded that although full swarming behaviour was not observed, the underground workings of the mine, particularly the adit, has the potential to be utilized by bats as a hibernaculum.

4.2 2021 Mine Hazard Registry/ Investigation and Rehabilitation Reports

Golder Associates (now WSP Canada Inc.) was retained to complete a Phase 1 preliminary assessment of the Gould Copper Mine site. The objective of the assessment was to provide an understanding of current mine conditions and to identify mine hazards/features that would require rehabilitation. A hazard registry was completed as part of the *Mine Hazard Registry* report that ranked the risks associated with each mine feature. The features with the highest risk rankings included the adit, the two raises to surface, and the mill site foundation. The crown pillars, water tank and two steel barrels containing unknown waste were classified as medium risk.

Based on the results of the mine hazard registry, an *Investigation and Rehabilitation Report* was prepared outlining recommended plan forward for rehabilitation and any data gaps that would require additional investigation. The report recommended that additional investigations be completed to better understand the underground geometry and stability of the crown pillars.

4.3 2023 Stage II Geotechnical Investigation

WSP Canada Inc. was retained to complete a geotechnical drilling investigation to collect rock mass quality parameters and pillar geometrics. The purpose of the assessment was to determine the stability of the crown pillars at the mine and to provide a recommended rehabilitation plan for the hazards. Rock mass quality parameters and stability estimates collected as part of the drilling investigation determined that the crown pillar associated with the adit is not long-term stable and progressive failure of the adit brow and crown pillar have occurred. It was recommended that the adit and adit crown pillar be rehabilitated concurrently using an engineered backfill. The backfill would need to be placed in the void a minimum of 10 m from the adit brow to support the crown pillar and prevent it from unravelling. The recommended rehabilitation strategy for the two raises was to also backfill.

5 Analysis of Environmental Effects and Mitigation Measures

The Ministry of Mines reviewed various information sources and technical reports (see Section 4) to complete an analysis of potential environmental effects associated with the undertaking. An overview of site-specific information, potential environmental effects (both positive and negative) and associated mitigation measures is provided in the following section. The mitigation measures provided are consistent with best management practices and industry standards and have been prepared with input provided during the consultation phase. A summary of all environmental effects and associated mitigation measures is included in Appendix C.

5.1 Planning and Policy

There are no proposed changes to land use associated with the rehabilitation activities and no new infrastructure or development proposed. As such, the proposed rehabilitation activities do not contravene with the land use planning policies outlined in the Growth Plan for Northern Ontario (2011) and the Provincial Policy Statement (2020).

The area will remain Crown land and the use consistent with the land use intent and planning policies for planning unit G1887 Wakomata/ Tunnel System General Use Area. The proposed rehabilitation activities will benefit the commercial tourism and cottaging sector by eliminating dangerous mine hazards and debris in the surrounding environment and thereby making the land safer for users.

Environmental Effects

No negative environmental effects identified related to land use planning and policies are anticipated.

Mitigation Measures

No mitigation measures are anticipated.

5.2 Source Water Protection

The Gould Copper Mine is not situated within a Well Head Protection Area (WHPA), surface water Intake Protection Zone (IPZ), Highly Vulnerable Aquifer (HVA), Significant Groundwater Recharge Area (SGRA), Event—based Modelling Area (EBA), or Issues Contributing Area (ICA).

Environmental Effects

No negative impacts to drinking water quality or quantity are anticipated as a result of the rehabilitation activities.

Mitigation Measures

No mitigation measures are anticipated.

5.3 Climate Change

Normal activities at the mine and surrounding area do not currently contribute to the release of greenhouse gases.

Environmental Effects

The proposed activities are not expected to have a significant effect on climate change. Standard construction equipment will be used to complete the rehabilitation activities and the emission of greenhouse gases from this equipment is expected to be minimal.

The east raise is currently inaccessible by heavy equipment and will be require some tree removal to facilitate the execution of the rehabilitation work. The removal of trees will have negative impacts on carbon sequestration.

Mitigation Measures

The unnecessary idling of construction vehicles will not be permitted during the construction work. The removal of trees will be minimized to the smallest footprint possible. All felled trees will be mulched and spread over disturbed areas. The area will be allowed to revegetate naturally allowing pioneer species to cultivate previously disturbed areas of the land.

5.4 Air Quality, Dust and Noise

Normal activities at the mine and surrounding area do not currently contribute to increased air quality, dust, or noise emissions in the atmosphere. There are no sensitive receptors (e.g., residences) situated within 500 m of the mine. The nearest residential properties are situated approximately 1.2 km east of the mine on Jobammageeshig Lake.

Environmental Effect

Standard construction equipment will be utilized, and the emissions associated with this equipment is expected to be minimal. There is the potential for increased fugitive dust to occur along the mine access road due to the movement of equipment and construction vehicles. The dust will be minimal and limited to the footprint of the road and rehabilitation work area.

Mitigation Measures

Mitigation measures for vehicle emissions have been identified above in *Section 5.3 – Climate Change*. Speed limits will be enforced along the mine access roads to minimize dust emissions and if required, water or a non-chloride dust suppressant will be utilized as needed.

5.5 Ecosystem Protection and Restoration

There are no Areas of Natural or Scientific Interest (ANSI), provincially significant wetlands, provincial parks, conservation reserves, or other environmentally significant areas situated on or adjacent to the mine. It is noted that the underground workings have the potential to provide habitat to Little Brown Myotis, a species currently designated as endangered provincially under the ESA (2007). Additional details regarding impacts to SAR and SAR habitat are provided below in *Section 5.6 – Species at Risk*.

The Gould Copper Mine is situated in a remote area, surrounded by a mix of deciduous and coniferous tree species. Several plant invasive species have previously been observed in the area along Highway 129. The forested habitat surrounding the mine is expected to provide habitat to a variety of terrestrial species and migratory birds. In addition, several herpetofauna have been observed in the area surrounding the mine including the Snapping Turtle and Midland Painted Turtle. Hydrologic features are limited to a small creek east of the adit that empties into Huston Lake, located approximately 80 m south of the mine infrastructure. Additional details related to key hydrologic features is provided in *Section 5.7 – Surface Water*.

Environmental Effects

The proposed rehabilitation activities will require the removal of trees and vegetation to facilitate access to the east raise. This will result in the loss of terrestrial habitat and potential impacts to migratory bird species. In addition, wildlife may be temporarily displaced due to increased noise, vibrations and vehicular traffic associated with rehabilitation work. Increased vehicular traffic may cause injury/mortality to individual animals and domestic waste may unintentionally attract wildlife to the area.

There is the potential to introduce non-native invasive species to the area through the movement of equipment, material, and vehicles.

It is possible for turtles to utilize the mine access road and cleared areas for nesting habitat where suitable substrate is available. Similarly other terrestrial wildlife may be encountered during the completion of the rehabilitation work.

Mitigation Measures

The removal of trees and vegetation will be minimized to the smallest footprint possible and where required, preferentially completed outside of the migratory bird active period which is from approximately mid-April to late- August. If work is completed during the breeding bird season, vegetation proposed for removal will be surveyed by a qualified biologist to confirm the presence/absence of migratory birds or nests. If avian nests are identified, work around the nest will cease and a setback buffer established. All work inside the buffer avoided until the young have fledged and left the area.

All equipment, machinery and vehicles will be brought onto site in a clean condition to prevent the accidental spread of non-native, invasive species.

Any disturbance to wildlife associated with noise, vibration or vehicular traffic will be temporary and limited to the footprint of the mine. Any disturbed areas caused by the rehabilitation work will be allowed to revegetate naturally. It is expected that any displaced wildlife will recolonize the area soon after the completion of the work. The risk of mortality and injury to wildlife will be reduced by enforcing speed limits on mine access roads and the work area will remain free of litter with all waste disposed of in accordance with O. Reg 347/90.

If required, exclusionary fencing will be utilized to deter turtles and other wildlife from entering the work area. The fencing installation and types will be in accordance with the Ministry of Natural Resources and Forestry (MNRF) Best Management Practises for *Reptile and Amphibian Exclusion Fencing* (2021).

5.6 Species at Risk

Bat acoustic studies have confirmed the presence of Little Brown Myotis within the underground workings of the mine, with individual bats observed flying in and out of the adit. Little Brown Myotis are currently listed as endangered provincially and receive both species and habitat protection. The underground workings of the mine are assumed to provide overwintering habitat to the species.

Environmental Effects

The proposed rehabilitation activities will result in the permanent loss of bat SAR overwintering habitat. There is the potential for other terrestrial SAR to enter the project area and be impacted by the proposed work.

Mitigation Measures

The rehabilitation work will be completed in accordance with the regulatory exemption detailed in *Section 23.18 (Threats to health and safety, not imminent)* of O. Reg 242/08 under the ESA (2007). This exemption is applicable for mine decommissioning projects where there is a not imminent risk to human health and safety but potentially serious consequences in the short- or long-term if the activity is not carried out. The work will be completed between June 10th and July 10th, as this is the time when bats are not expected to be hibernating or roosting within the mine. A mitigation plan will be prepared in accordance with Subsection 6 and 7 of Section 23.18 of O. Reg 242/08 and all work completed in accordance with the mitigation plan.

A SAR habitat assessment will be completed prior to the proposed work to identify the presence/absence of other protected species and/or their habitat within the project area. All workers assigned to this project will review the SAR survey to ensure they are aware of potential species that may be encountered and how to identify them. If any SAR are encountered during the rehabilitation activities, work will immediately stop, the MINES Project manager notified, and the MECP consulted as to how to proceed. Applicable regulatory requirements will be adhered to, and mitigation measured implemented to avoid impacting SAR.

5.7 Surface Water

Surface water features in the vicinity of the mine is limited to an intermittent creek situated approximately 20 m east of the adit. The creek transects the mine road and flows in a southerly direction where it empties into Huston Lake, located approximately 80 m south of the mine infrastructure. The creek is intermittent in nature and not expected to support fish and fish habitat. Huston Lake is known to support a wide variety of fish and aquatic species.

Environmental Effects

Heavy equipment will be used and there is a risk of spills that could impact the intermittent creek and downstream Huston Lake. Heavy equipment will be required to cross over the creek to access the adit and two raises, which may result in the resuspension and entrainment of sediment and increase concentration of pollutants in the creek and downstream environment.

Mitigation Measures

A vegetated buffer will be maintained between Huston Lake and the mine. All vehicle and equipment refueling will be completed on an impermeable surface at a minimum of 30 meters away from the creek. An emergency spill kit will be readily available at all times during construction activities and all workers trained on proper use. Should a spill occur, regardless of its severity, it will be the responsibility of the Site Supervisor to ensure that the Ministry of Environment, Conservation and Parks is immediately notified through the Ontario Spill Action Centre (1-800-268-6060). The MINES Project Manager will be immediately notified, and all applicable provincial and federal regulations adhered to.

All equipment will be brought onto site clean, degreased, and free of fluid leaks to mitigate any deleterious substances from entering the creek. Sediment and erosion controls (e.g., erosion control fencing, fabrics, straw) will be used if needed to mitigate erosion of exposed soils to the creek and downstream environment. If water is flowing within the creek at the time of the construction activities, the movement of construction vehicles and equipment over the water will be kept to a minimum and avoided when possible. The installation of a culvert or similar temporary crossing is not proposed, at this time, as the installation and removal of such features may result in even greater disturbance to the landscape and potential changes to the creek flow and existing morphology.

5.8 Groundwater

The nearest potable water well is located approximately 2km east of the mine at the Outpost Lodge property.

Environmental Effects

No negative impacts to groundwater quality or quantity are anticipated as a result of the rehabilitation activities. No groundwater takings or installation of water wells are required to facilitate the work.

Mitigation Measures

No mitigation measures are anticipated.

5.9 Excess Materials and Waste Management

The proposed activities do not require the management of excess soil and, as such *O. Reg 406/19 – On-Site and Excess Soil Management* does not apply. The proposed rehabilitation activities will require the removal of building materials and other debris associated with the historical mine infrastructure.

Environmental Effects

Workers and/or the environment may be exposed to designated substances and/or other hazardous materials during the decommissioning of the mine infrastructure and other rehabilitation work.

Mitigation Measure

A Designated Substance Survey (DSS) will be completed to confirm the presence of eleven designated substances as defined by O. Reg 490/09, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work. All workers assigned to this project will review the DSS survey prior to removing all building material and waste. The handling, management, and disposal of waste material will be completed in accordance with applicable health and safety and environmental legislation. All waste will be disposed of at a licensed facility.

5.10 Contamination and Contaminated Sites

The proposed rehabilitation activities will require the mobilization of clean backfill to rehabilitate the adit and two raises. The backfill will be sourced from local suppliers. There is no known soil, groundwater or surface water contamination associated with the mine hazards proposed for rehabilitation.

Environmental Effects

Although considered low risk, there is the potential for the backfill to introduce contaminants to the environment. Similarly, workers and/or the environment may be exposed to previously unidentified contamination during the work, particularly in the areas where mine debris is remaining.

Mitigation Measures

All backfill material mobilized to site will be transported in clean trucks and will be free of contaminants.

If previously unidentified contamination is identified during the course of the work, the work will immediately stop, and the MINES Project Manager consulted as to how to proceed. Any investigation and/or remedial work will be conducted by an environmental consultant under the supervision of a Qualified Person in a manner consistent with O. Reg 153 and industry standards.

5.11 Servicing, Utilities and Facilities

The mine was historically serviced by an overhead electrical powerline; however, no utilities currently service the property. All electrical transformers associated with the hydro-substation have been removed. No new utility services or facilities are proposed as part of the project. Access

to the mine is provided by an existing access trail off Highway 129. Only minor access improvements will be required to facilitate the mobilization of heavy equipment. The project is not expected to impact major transportation routes.

Environmental Effects

No negative impacts to servicing, utilities and facilities are anticipated as a result of the rehabilitation activities.

Mitigation Measures

No mitigation measures are anticipated.

5.12 Archaeological Resources and Cultural Heritage Landscapes

There are no known archaeological sites within 300 m of the mine. The rehabilitation activities will require some ground disturbance activities, including the placing of fill, removal of vegetation and some minor trail construction. The areas impacted by ground disturbing activities are limited to previously disturbed areas of the mine that have been subject to recent (i.e., post 1960) extensive and intensive disturbances. No below-grade work is anticipated. The mine is not expected to have cultural heritage value or interest. All buildings remaining associated with the mine are in poor integrity, with mostly debris and foundations remaining.

Environmental Effects

No impacts to archaeological resources and cultural heritage landscapes are anticipated.

Mitigation Measure

No mitigation measures are anticipated.

6 Approvals and Permits

The underground workings of the mine are assumed to be utilized by Little Brown Myotis as overwintering habitat. Little Brown Myotis is a species designated as endangered provincially under the ESA (2007) and receives both species (Section 9) and habitat (Section 10) protection. The proposed rehabilitation activities will result in the permanent loss of bat habitat, and therefore contravenes Section 10 (habitat) of the ESA (2007).

The proposed rehabilitation activities will be completed in accordance with the regulatory exemption detailed in Section 23.18 (*Threats to health and safety, not imminent*) of O. Reg 242/08 under the ESA (2007). This exemption applies to activities that are necessary to avoid or reduce a threat to human health or safety in situations where the threat is not imminent but is likely to have serious consequences in the short- or long-term if the activity is not carried out. The types of activities this exemption applies to includes the decommissioning of a mine, as indicated in Subsection 1(3) of Section 23.18 (O. Reg 242/08).

Conditions to be satisfied as part of this exemption includes, but is not limited to, the following:

- 1) Before commencing the activity, MINES will give the Minister notice by submitting a notice of activity form through the Registry;

- 2) While carrying out the activity, MINES will take reasonable steps to minimize the adverse effects of the activity on bat species, such as by avoiding work during a time of year when the bats are likely to be hibernating within the mine.
- 3) A mitigation plan will be prepared, and all work will be completed in accordance with the mitigation plan. The mitigation plan will satisfy the regulatory requirements described in Subsection 6 and 7 of Section 23.18 (O. Reg 242/08) .

No other permits or approvals are required for the project.

7 Monitoring Requirements and Studies

The Project Manager and/or designate will inspect the site periodically during construction activities to confirm that the mitigation measures detailed above are in place and working effectively. The rehabilitation activities will be completed in accordance with O. Reg 240/00 and certified by a professional engineer. Follow-up monitoring is currently not anticipated, and the rehabilitation work proposed is not expected to be impacted by changing climatic conditions.

Two additional studies will be completed prior to initiating the rehabilitation work including the following:

- 1) Species at Risk Habitat Assessment – The purpose of this study is to confirm the presence of additional species at risk and/or their habitat prior to the proposed work.
- 2) Designated Substance Survey (DSS)– A DSS is needed to confirm the presence of eleven designated substances, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work.

8 Construction Overview and Schedule

A species at risk habitat assessment and DSS will be completed prior to initiating the rehabilitation activities. It is anticipated that these studies will be implemented in the late-fall or spring of 2023. The clearing of trees and vegetation to facilitate access to the east raise will preferentially be scheduled outside of the migratory bird period (i.e., prior to April 14th) to mitigate potential impacts to breeding birds. All rehabilitation work affecting the underground workings will be completed between June 10th and July 10th, as this is the time advised by the MECP when bats are least likely to be actively roosting within the mine. It is anticipated that all rehabilitation activities will be completed in the summer of 2024.

An overview of the phases for rehabilitation, estimated duration and, where applicable, recommended timing windows is provided below in Table 6.

Table 6 - Construction Phases and Schedule

Task	Description	Estimated Duration	Recommended Timing Window
1 – Tree/vegetation clearing	Vegetation and tree removal is needed to facilitate access to the east raise.	One day	Prior to April 14 th
2 – Mobilization, mitigations, and site preparation	If required, site access improvements will be completed to ensure construction vehicles can access the work areas. A site laydown area will be established and any required erosion and sediment control measures, fencing or other mitigation measures implemented.	Two days	Not applicable.
2 – Backfilling of the adit and adit crown pillar zone	Backfilling a minimum of 10 m of the adit from the brow with clean granular material. It is estimated that approximately 450 m ³ of backfill is required.	Three days	Between June 10 th and July 10 th
3 – Backfilling of the east and west raise	Backfilling of the raises with a combination of clean backfill and cemented backfill. It is estimated that approximately 25 m ³ of aggregate backfill and 15 m ³ of cemented backfill is needed for the east raise; and 200 m ³ of aggregate backfill and 30 m ³ of cemented backfill for the west raise.	Ten days	Between June 10 th and July 10 th
4- Infrastructure and debris	All building materials and debris associated with the historical mining activities will be removed and disposed in accordance with O. Reg 347/90.	Three days	Not applicable
5 - Site clean-up and demobilization	All equipment, personnel and materials will be demobilized from site.	One-day	Not applicable.

9 Class EA Requirements

This project has been completed in accordance with the Category C review and planning process, as detailed in the MINES Class EA. A summary of how Category C requirements have been met is provided in Table 6 below.

Table 7 – Class EA Requirements

Category B Project Requirement	MINES Class EA Section	Description
Technical Requirements		
Project Description	Section 4.2.1.1	A project description was prepared and included as supporting material on the ERO posting and distributing with consultation letters. A copy of the project description is provided in Appendix B.
Project Documentation	Section 4.2.1.2	This document has been prepared to satisfy the Category C project documentation requirements. All technical information required as part of Class EA has been included within this report.
Consultation Requirements		
Notice of Opportunity to Provide Input	Section 4.2.2.1	A Notice of Opportunity to Provide Input was prepared that satisfies the requirements of the Class EA, as described above in Section 3.1. A copy of the Notice of Opportunity to Provide input is included in Appendix B.
Notice of Completion	Section 4.2.2.2	All parties contacted with as part of the consultation phase were provided this document with a Notice of Completion (NOC) and the opportunity to provide additional comments over a 30-day comment period.
Statement of Completion	Section 4.2.2.3	If no new comments or information that would require the proposed project to be reassigned to a higher category is received following the 30-day comment period, the ministry will issue a Statement of Completion and the rehabilitation activities will proceed as planned.

10 References

- Endangered Species Act., 2007, S.O. 2007, c.6. Available from: <https://www.ontario.ca/laws/statute/07e06> . Accessed: June 2023
- Environmental Registry of Ontario, 2023. Bulletin Notice: Gould Copper Mine Rehabilitation Project. ERO Number: 019-7116. Posted: June 1, 2023. Available from: <https://ero.ontario.ca/notice/019-7116>
- Baldwin, K., L. Allen, S. Basquill, K. Chapman, D. Downing, N. Flynn, W. MacKenzie, M. Major, W. Meades, D. Meidinger, C. Morneau, J-P. Saucier, J. Thorpe and P. Uhlig. 2018. Vegetation Zones of Canada: A biogeoclimatic perspective. Map. Scale 1:5,000,000. Natural Resources Canada, Canadian Forest Service. Sault Ste. Marie, ON.
- Birds Canada. 2023. Ontario Breeding bird Atlas, Nature Counts, Square Summary. Available from: <https://naturecounts.ca/nc/onatlas/squaresummaryform.jsp?squareID=17TLM15>. Accessed July 2023.
- Crins W.J., Gray P.A., Uhlig P.W., and Wester M.C. 2009. The Ecosystems of Ontario, Part 1: Ecozones and Ecoregions. Ontario Ministry of Natural Resources, Peterborough Ontario, Inventory, Monitoring and Assessment. SIB TER IMA TR-01, 71 pp.
- Dobbyn J. 1996. Atlas of the Mammals of Ontario. Federation of Ontario Naturalist, Ontario, Canada. ISBN 1-896059-02-3.
- Golder Associates Ltd. 2021. Mine Hazard Registry – Gould Mine Site, AMIS Site ID:07872, dated: March 5, 2021.
- Golder Associates Ltd. 2021. Investigation and Rehabilitation Plan, Sault. Ste. Marie – Abandoned Mine Sites. Dated: March 30, 2021.
- Kilgour & Associates Ltd. 2019. Bat Monitoring at the Gould Copper Mine Site. Dated: December 6, 2019
- Mining Act, R.S.O. 1990, c. M.14. Available from: <https://www.ontario.ca/laws/statute/90m14> . Accessed: June 2023.
- Ministry of the Environment, Conservation and Parks, 2021. Ontario well records map. Available from: <https://www.ontario.ca/page/map-well-records> . Accessed: July 2023.
- Ministry of Natural Resources and Forestry. 2006. Crown Land Use Policy Atlas Policy Report: G1887: Wakomata/Tunnel System. Available from: https://www.lioapplications.lrc.gov.on.ca/services/CLUPA/xmlReader.aspx?xsl=web-primary.xsl&type=primary&POLICY_IDENT=G1887 . Accessed July 2023.
- Ministry of Natural Resources and Forestry, 2020. Best Management Practise: Reptile and Amphibian Exclusion Fencing. Available from: <https://www.ontario.ca/page/reptile-and-amphibian-exclusion-fencing>. Accessed: June 2023

- Ministry of Natural Resources and Forestry, 2022. Natural Heritage Information Centre (NHIC) Make A Map: Natural Heritage Areas. Available from: https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html?viewer=Natural_Heritage.Natural_Heritage&locale=en-CA . Accessed: July 2023.
- Ministry of Natural Resources and Forestry, 2022b. Fish ON-Line. Available from: <https://www.lioapplications.lrc.gov.on.ca/fishonline/Index.html?viewer=FishONLine.FishONLine&locale=en-CA> . Accessed July 2023.
- Ministry of Natural Resources and Foerstry; 2022c. Crown Land Use Policy Atlas. Available from: <https://www.lioapplications.lrc.gov.on.ca/CLUPA/index.html?viewer=CLUPA.CLUPA&locale=en-CA> . Accessed July 2023.
- Ministry of Natural Resources and Forestry, 2023. Ontario Watershed Information Tool. Available from: <https://www.lioapplications.lrc.gov.on.ca/OWIT/index.html?viewer=OWIT.OWIT&locale=en-CA> . Accessed July 2023.
- Natural Resources Canada (NRCan). 2021. The Atlas of Canada – Toporama Interactive Map. Available from: <https://atlas.gc.ca/toporama/en/index.html> . Accessed: July 2023.
- Ontario Geological Survey (OGS). 2011. 1:250 000 scale bedrock geology of Ontario; Ontario Geological Survey, Miscellaneous Release---Data 126-Revision 1. Available from: <https://www.geologyontario.mndm.gov.on.ca/ogsearch.html>. Accessed: July 2023
- Ontario Ministry of Natural Resources and Forestry (OMNRF). 2016. PP_FRI_FIMv2_Northshore_Forest_680_2013 database. Ontario Ministry of Natural Resources and Forestry, Sault Ste. Marie, ON.
- Ontario Ministry of Norther Development and Mines, 2012. A Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the Mining Act. Amended February 28, 2018. Available at: [https://www.geologyontario.mndm.gov.on.ca/mines/lands/class-
ea/class_ea_approved_minor_amendments.pdf](https://www.geologyontario.mndm.gov.on.ca/mines/lands/class-
ea/class_ea_approved_minor_amendments.pdf)
- Ontario Nature, 2020. Ontario Reptile and Amphibian Atlas: a citizen science project to map the distribution of Ontario's reptiles and amphibians. Ontario Nature, Ontario. Available: <https://www.ontarioinsects.org/herp> . Accessed: July 2023
- Ontario Regulation 240/00. Mine Rehabilitation Code, s.4. Available from: <https://www.ontario.ca/laws/regulation/000240#BK2> . Accessed: June 2023
- Ontario Regulation 242/08. Threats to health and safety- non imminent, s. 23.18. Available from: <https://www.ontario.ca/laws/regulation/080242#BK44> . Accessed: June 2023
- Rowe, J.S. 1972. Forest regions of Canada. Department of the Environment, Canadian Forestry Service, Ottawa, ON. Publication No. 1300. 172 p. + map.

Wester M.C., Henson B.L., Crins W.J., Uhlig P.W.C., and Gray P.A. 2018. The Ecosystems of Ontario, part 2: Ecodistricts. Ontario Ministry of Natural Resources and Forestry, Science and Research Branch, Peterborough, ON. Science and Research Technical Report TR-26. 474 p

WSP Canada Inc. 2023. Stage II Geotechnical Investigation for the Sault Ste. Marie Cluster. Gould Mine Site – AMIS Site ID: 07872. Submitted in draft. Dated: March 2, 2023.

Appendix A – Project Screening

Part 1 Screening Criteria

AMIS #: 07872

Site: Gould Copper

Question		Yes	No	Comments
1	Is the decision related to a section of the <i>Mining Act</i> listed in Table 4 (Pre-screened Discretionary Activities)?		X	If yes, no further screening is required – Category A (see Section 3.2.1); if no, proceed to question 2.
2	Is the decision related to <i>emergency</i> measures being undertaken by MNDM?		X	If yes, no further screening is required – Category A (see Section 7.4); if no, proceed to question 3.
3	Is the decision related to the <i>maintenance of a mine hazard(s)</i> on Crown land?	X		If yes, no further screening is required – Category A (see Section 3.2.1); if no, proceed to question 4.
4	Is the decision related to an issuance of a <i>surface rights only lease</i> (Section 84. (1) of the <i>Mining Act</i>)?			If yes, proceed to question 5; if no, proceed to Part 2 screening criteria (Section 3.1.1.3).
5	Is the proposed <i>surface rights only lease</i> located within the applicant's existing <i>mining rights lease</i> ?			If yes, no further screening is required – Category A (Section 3.2.1); if no, proceed to Part 2 screening criteria (Section 3.1.1.3).

Class EA Part 2 Screening Criteria

Project Name:

Gould Copper Mine Rehabilitation Project (AMIS #07872)

Location:

Gould Township, Algoma District

Project Description:

The Gould Copper Mine (AMIS # 07872) is a former high grade, low tonnage copper mine that operated from 1969 to 1976. The mine is situated in Gould Township, approximately 70 km east of Sault Ste. Marie and 45 km north of Thessalon, Ontario. The property is accessed via a narrow access road west of Highway 129. The mine features two raises to surface, an adit, a tailings management area, and the remnants of mine infrastructure (i.e. mill foundation, water tank, hydro substation). Acoustic and visual surveys completed in 2019 have confirmed the presence of Little Brown Myotis (*Myotis lucifugus*), with individual bats observed flying in and out of the adit. Little Brown Myotis are a species listed as endangered provincially under the Endangered Species Act (ESA 2007). It is assumed that the underground workings serve as a hibernaculum to bats.

The objective of the project is to rehabilitate the mine hazards at the Gould Copper Mine property to eliminate the risk to the public and the environment. A geotechnical investigation completed by WSP Canada Inc. in 2022 concluded that the crown pillar associated with the adit zone is not long-term stable and, as a result, bat-friendly rehabilitation measures (i.e., stainless steel gate) are not feasible as it would not address the long-term stability of the adit crown pillar zone. The proposed rehabilitation approach for the adit is to backfill a minimum of 10 m of the adit from the brow to support the crown pillar and prevent it from unravelling. The backfill will additionally eliminate safety concerns related to access by the public. Other mine hazards to be addressed as part of the rehabilitation work includes two raises to surface and the remnants of various mine infrastructure. The preferred rehabilitation strategy for the two raises is to backfill to 5 m below the raise collar and fill the remaining 5 m with reinforced concrete. Mine infrastructure to be decommissioned includes a hydro substation, mill site foundations, a water tank, and two steel barrels. Disturbed areas will be backfilled and landscaped, as required, and allowed to revegetate naturally to match surrounding habitat.

It is anticipated that minor vegetation clearing, and grading of existing mine roads will be needed to facilitate the access of heavy equipment to the the adit, west raise and remaining mine infrastructure. The east raise is currently inaccessible by heavy equipment and additional improvements will be needed to allow the execution of the rehabilitation work. The boundary of the project area will be defined by the mine access road and area surrounding the mine hazards.

Proposed Category: Category B **Category C** Category D Individual EA**Rationale / Comments:**

The undertaking will result in negative effects to bat species at risk habitat that cannot be readily mitigated using standard measures. The underground workings are utilized by bats as a hibernaculum, with access in and out of the mine provided by the mine adit. The adit will be backfilled as part of the rehabilitation activities to support the crown pillar and prevent it from unravelling. This will result in the loss of bat habitat.

Screened by:

Michaela Haring

Date:

April 4, 2023

Approved by:

Date:

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
1. Physical Environment										
Protected areas / Areas of Natural and Scientific Interest (ANSIs) (overlapping or adjacent)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	According to the NHIC Map, there are no protected areas or ANSIs, Conservation Reserved, Significant Wetlands, or Environmentally Significant areas located on or adjacent to the site.	No environmental effects identified.
Proximate First Nation Reserves/ Aboriginal Communities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The project is located within what Ontario understands to be the traditional land use area of Thessalon First Nations and Mississauga #8 First Nation. The proposed has the potential to disrupt traditional activities including hunting, trapping, gathering and other traditional cultural activities. The project is also within the geographic vicinity of the Historic Sault Ste. Marie Metis Community, however no known historical harvesting activity in area.	Consultation with communities will be ongoing during the rehabilitation work.
Noise limits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	There are no sensitive receptors (e.g residences) situated within 500 m of the site. The nearest residential property is located approximately 1.2 km east of the site on Jobammageeshig Lake.	No environmental effects identified.

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									Potential environmental effects to terrestrial wildlife associated with construction noise is detailed below in <i>Section 2 - Biological Environment</i> .	
Vibration limits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	There are no sensitive receptors (e.g residences) situated within 500 m of the site. The nearest residential property is located approximately 1.2 km east of the site on Jobammageeshig Lake. Potential environmental effects to terrestrial wildlife associated with vibrations is detailed below in <i>Section 2 - Biological Environment</i> .	No environmental effects identified.
Views / aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	The proposed rehabilitation activities are expected to improve the overall aesthetic of the site.	No mitigation measures required.
Climate Change	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	Standard construction equipment will be utilized and the emission of greenhouse gases from this equipment is expected to be minimal and consistent with the use of similar equipment for short-term projects. The proposed rehabilitation activities are not expected to have a significant effect on climate change.	No environmental effects identified.
Additional Information/Comments:										
<ul style="list-style-type: none"> All negative environmental effects for physical environment criteria can be mitigated using standard measures. 										

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
2. Biological Environment										
Fish and other aquatic species or habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	The nearest surface water feature is Huston Lake located approximately 80 m south of the property. A vegetated buffer will be maintained between the mine property and waterbody during the rehabilitation work.	No environmental effects identified.
Terrestrial species or habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The mine property is situated in a remote area, surrounded by deciduous and coniferous tree species. The removal of trees/vegetation may be required to facilitate the access of construction vehicles and equipment.</p> <p>The forested areas surrounding the mine is expected to provide habitat to several terrestrial species. Wildlife may be temporarily displaced due to increased noise levels, vibrations and vehicular traffic associated with the rehabilitation work.</p> <p>Wildlife-vehicle collisions may cause injury/mortality to individual animals. Domestic waste generated may unintentionally attract wildlife to the work area.</p>	<p>Tree removal will be kept to a minimum and, where required, will be completed outside of the migratory bird active period, which is from approximately mid-April to late- August.</p> <p>Any disturbances to wildlife will be temporary and limited to the footprint of the mine. Disturbed areas will be rehabilitated to match surrounding landscapes to facilitate the recolonization of terrestrial wildlife.</p> <p>The risk of mortality and injury to wildlife will be reduced by enforcing speed limits on access roads. The work area will remain free of litter and all waste disposed of in accordance O.Reg 347.</p>

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									<p>The NHIC Map and The Ontario Reptile Amphibian Atlas identifies a previous occurrence of Midland Painted Turtle (<i>Chrysemys picta marginata</i>) and Snapping Turtle (<i>Chelydra serpentina</i>) adjacent to the mine. Turtles and other wildlife may be encountered during the rehabilitation work. It is possible that turtles may utilize the property for nesting where suitable substrate is available.</p>	<p>Exclusionary fencing will be utilized as needed to deter turtles and other wildlife from entering the work area. The fencing installation and types will be in accordance with the MNR Best Management Practices for <i>Reptile and Amphibian Exclusion Fencing</i>.</p>
Endangered Species / Species at risk or habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Bat acoustics studies were completed at all three openings to surface by Kilgour & Associates Ltd. in 2019. The surveys confirmed the presence of Little Brown Myotis (<i>Myotis lucifugus</i>). Little Brown Myotis were the second most recorded species and the only species visually observed flying in and out of the mine adit. It is assumed that the underground workings are utilized by bats as a winter hibernaculum or summer roost. Due to the stability of the adit crown pillar, bat friendly rehabilitation measures are not feasible and as such the proposed rehabilitation activities will negatively affect the ability for bats to access the underground workings.</p>	<p>The MECP will be consulted to confirm permitting requirements under Section 17 of the <i>Endangered Species Act</i> (ESA 2007). All permits will be obtained prior to mobilizing equipment and personnel to the mine.</p> <p>Mitigation measures for turtles are provided above in <i>Terrestrial Species or Habitat</i>.</p> <p>A <i>SAR Habitat Assessment</i> will be completed to confirm the presence/absence of other protected species and/or their habitat within the project area. If any SAR are encountered, work will immediately stop and the</p>

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									The NHIC Map identifies a previous occurrence of Midland Painted Turtle and Yellow- banded Bumble Bee (<i>Bombus terricola</i>) adjacent to the mine. Similarly, the Ontario Reptile and Amphibian Atlas identifies a previous occurrence of Snapping Turtles. The reptile and insect species are currently listed as Special Concern under the <i>Endanegred Species Act</i> (ESA 2007). Project activities are not expected to impact the abovementioned species.	MECP consulted as to how to proceed. Applicable regulatory requirements will be adhered to, and mitigation measured implemented to avoid impacting SAR.
Migratory bird species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The mine is surrounding by a mix of deciduous and coniferous tree species that is likely to provide habitat to migratory birds. Removal of trees/vegetation will be required to facilitate the access of vehicles and equipment.	Vegetation clearing will be completed outside of the migratory bird period. If work is completed during the breeding bird season, vegetation proposed for removal will be surveyed by a qualified individual to confirm the presence/absence of migratory birds or nests. If avian nests are identified, work around the nest will cease and a setback buffer established. All work inside the buffer avoided until the young have fledged and left the area.
Ground water quality/ quantity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	The proposed rehabilitation activities are not expected to result in the long-or short-term deterioration of groundwater quality or quantity.	No environmental effects identified.

Part 2 Screening Criteria	Potential Net Environmental Effects							Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects	
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes			No
Surface water - quality/ quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>The nearest surface water feature is Huston Lake located approximately 80 m south of the property. Forested land separates Huston Lake from the mine property.</p> <p>There is the potential to negatively impact surrounding water features through sills and sedimentation.</p>	<p>The vegetated buffer will be maintained between the mine property and waterbody during the rehabilitation work.</p> <p>An emergency spill kit will be readily available at all times during construction activities and all workers trained on proper use. Should a spill occur, regardless of its severity, the Ministry of Environment, Conservation and Parks will be immediately notified through the Ontario Spill Action Centre (1-800-268-6060).</p>
Soils - contaminants, sedimentation, erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>There is the potential to negatively impact soil quality through spills and sedimentation.</p>	<p>Mitigation measures for spills have been identified above in <i>Surface Water – Quality/Quantity</i>.</p>
Wells / drinking water sources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	<p>According to the MECP Well Records Interactive Map (2021), the nearest potable water well is located approximately 2km east of the mine at the Outpost Lodge property. The proposed rehabilitation activities are not expected to have an effect on the well or other drinking water sources.</p>	<p>No environmental effects identified.</p>
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Standard construction equipment will be utilized, and the emissions</p>	<p>Speed limits will be enforced along the mine access roads to minimize dust emissions. If</p>

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									<p>associated with this equipment is expected to be minimal.</p> <p>There is the potential for increased fugitive dust to occur along the mine access road due to the movement of equipment and vehicles. The dust will be minimal and limited to the footprint of the road and rehabilitation work area.</p>	<p>required, water or an approved dust suppressant will be utilized as needed.</p>
Designated Substances, Hazardous Materials and Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Workers and/or the environment may be exposed to designated substances and/or other hazardous materials during the decommissioning of mine infrastructure and other rehabilitation work.</p>	<p>A designated substance survey will be completed to confirm the presence of eleven designated substances as defined by O.Reg 490/09, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work.</p>

Part 2 Screening Criteria	Potential Net Environmental Effects									Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?				
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No			
Additional Information/Comments:											
<ul style="list-style-type: none"> Bat acoustics and visual surveys suggest that Little Brown Myotis (<i>Myotis lucifugus</i>) likely utilize the underground workings as a hibernaculum, with access in and out of the mine provided by the mine adit. Bat-friendly rehabilitation measures (i.e., stainless steel gate) are not feasible as it would not address the long-term stability of the adit crown pillar zone. As such, the proposed rehabilitation activities will result in the loss of bat habitat and negatively affect the ability for bats to access the underground workings in the future. A species at risk habitat assessment will be completed to confirm the presence/absence of other protected species and/or their habitat prior to the proposed work. A designated substance survey is required to confirm the presence of eleven designated substances as defined by O.Reg 490/09, as well as other hazardous materials that may require special handling or management during the decommissioning of remaining mine infrastructure. All other negative environmental effects for biological environment criteria can be mitigated using standard measures. 											
3. Built / Structural Environment											
Infrastructure (roads, powerlines, pipelines, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	N/A	There are no utilities currently servicing the property and no new servicing proposed as part of the rehabilitation work. Access to the mine is provided by an access trail off Highway 129. Access improvements will be required to facilitate the mobilization of heavy equipment.	No environmental effects identified.
Navigation routes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	N/A	The mine is not situated directly adjacent to major transportation routes. There is the potential for increased vehicular traffic along Highway 129 associated with the mobilization of equipment and backfill. However, the work is not expected to have an impact on navigation routes.	No environmental effects identified.

Part 2 Screening Criteria	Potential Net Environmental Effects									Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?				
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No			
Seasonal or permanent residences	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	N/A	There are no seasonal or residential properties situated within 500 m of the site. The nearest residential property is located approximately 1.2 km east of the site on Jobammageeshig Lake.	No environmental effects identified.
Natural or human-made hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	The mine Gould Copper mine is frequented by the public, with a geocache location identified at the adit brow. The proposed activities will eliminate safety concerns associated with the mine hazards.	No mitigation measures required.
Other projects or activities (adjacent)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	N/A	The mine overlaps with Unpatented mining claims 683801 and 726824. There are no known exploration activities currently occurring on or adjacent to the property.	No environmental effects identified.
Additional Information / comments:											
<ul style="list-style-type: none"> All negative environmental effects for built/structural environment criteria can be mitigated using standard measures. 											
4. Social / Economic / Cultural Environment¹											
Archaeological resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	N/A	There are no know archaeological sites within 300 m of the mine. The rehabilitation activities will require some ground disturbance including the placing of fill, removing of vegetation	If any previously unidentified archaeological features are identified during the rehabilitation activities, work must stop immediately and The Ministry of

¹ Completed in accordance with the screening checklists provided in Schedule A (Screening for Built Heritage resources and Cultural heritage Landscapes) and Schedule B (Screening for Archaeological Resources) in the document *A Class Environmental Assessment for Activities of the Ministry of Northern Development of Mines under the Mining Act*.

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									and trail construction. The areas impacted by ground disturbing activities are limited to previously disturbed areas of the site that have been subject to recent (i.e. post 1960) extensive and intensive disturbances.	Tourism, Culture and Sport contacted to determine appropriate next steps.
Built heritage resources / cultural heritage landscapes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	There are no known built heritage resources/ cultural heritage landscapes on the property. The proposed rehabilitation activities will require the decommissioning of remaining infrastructure. The integrity of the buildings is poor, with mostly debris and foundations remaining.	There is low potential for impacts to cultural heritage resources.
Agricultural or forestry uses	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	According to the NHIC Map, the mine is not considered prime agricultural land. The mine is located within the Northshore Forest Management Unit. According to the FMP Summary Map (2020-2030), the mine is located within a regular harvest area. The proposed rehabilitation activities are not expected to impact ongoing and future forestry operations.	No effects identified.
Site(s) of Aboriginal cultural significance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	The project is located within what Ontario understands to be the traditional land use area of Thessalon First Nations and Mississauga #8 First Nation. There are no known sites of	No effects identified

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									cultural significance located on or adjacent to the project area.	
Recreational uses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	There is a known geocache location at the adit brow that is frequented by the public. The proposed activities will eliminate safety concerns associated with the adit and eliminate potential risks to recreational users.	No mitigation measures required.
Tourism uses	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	The property as no known tourism uses. The proposed work is not expected to impact surrounding tourism activities.	No effects identified.
Industrial uses	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	The mine has been abandoned since 1976. The property has no industrial use.	No effects identified.
Local / regional economies or businesses	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	The rehabilitation activities will require the use of local resources, equipment, and labour.	No mitigation measures required.
Public health and safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	The proposed activities will eliminate safety concerns associated with the mine hazards.	No effects identified.
First Nation land claims	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A	N/A	N/A	N/A	N/A	Thessalon First Nation has a boundary claim which asserts that the boundaries of the reserve surveyed for the First Nation under the Robinson-Huron Treaty 1850 differ from what the First Nation was entitled to receive. Negotiations between Thessalon First Nation and Ontario began in July 2016.	The project is located within what Ontario already understands to be the traditional land use area of Thessalon First Nations. Consultation with the community will be ongoing during the rehabilitation work.

Part 2 Screening Criteria	Potential Net Environmental Effects								Description of Positive, Negative or Unknown Effect	Description of Mitigation Measures / Studies Required to Address Negative or Unknown Effects
	Is there a potential environmental effect?			Is the known effect positive or negative?			Can the effect be mitigated using standard measures?			
	Yes	No	Unk.	Pos.	Neg.	Unk.	Yes	No		
									The negotiations have been on hold since September 2020 and is now in active litigation.	
Additional Information / comments: <ul style="list-style-type: none"> All negative effects for social/economic/cultural environment criteria can be mitigated using standard measures. 										

Appendix B – Notice of Opportunity to Provide Input and Project Description

Notice of Opportunity to Provide Input on a Category C Project

Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the Mining Act

Gould Copper Mine Rehabilitation Project

The Ministry of Mines (MINES) invites you to comment on the Gould Copper Mine Rehabilitation Project, located in Gould Township, approximately 70 km east of Sault Ste. Marie and 45 km north of Thessalon, Ontario. The project location is provided below on Figure 1.

The objective of the project is to rehabilitate the mine hazards at the Gould Copper Mine to eliminate the risk to the public and the environment. The mine hazards to be addressed includes: two raises to surface, an adit, crown pillar, and the remnants of infrastructure. Bat acoustics studies have confirmed the presence of bat species at risk, with individual bats observed flying in and out of the mine adit. The underground workings are assumed to be utilized by bats as a hibernaculum. A geotechnical investigation has determined that the crown pillar associated with the adit is not long-term stable and, as a result, bat-friendly rehabilitation measures (e.g., stainless steel gates) are not feasible as it would not address the long-term stability of the adit crown pillar. The proposed rehabilitation approach for the adit is to backfill to support the crown pillar and prevent it from unravelling. The backfill will also permanently prevent access to the adit by the public but will result in the permanent loss of bat habitat.

The rehabilitation strategy for the two raises is to backfill using a combination of cemented and uncemented material to maintain long-term stability. Mine infrastructure to be decommissioned includes a hydro substation, mill site foundations, a water tank, and two steel barrels. Disturbed areas will be backfilled and landscaped, as required, and allowed to revegetate naturally to match surrounding habitat.

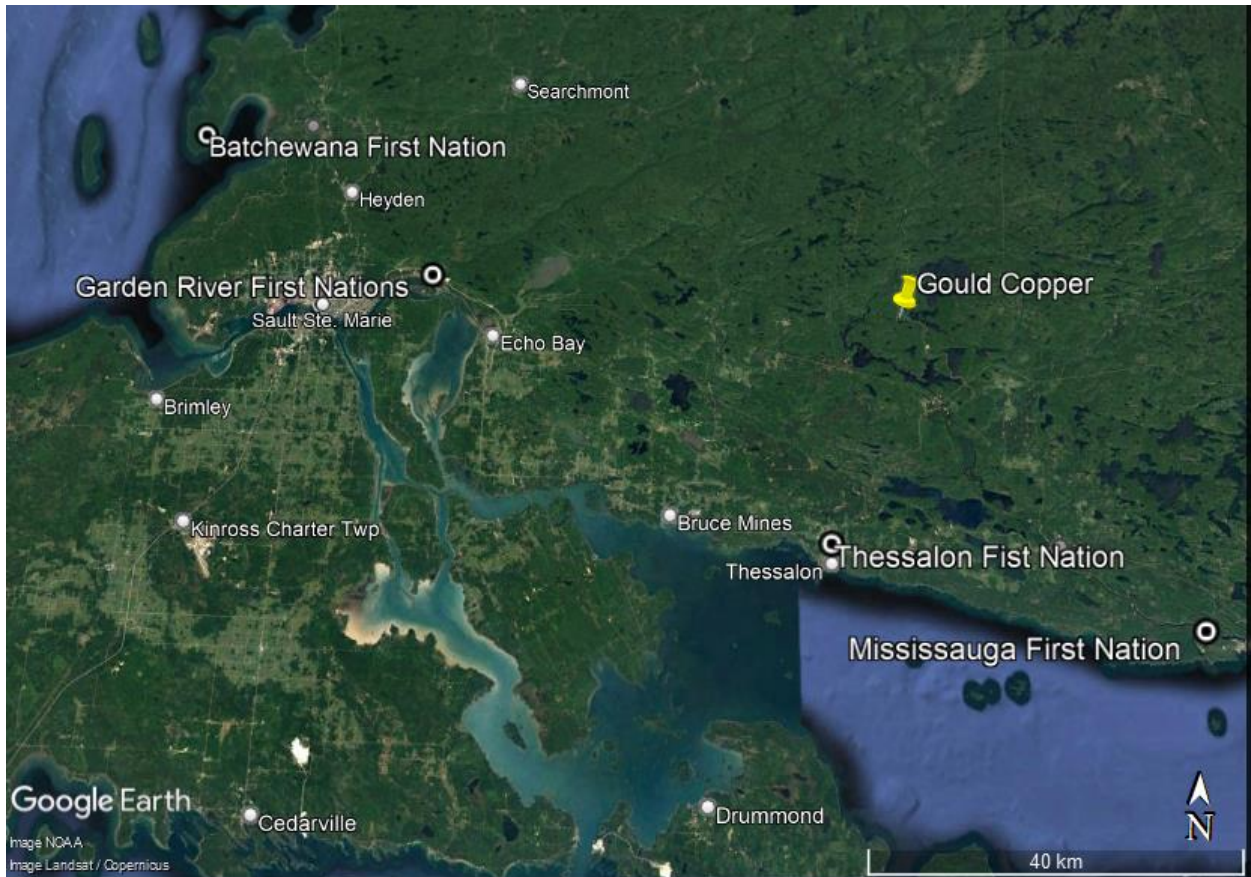
This proposed Category C project is being carried out in accordance with the *Class Environmental Assessment for Ministry of Northern Development and Mines Activities under the Mining Act* (Class EA). You are invited to provide input and express any concerns about this proposed project. Comments must be received by **July 3, 2023**. For more information, or to submit comments on the project, please contact:

Michaela Haring
Environmental Planner
933 Ramsey Lake Road
Sudbury, ON P3E 6B5
Ph: 249- 885- 3631
Michaela.Haring2@Ontario.ca

Please note that personal information provided in a submission (such as name, address, and telephone number) and your views and opinions are being collected by

MINES under the authority of the *Environmental Assessment Act* for the purpose of engaging in public consultation and making decisions regarding the project. The personal information may also be shared with the Environmental Approvals Branch of the Ministry of the Environment, Conservations and Parks. The collection, use, and disclosure of this information are all governed by the *Freedom of Information and Protection of Privacy Act*. Questions about the collection of this information should be directed to the contact listed above.

Figure 1: Project Location



Project Description: Gould Mine Rehabilitation Project

BACKGROUND

The Gould Copper Mine (AMIS # 07872) is a former high grade, low tonnage copper mine that operated from 1969 to 1976. The mine is situated in Gould Township, approximately 70 km east of Sault Ste. Marie and 45 km north of Thessalon, Ontario. The property is accessed via a narrow access trail west of Highway 129. The mine features two raises to surface, an adit, a crown pillar, a tailings management area, and the remnants of mine infrastructure (i.e. mill foundation, water tank, hydro substation). The location of the mine is illustrated below on Figure 1.

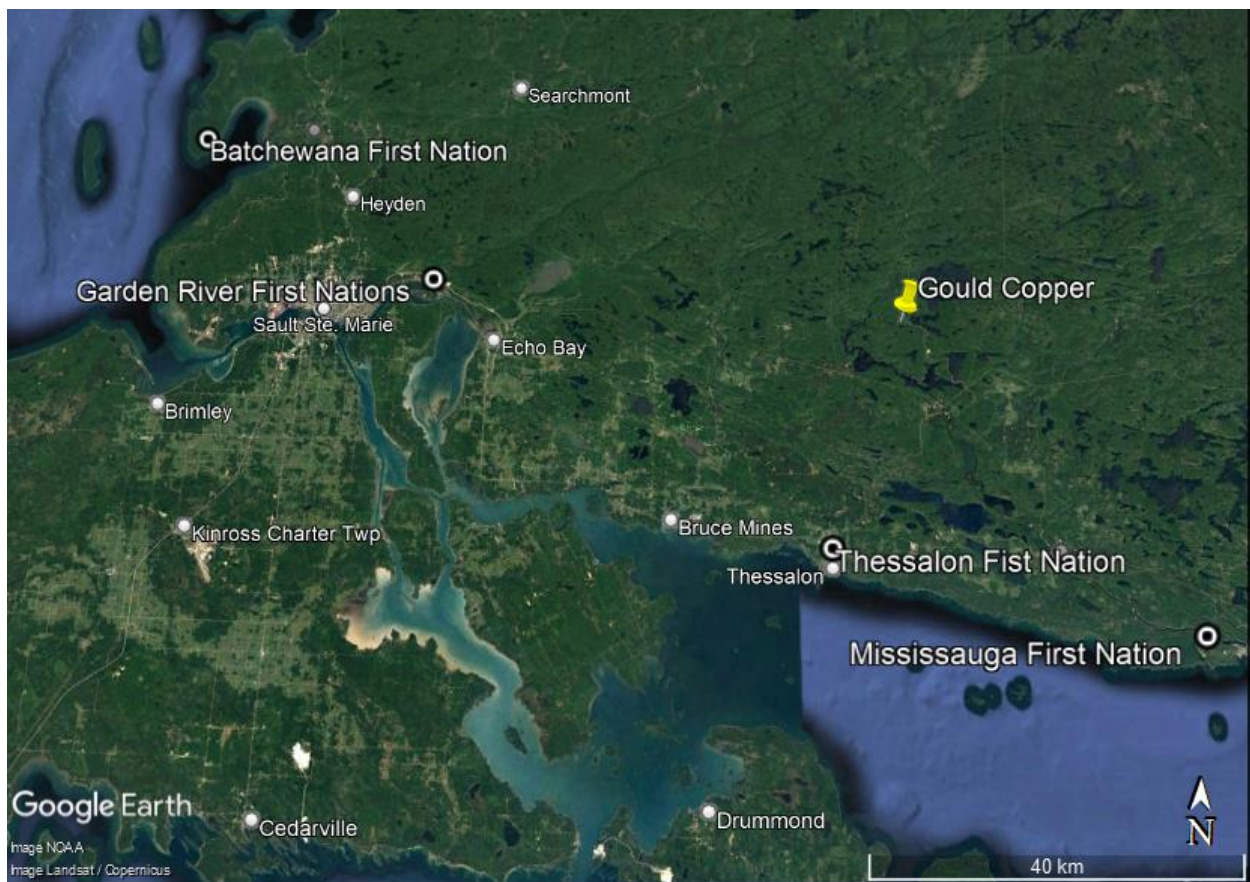


Figure 1 – Site location plan.

A bat acoustic study was completed for the Gould Copper Mine by Kilgour & Associates in 2019. The objective of the study was to confirm the presence/absence of bat species at risk and to determine if the underground workings were being used by bats as a hibernaculum. Visual and acoustic surveys were completed at each of the mine openings (i.e. two raises and one adit) over ten days in late-August. The surveys confirmed the presence of bat species at risk, with individual

bats visually observed flying in and out of the adit. Although swarming behaviour was not observed, the study concluded that the mine may be utilized by bats as a hibernaculum.

REHABILITATION ACTIVITIES

The purpose of the project is to rehabilitate the mine hazards at the Gould Copper Mine property to eliminate the risk to the public and the environment. To assist with determining the preferred rehabilitation strategy, a geotechnical drilling investigation was completed by WSP Canada Inc. in 2022 to determine the long-term stability of the crown pillars and conditions of the openings to surface remaining at the site. A crown pillar is defined as the rock mass that remains between the underground workings and the ground surface. Rock mass quality parameters and stability estimates collected as part of the geotechnical investigation concluded that the crown pillar associated with the adit zone is not long-term stable and progressive failure of the adit brow and crown pillar have occurred. As a result, bat-friendly rehabilitation measures (i.e., stainless steel gate) are not feasible as it would not address the long-term stability of the adit crown pillar zone. The proposed rehabilitation approach for the adit is to backfill a minimum of 10 m of the adit from the brow to support the crown pillar and prevent it from unravelling. The backfill will also be used as the rehabilitation measure to permanently prevent access to the adit.

Other mine hazards to be addressed as part of the rehabilitation work includes two raises to surface and the remnants of various mine infrastructure. The location of all mine hazards on the property are illustrated below on Figure 2. The preferred rehabilitation strategy for the two raises is to backfill using a combination of cemented and uncemented material to maintain long-term stability. Mine infrastructure to be decommissioned as part of the rehabilitation work includes a hydro substation, mill site foundations, a water tank, and two steel barrels. Disturbed areas will be backfilled and landscaped, as required, and allowed to revegetate naturally to match surrounding habitat.



Figure 2 – Location of mine hazards at Gould Copper Mine property. The boundary of the project area is defined by the mine access road and area surrounding the mine hazards.

Some access improvements have been completed as part of previous investigation work along the main access road and to the adit. It is anticipated that only minor vegetation clearing, and grading of existing mine roads will be needed to facilitate the access of heavy equipment to the the adit, west raise and remaining infrastructure. The east raise is currently inaccessible by heavy equipment and additional improvements will be needed to allow the execution of the rehabilitation work. The boundary of the project area is defined by the mine access road and area surrounding the mine hazards.

CLASS EA SCREENING

The proposed rehabilitation activities are subject to The Ministry of Mines Class Environmental Assessment (EA) Process. Considering that the rehabilitation work will negatively impact habitat of bat species at risk, the undertaking has been screened as a Category C in accordance with the requirements of the *Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the Mining Act* (amended 2018).

ENVIRONMENTAL EFFECTS AND PROPOSED MITIGATION MEASURES

The Ministry of Mines is seeking input on the undertaking and proposed mitigation measures. Several environmental effects associated with the undertaking have been identified during the

Class EA screening process. A summary of negative environmental effects and proposed mitigation measures are provided below in Table 1.

Environmental Effect	Description	Proposed Mitigation Measure
Terrestrial Species or Habitat	<p>The mine property is situated in a remote area, surrounded by deciduous and coniferous tree species. The removal of trees/vegetation will be required to facilitate the access of construction vehicles and equipment.</p> <p>The forested areas surrounding the mine is expected to provide habitat to several terrestrial species. Wildlife may be temporarily displaced due to increased noise levels, vibrations and vehicular traffic associated with the rehabilitation work.</p> <p>Wildlife-vehicle collisions may cause injury/mortality to individual animals. Domestic waste generated may unintentionally attract wildlife to the work area.</p> <p>The NHIC Map and The Ontario Reptile Amphibian Atlas identifies a previous occurrence of Midland Painted Turtle (<i>Chrysemys picta marginata</i>) and Snapping Turtle (<i>Chelydra serpentina</i>) adjacent to the mine. Turtles and other wildlife may be encountered during the rehabilitation work. It is possible that turtles may utilize the property for nesting where suitable substrate is available.</p>	<p>Tree removal will be kept to a minimum and, where required, will be completed outside of the migratory bird active period, which is from approximately mid-April to late-August.</p> <p>Any disturbances to wildlife will be temporary and limited to the footprint of the mine. Disturbed areas will be rehabilitated to match surrounding landscapes to facilitate the recolonization of terrestrial wildlife.</p> <p>The risk of mortality and injury to wildlife will be reduced by enforcing speed limits on access roads. The work area will remain free of litter and all waste disposed of in accordance O.Reg 347.</p> <p>Exclusionary fencing will be utilized as needed to deter turtles and other wildlife from entering the work area. The fencing installation and types will be in accordance with the Ministry of Natural Resources and Forestry (MNRF) <i>Best Management Practices for Reptile and Amphibian Exclusion Fencing</i>.</p>
Endangered Species / Species at risk or habitat	<p>Bat acoustics studies completed in 2019 confirmed the presence of bat species at risk. It is assumed that the underground workings are utilized by bats as a winter hibernaculum. Due to the stability of the adit crown pillar, bat friendly rehabilitation measures are not feasible. The proposed rehabilitation activities will negatively affect the ability for bats to access the underground workings.</p>	<p>The Ministry of Environment, Conservation and Parks will be consulted to confirm permitting requirements under the <i>Endangered Species Act</i> (ESA 2007). All permits will be obtained prior to mobilizing equipment and personnel to the mine.</p> <p>Mitigation measures for turtles are provided above in <i>Terrestrial Species or Habitat</i>.</p> <p>A Species at Risk (SAR) Survey will be completed to confirm the presence of other protected species and/or their</p>

	<p>The NHIC Map identifies a previous occurrence of Midland Painted Turtle and Yellow-banded Bumble Bee (<i>Bombus terricola</i>) adjacent to the mine. Similarly, the Ontario Reptile and Amphibian Atlas identifies a previous occurrence of Snapping Turtles. The reptile and insect species are currently listed as Special Concern under the <i>Endangered Species Act</i> (ESA 2007). Project activities are not expected to impact the abovementioned species.</p>	<p>habitat prior to the proposed work. The report will be reviewed by all workers assigned to this project to ensure they are aware of potential SAR that may be encountered and how to identify the species.</p> <p>If any SAR are encountered, work will immediately stop and the MECP consulted as to how to proceed. Applicable regulatory requirements will be adhered to, and mitigation measures implemented to avoid impacting SAR.</p>
<p>Migratory bird species and migratory bird habitat</p>	<p>The mine is surrounded by a mix of deciduous and coniferous tree species that is likely to provide habitat to migratory birds. Removal of trees/vegetation will be required to facilitate the access of vehicles and equipment.</p>	<p>Vegetation clearing will be completed outside of the migratory bird period. If work is completed during the breeding bird season, vegetation proposed for removal will be surveyed by a qualified individual to confirm the presence/absence of migratory birds or nests. If avian nests are identified, work around the nest will cease and a setback buffer established. All work inside the buffer avoided until the young have fledged and left the area.</p>
<p>Surface water quality/quantity and Soils - contaminants, sedimentation, erosion.</p>	<p>The nearest surface water feature is Huston Lake located approximately 80 m south of the property. Forested land separates Huston Lake from the mine.</p> <p>There is the potential to negatively impact surrounding water features and soil quality through sills and sedimentation.</p>	<p>The vegetated buffer will be maintained between the mine property and waterbody during the rehabilitation work.</p> <p>An emergency spill kit will be readily available during rehabilitation activities and all workers trained on proper use. Should a spill occur, regardless of its severity, the Ministry of Environment, Conservation and Parks will be immediately notified through the Ontario Spill Action Centre (1-800-268-6060).</p>
<p>Air Quality</p>	<p>Standard construction equipment will be utilized, and the emissions associated with this equipment is expected to be minimal.</p> <p>There is the potential for increased fugitive dust to occur along the mine access road due to the movement of equipment and vehicles. The dust will be minimal and limited to the footprint of the road and rehabilitation work area.</p>	<p>Speed limits will be enforced along the mine access roads to minimize dust emissions. If required, water or an approved dust suppressant will be utilized as needed.</p>

Designated Substances, Hazardous Materials and Waste	Workers and/or the environment may be exposed to designated substances and/or hazardous materials during the decommissioning of mine infrastructure and other rehabilitation work.	A designated substance survey will be completed to confirm the presence of eleven designated substances as defined by O.Reg 490/09.
--	--	---

NEXT STEPS

The Ministry of Mines will consult with the Ministry of Environment, Conservation and Parks (MECP) Species at Risk Branch to confirm permitting requirements under the ESA (2007). All permits and/or approvals will be obtained prior to initiating the rehabilitation work.

Site access improvements will be completed in September 2023, outside of the migratory bird active period. It is anticipated that the rehabilitation of the adit and two raises will be completed over a three-week period in early October 2023, when bats are not expected to be actively hibernating within the mine. A designated substance survey (DSS) is needed prior to the decommissioning of mine infrastructure to confirm the presence of eleven designated substance as identified in the Occupational Health and Safety Act, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work. It is anticipated that the DSS will be completed by November 2023 and the decommissioning of remaining mine hazards completed by May 2024.

[View \(/notice/019-7116\)](/notice/019-7116)[Translate \(/node/10700/translations\)](/node/10700/translations)

Gould Copper Mine Rehabilitation Project

ERO (Environmental Registry of Ontario) number	019-7116
Notice type	Bulletin
Act	Mining Act, R.S.O. 1990
Posted by	Ministry of Mines
Bulletin posted	June 1, 2023
Last updated	June 1, 2023

This notice is for informational purposes only. There is no requirement to consult on this initiative on the Environmental Registry of Ontario. Learn more about the [types of notices \(/page/glossary#section-4\)](/page/glossary#section-4) on the registry.

Bulletin summary

The Ministry of Mines is proposing to rehabilitate the mine hazards at the abandoned Gould Copper Mine. Project planning is being carried out in accordance with the Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the *Mining Act* (Class Environmental Assessment).

Why consultation isn't required

The Gould Copper Mine rehabilitation project is an undertaking subject to the *Environmental Assessment Act*. This proposed Category C project is being carried out in accordance with the Class Environmental Assessment for the Activities of the Ministry of Northern Development and Mines under the *Mining Act*. Consultation will be completed in accordance with requirements of the Class Environmental Assessment.

Bulletin details

The Gould Copper Mine (AMIS #.(number) 07872) is a former high grade, low tonnage copper mine that operated from 1969 to 1976. The mine is situated in Gould Township, approximately 70 kilometres east of Sault Ste. Marie and 45 kilometres north of Thessalon, Ontario.

The purpose of the project is to rehabilitate the mine hazards at the Gould Copper Mine to eliminate the risk to the public and the environment. Mine hazards to be addressed as part of the rehabilitation activities includes two raises to surface, an adit, crown pillar and the remnants of infrastructure. A bat acoustic study was completed in 2019, which confirmed the presence of bat species at risk. Individual bats were observed flying in and out of the adit and the study concluded that mine is likely utilized by bats as a hibernaculum.

To assist with determining the preferred rehabilitation strategy, a geotechnical drilling investigation was completed in 2022 to determine the long-term stability of the crown pillars and conditions of the openings to surface remaining at the mine. Rock mass quality parameters and stability estimates collected as part of the geotechnical investigation concluded that the crown pillar associated with the adit is not long-term stable and progressive failure of the adit brow and crown pillar have occurred. As a result, bat-friendly rehabilitation measures (i.e. (that is), stainless steel gate) are not feasible for the adit as it would not address the long-term stability of the adit crown pillar. The proposed rehabilitation approach for the adit is to backfill to support the crown pillar and prevent it from unravelling. The backfill will also permanently prevent access to the adit by the public but will result in the loss of bat habitat. Permits and/or approvals under the *Endangered Species Act* will be obtained prior to initiating the rehabilitation work.

The preferred rehabilitation strategy for the two raises is to backfill using a combination of cemented and uncemented material to maintain long-term stability. Mine infrastructure to be decommissioned as part of the rehabilitation work includes a hydro substation, mill site foundations, a water tank, and two steel barrels. Disturbed areas will be backfilled and landscaped, as required, and allowed to revegetate naturally to match surrounding habitat.

It is anticipated that only minor vegetation clearing, and grading of existing mine roads will be needed to facilitate the access of heavy equipment to the the adit, west raise and remaining mine infrastructure. The east raise is currently inaccessible by heavy equipment and additional improvements will be needed to allow the execution of the rehabilitation work.

Site access improvements will be completed in September 2023, outside of the migratory bird active period. It is anticipated that the rehabilitation of the adit and two raises will be completed over a three-week period in early October 2023, when bats are not expected to be actively hibernating within the mine. A designated substance survey (DSS) is needed prior to the decommissioning of mine infrastructure to confirm the presence of eleven designated substance as identified in the *Occupational Health and Safety Act*, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work. It is anticipated that the DSS will be completed by November 2023 and the decommissioning of remaining mine hazards completed by May 2024.

Public consultation: You are invited to provide input and express any concerns about this proposed project. Comments must be received by July 3, 2023. For more information or to submit comments please contact:

Michaela Haring, Environmental Planner

Ministry of Mines

Telephone: 1-249-885-3631

Email: Michaela.Haring2@ontario.ca

Please note that personal information provided in a submission (such as name, address, and telephone number) and your views and opinions are being collected by MINES under the authority of the *Environmental Assessment Act* for the purpose of engaging in public consultation and making decisions regarding the project. The personal information may also be shared with the Environmental Assessment and Permissions Branch of the Ministry of the Environment, Conservation and Parks. The collection, use, and disclosure of this information are all governed by the *Freedom of Information and Protection of Privacy Act*. Questions about the collection of this information should be directed to the person listed above.

Applicant Details:

Ministry of Mines
933 Ramsey Lake Road
Sudbury, Ontario
P3E 6B5

Location Details: Gould Township, Algoma District

Site Location Description: The project activities occur in Gould Township, approximately 70 kilometres east of Sault Ste. Marie and 45 kilometres north of Thessalon, Ontario.

Supporting materials

Related files

[Project Description - Gould Mine Rehabilitation Project](https://prod-environmental-registry.s3.amazonaws.com/2023-05/Project%20Description%20-%20Gould%20Mine%20Rehabilitation%20Project.pdf)
([https://prod-environmental-registry.s3.amazonaws.com/2023-05/Project Description - Gould Mine Rehabilitation Project.pdf](https://prod-environmental-registry.s3.amazonaws.com/2023-05/Project%20Description%20-%20Gould%20Mine%20Rehabilitation%20Project.pdf))
pdf.(Portable.Document.Format.file) 287.15 KB

[Notice of Opportunity to Provide Input on a Category C Project](https://prod-environmental-registry.s3.amazonaws.com/2023-05/Notice%20of%20Opportunity%20to%20Provide%20Input%20on%20a%20Category%20C%20Project%200.pdf)
([https://prod-environmental-registry.s3.amazonaws.com/2023-05/Notice of Opportunity to Provide Input on a Category C Project 0.pdf](https://prod-environmental-registry.s3.amazonaws.com/2023-05/Notice%20of%20Opportunity%20to%20Provide%20Input%20on%20a%20Category%20C%20Project%200.pdf))
pdf.(Portable.Document.Format.file) 118.36 KB

Related links

[Ministry of Mines Class EA Website](https://www.ontario.ca/page/class-environmental-assessment-activities-ministry-northern-development-mines-natural) (<https://www.ontario.ca/page/class-environmental-assessment-activities-ministry-northern-development-mines-natural>)


View materials in person

Some supporting materials may not be available online. If this is the case, you can request to view the materials in person.

Get in touch with the office listed below to find out if materials are available.

Ministry of Mines


933 Ramsey Lake Road
Sudbury, ON
P3E 6B5
Canada

 [249-885-3631](tel:249-885-3631)

Connect with
us

Contact

Michaela Haring

 [249-885-3631](tel:249-885-3631)

 Michaela.Haring2@ontario.ca

Appendix C – Environmental Effects and Mitigation Measures

Appendix C – Monitoring and Mitigation Measures Table

Criteria	Mitigation Measure
Climate Change	The unnecessary idling of construction vehicles will not be permitted during the construction work.
	The removal of trees will be minimized to the smallest footprint possible. All felled trees will be mulched and spread over disturbed areas. The area will be allowed to revegetate naturally allowing pioneer species to cultivate previously disturbed areas of the land.
Air Quality, Dust and Noise	The unnecessary idling of construction vehicles will not be permitted during the construction work.
	Speed limits will be enforced along the mine access roads to minimize dust emissions
	Water or a non-chloride dust suppressant will be utilized as needed.
Ecosystem Protection and Restoration	The removal of trees and vegetation will be minimized to the smallest footprint possible
	Tree removal activities will preferentially be completed outside of the migratory bird active period which is from approximately mid-April to late- August. If work is completed during the breeding bird season, vegetation proposed for removal will be surveyed by a qualified biologist to confirm the presence/absence of migratory birds or nests. If avian nests are identified, work around the nest will cease and a setback buffer established. All work inside the buffer avoided until the young have fledged and left the area.
	All equipment, machinery and vehicles will be brought onto site in a clean condition to prevent the accidental spread of non-native, invasive species.
	Any disturbed areas caused by the rehabilitation work will be allowed to revegetate naturally.
	Speed limits will be enforced on mine access roads to minimize the risk of mortality to wildlife.
	The work area will remain free of litter with all waste disposed of in accordance with O.Reg 347/90.
	If required, exclusionary fencing will be utilized to deter turtles and other wildlife from entering the work area. The fencing installation and types will be in accordance with the Ministry of Natural Resources and Forestry (MNRF) Best Management Practises for Reptile and Amphibian Exclusion Fencing (2021).

Species at Risk and Species at Risk Habitat	The rehabilitation work will be completed in accordance with the regulatory exemption detailed in Section 23.18 (Threats to health and safety, not imminent) of O. Reg 242/08 under the ESA. A mitigation plan will be prepared in accordance with Subsection 6 and 7 of Section 23.18 of O. Reg 242/08 and all work completed in accordance with the mitigation plan.
	The work will be completed between June 10th and July 10th, during a time when bats are not expected to be actively roosting within the mine.
	A SAR habitat assessment will be completed prior to the proposed work to identify the presence/absence of other protected species and/or their habitat within the project area. All workers assigned to this project will review the SAR survey to ensure they are aware of potential species that may be encountered and how to identify them.
	If any SAR are encountered during the rehabilitation activities, work will immediately stop, the MINES Project manager notified, and the MECP consulted as to how to proceed. Applicable regulatory requirements will be adhered to, and mitigation measures implemented to avoid impacting SAR.
Surface Water	A vegetated buffer will be maintained between Huston Lake and the mine.
	All vehicle and equipment refueling will be completed on an impermeable surface at a minimum of 30 meters away from the creek.
	An emergency spill kit will be readily available at all times during construction activities and all workers trained on proper use. Should a spill occur, regardless of its severity, it will be the responsibility of the Site Supervisor to ensure that the Ministry of Environment, Conservation and Parks is immediately notified through the Ontario Spill Action Centre (1-800-268-6060). The MINES Project Manager will be immediately notified, and all applicable provincial and federal regulations adhered to.
	All equipment will be brought onto site clean, degreased, and free of fluid leaks to mitigate any deleterious substances from entering waterbodies.
	If water is flowing within the creek at the time of the construction activities, sediment and erosion controls (e.g., erosion control fencing, fabrics, straw) will be used if needed to mitigate erosion of exposed soils to the creek and downstream environment.
	If water is flowing within the creek at the time of the construction activities, the movement of construction vehicles and equipment over the water will be kept to a minimum and avoided when possible.

<p>Excess Materials and Waste management</p>	<p>A Designated Substance Survey (DSS) will be completed to confirm the presence of eleven designated substances as defined by O. Reg 490/09, as well as other hazardous materials that may require special handling or management during the proposed rehabilitation work. All workers assigned to this project will review the DSS survey prior to removing all building material and waste. The handling, management, and disposal of waste material will be completed in accordance with applicable health and safety and environmental legislation. All waste will be disposed of at a licensed facility.</p>
<p>Contamination and Contaminated Sites</p>	<p>All backfill material mobilized to site will be transported in clean trucks and will be free of contaminants.</p> <p>If previously unidentified contamination is identified during the course of the work, the work will immediately stop, and the MINES Project Manager consulted as to how to proceed. Any investigation and/or remedial work will be conducted by an environmental consultant under the supervision of a Qualified Person in a manner consistent with O. Reg 153 and industry standards.</p>