

APPENDIX 9-K MINE SITE TRAFFIC CONTROL PLAN



Blackwater Gold Project

Mine Site Traffic Control Plan

March 2022

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ACRONYMS AND ABBREVIATIONS

Aboriginal Groups or Indigenous nations	Ulkatcho First Nation, Lhoosk'uz Dené Nation, Nadleh Whut'en First Nation, Stelat'en First Nation, Saik'uz First Nation, and Nazko First Nation (as defined in the Project's Environmental Assessment Certificate #M19-01)
Joint MA/EMA Application	Joint Application Information Requirements for <i>Mines Act / Environmental Management Act</i> Permits
Artemis	Artemis Gold Inc.
BC	British Columbia
Blackwater	Blackwater Gold Project
BW Gold	BW Gold LTD.
CEA Agency	Canadian Environmental Assessment Agency
Code	Health, Safety and Reclamation Code for Mines in British Columbia
DS	Decision Statement
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EMBC	Emergency Management British Columbia
EMLI	Ministry of Energy, Mines and Low Carbon Innovation
EMP	Environmental Management Plan
EMPR	Ministry of Energy, Mines and Petroleum Resources
EMS	Environmental Management System
ENV	Ministry of Environment and Climate Change Strategy
EPCM	Engineering, Procurement and Construction Management
FLNRORD	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FSR	Forest Service Road
GM	General Manager
km	kilometre
MAR	Mine Access Road
MSTCP	Mine Site Traffic Control Plan
New Gold	New Gold Inc.
Project	Blackwater Gold Project
t	tonnes
TSF	Tailings Storage Facility
VP	Vice President
WMMP	Wildlife Mitigation and Monitoring Plan

1. PROJECT OVERVIEW

The Blackwater Gold Project (the Project) is a gold and silver open pit mine located in central British Columbia (BC), approximately 112 kilometres (km) southwest of Vanderhoof, 160 km southwest of Prince George, and 446 km northeast of Vancouver.

The Project is presently accessed via the Kluskus Forest Service Road (FSR), the Kluskus-Ootsa FSR and an exploration access road, which connects to the Kluskus-Ootsa FSR at km 142. The Kluskus FSR joins Highway 16 approximately 10 km west of Vanderhoof. A new, approximately 13.8 km road (Mine Access Road) will be built to replace the existing exploration access road, which will be decommissioned. The new planned access is at km 124.5. Driving time from Vanderhoof to the mine site is about 2.5 hours.

Major mine components include a tailings storage facility (TSF), ore processing facilities, waste rock, overburden and soil stockpiles, borrow areas and quarries, water management infrastructure, water treatment plants, accommodation camps and ancillary facilities. The gold and silver will be recovered into a gold-silver doré product and shipped by air and/or transported by road. Electrical power will be supplied by a new approximately 135 km, 230 kilovolt (kV) overland transmission line that will connect to the BC Hydro grid at the Glenannan substation located near the Endako mine, 65 km west of Vanderhoof.

The Blackwater mine site is located within the traditional territories of Lhoosk'uz Dené Nation (LDN), Ulkatcho First Nation (UFN), Skin Tyee Nation and Tsilhqot'in Nation. The Kluskus and Kluskus-Ootsa FSRs and Project transmission line, cross the traditional territories of Nadleh Whut'en First Nation (NWFN), Saik'uz First Nation (SFN), and Stellat'en First Nation (StFN; collectively, the Carrier Sekani First Nations) as well as the traditional territories of the Nazko First Nation (NFN), Nee-Tahi-Buhn Band, Cheslatta Carrier Nation and Yekooche First Nation (EAO 2019a and 2019b).

Project construction is anticipated to take two years. Mine development will be phased with an initial production rate of 15,000 tonnes per day (t/d) for the first five years, increasing production up to 33,000 t/d for the following five-years, and 55,000 t/d in Year 11 until the end of the 23-year mine life. The Closure phase is 24 to approximately 44 years, ending when the Open Pit has filled and the TSF is allowed to passively discharge to Davidson Creek, and the Post-closure phase is 46+ years.

New Gold Inc. (New Gold) received Environmental Assessment Certificate #M19-01 (EAC) on June 21, 2019 under the *2002 Environmental Assessment Act* (EAO 2019c) and a Decision Statement (DS) on April 15, 2019 under the *Canadian Environmental Assessment Act, 2012* (CEA Agency 2019). In August 2020, Artemis Gold Inc. (Artemis) acquired the mineral tenures, assets and rights in the Blackwater Project that were previously held by New Gold Inc. On August 7, 2020, the Certificate was transferred to BW Gold LTD (BW Gold), a wholly-owned subsidiary of Artemis, under the 2018 *Environmental Assessment Act*. The Impact Assessment Agency of Canada notified BW Gold on September 25, 2020 to verify that written notice had been provided within 30 days of the change of proponent as required in Condition 2.16 of the DS, and that a process had been initiated to amend the DS.

2. PURPOSE AND OBJECTIVES

The purpose of the Mine Site Traffic Control Plan (MSTCP) is to identify the protocols that will enable safe and efficient transportation of personnel, materials, equipment and vehicles on roads within the Blackwater mine site during construction, operation, closure, and post-closure. The MSTCP is focused on implementation of regulatory requirements and industry-standard practices that increase the safety of mine site road users and prevent unauthorized access to the site. The MSTCP is further supported by BW Gold's Health and Safety and Environment policies for the mine.

The MSTCP is applicable to all Project-controlled roads, including:

- the Exploration Access Road in its entirety until it is decommissioned during construction;
- the MAR in its entirety through all mine phases;
- the airstrip access road;
- mine service roads, including onsite and offsite portions of the water supply pipeline and transmission line service roads;
- mine haul roads; and
- pre-existing exploration and site roads constructed under *Mines Act* mineral exploration (MX) permits issued for the Project.

The MSTCP's objectives are to:

- provide safety on Project roads for designated users and uses;
- ensure that all Project-related authorized road users follow stipulated procedures;
- comply with the *Mines Act* and Health, Safety and Reclamation Code for Mines in British Columbia (Code; EMLI 2021); and
- prevent unauthorized use of Project roads.

The MSTCP addresses the requirements in Section 9.13 of the Joint Application Information Requirements for *Mines Act* / *Environmental Management Act* Permits (EMPR & ENV 2019).

Project-related use of the Kluskus FSR and Kluskus-Oosta FSR is outside the scope of this plan.

3. ROLES AND RESPONSIBILITIES

BW Gold has the obligation of ensuring that all commitments are met and that all relevant obligations are made known to mine personnel and site contractors during all phases of the mine life. A clear understanding of the roles, responsibilities, and level of authority that employees and contractors have when working at the mine site is essential to meet Environmental Management System (EMS) objectives.

Table 3-1 provides an overview of general environmental management responsibilities during all phases of the mine life for key positions that will be involved in environmental management. Other positions not specifically listed in Table 3-1 but who will provide supporting roles include independent environmental monitors, an Engineer of Record (EOR) for each tailings storage facility and dam, an Independent Tailings Review Board (ITRB), TSF qualified person, geochemistry qualified professional, and other qualified persons and qualified professionals.

Table 3-1: Blackwater Gold Roles and Responsibilities

Role	Responsibility
Chief Executive Officer (CEO)	The CEO is responsible for overall Project governance. Reports to the Board.
Chief Operating Officer (COO)	The COO is responsible for engineering and Project development and coordinates with the Mine Manager to ensure overall Project objectives are being managed. Reports to CEO.
Vice President (VP) Environment & Social Responsibility	The VP Environment & Social Responsibility is responsible for championing the Environmental Policy Statement and EMS, establishing environmental performance targets and overseeing permitting. Reports to COO.
General Manager (GM) Development	The GM Development is responsible for managing project permitting, the Project's administration services and external entities, and delivering systems and programs that ensure Artemis's values are embraced and supported: Putting People First, Outstanding Corporate Citizenship, High Performance Culture, Rigorous Project Management and Financial Discipline. Reports to COO.
Mine Manager	The Mine Manager, as defined in the <i>Mines Act</i> , has overall responsibility for mine operations, including the health and safety of workers and the public, EMS implementation, overall environmental performance and protection, and permit compliance. The Mine Manager may delegate their responsibilities to qualified personnel. Reports to GM.
Construction Manager (CM)	The CM is accountable for ensuring environmental and regulatory commitments/ and obligations are being met during the construction phase. Reports to GM.
Environmental Manager (EM)	The EM is responsible for the day-to-day management of the Project's environmental programs and compliance with environmental permits, updating EMS and MPs. The EM or designate will be responsible for reporting non-compliance to the CM, and Engineering, Procurement and Construction Management (EPCM) contractor, other contractors, the Company and regulatory agencies, where required. Supports the CM and reports to Mine Manager.
Departmental Managers	Departmental Managers are responsible for implementation of the EMS relevant to their areas. Report to Mine Manager.
Indigenous Relations Manager	Indigenous Relations Manager is responsible for Indigenous engagement throughout the life of mine. Also responsible for day-to-day management and communications with Indigenous groups. Reports to VP Environment & Social Responsibility.

Role	Responsibility
Community Relations Advisor	Community Relations Advisor is responsible for managing the Community Liaison Committee and Community Feedback Mechanism. Reports to Indigenous Relations Manager.
Environmental Monitors	Environmental Monitors (includes Environmental Specialists and Technicians) are responsible for tracking and reporting on environmental permit obligations through field-based monitoring programs. Report to EM.
Aboriginal Monitors	Aboriginal Monitors are required under EAC condition 17 and will be responsible for monitoring for potential effects from the Project on the Indigenous interests. Indigenous Monitors will be involved in the adaptive management and follow-up monitoring programs. Report to EM.
Employees and Contractors	Employees are responsible for being aware of permit requirements specific to their roles and responsibilities. Report to Departmental Managers.
Qualified Professionals and Qualified Persons	Qualified professionals and qualified persons will be retained to review objectives and conduct various aspects of environmental and social monitoring as specified in EMPs and social MPs.

BW Gold will employ a qualified person as an EM who will ensure that the EMS requirements are established, implemented and maintained, and that environmental performance is reported to management for review and action. The EM is responsible for retaining the services of qualified persons or qualified professionals with specific scientific or engineering expertise to provide direction and management advice in their areas of specialization. The EM will be supported by a staff of Environmental Monitors that will include Environmental Specialists and Technicians and by a consulting team of subject matter experts in the fields of environmental science and engineering.

During the Construction phase, BW Gold will be entering into multiple EPC contracts, likely for the Transmission Line, Process Plant, Tailings and Reclaim System, and 25kV Power Distribution. Each engineer/contractor will have their own CM and there will be a BW Gold responsible PM and/or Superintendent who ultimately reports to the GM Development. Some of the scope, such as the TSF and Water Management Structures will be self-performed by BW Gold, likely using hired equipment. Other smaller scope packages may be in the form of EPCM contracts. The EPCM contractors will report to the CMs who will ultimately be responsible for ensuring that impacts are minimized, and environmental obligations are met during the Construction phase. For non-EPCM contractors, who will perform some of the minor works on site, the same reporting structure, requirements, and responsibilities will be established as outlined above. BW Gold will maintain overall responsibility for management of the construction and operation of the mine site and will therefore be responsible for establishing employment and contract agreements, communicating environmental requirements, and conducting periodic reviews of performance against stated requirements.

The CM is accountable for ensuring that environmental and regulatory commitments/obligations are being met during the construction phase. The EM will be responsible for ensuring that construction activities are proceeding in accordance with the objectives of the EMS and associated MPs. The EM or designate will be responsible for reporting non-compliance to the CM and EPCM contractor, other contractors, and regulatory agencies, where required. The EM or designate will have the authority to stop any construction activity that is deemed to pose a risk to the environment; work will only proceed when the identified risk and concern have been addressed and rectified.

Environmental management during operation of the Project will be integrated under the direction of the EM, who will liaise closely with departmental managers and will report directly to the Mine Manager. The EM will be supported by the VP of Environment and Social Responsibility in order to provide an effective and

integrated approach to environmental management and ensure adherence to corporate environmental standards. The EM will be accountable for implementing the approved MPs and reviewing them periodically for effectiveness. Departmental area managers (e.g., mining, milling, and plant/site services) will be directly responsible for implementation of the EMS and EMPs relevant to their areas. All employees and contractors are responsible for daily implementation of the practices and policies contained in the EMS.

During closure and post-closure staffing levels will be reduced to align with the level of activity associated with these phases. Prior to initiating closure activities, BW Gold will revisit environmental and health and safety roles and responsibilities to ensure the site is adequately resourced to meet permit monitoring and reporting. The Mine Manager will maintain overall responsibility for management of Closure and Post-closure activities.

Pursuant to Condition 19 of the Project's EAC #M19-01, BW Gold has established an Environmental Monitoring Committee to facilitate information sharing and provide advice on the development and operation of the Project, and the implementation of EAC conditions, in a coordinated and collaborative manner. Committee members include representatives of the Environmental Assessment Office (EAO), UFN, LDN, NWFN, StFN, SFN, NFN, Ministry of Energy, Mines and Low Carbon Innovation (EMLI), Ministry of Environment and Climate Change Strategy (ENV), and Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLRNORD).

Pursuant to Condition 17 of the EAC, Aboriginal Group Monitor and Monitoring Plan, BW Gold will retain or provide funding to retain a monitor for each Aboriginal Group prior to commencing construction and through all phases of the mine life. The general scope of the monitor's activities will be related to monitoring for potential effects from the Project on the Aboriginal Group's Aboriginal interests.

4. COMPLIANCE OBLIGATIONS, GUIDANCE, AND BEST MANAGEMENT PRACTICES

4.1 Legislation

Federal legislation applicable to the MSTCP includes:

- *Fisheries Act*,
 - *Authorizations Concerning Fish and Fish Habitat Regulations*;
- *Impact Assessment Act*;
- *Species at Risk Act*;
- *Transportation of Dangerous Goods Act*; and
 - *Transportation of Dangerous Goods Regulations*.

Provincial legislation applicable to the MSTCP includes:

- *Environmental Assessment Act*;
- *Forest Act*;
- *Forest and Range Practices Act*;
- *Forest Practices Code of British Columbia Act*;
- *Mines Act*;
 - Health, Safety and Reclamation Code for Mines in British Columbia (Part 6, sections 6.8.3 [Traffic Control] and 6.9.1 [Mine Haul Road Design]; EMLI 2021);
- *Mining Right of Way Act*;
- *Motor Vehicle Act*;
- *Transport of Dangerous Goods Act*;
 - *Transport of Dangerous Goods Regulations*;
- *Water Sustainability Act*;
- *Wildfire Act*;
- *Wildlife Act*;
- *Workers Compensation Act*; and
 - *Occupational Health and Safety Regulation*.

4.2 Environmental Assessment Certificate and Federal Decision Statement Conditions

There are no specific EAC or DS conditions related to mine site traffic; however, there are conditions related to access management as follows:

- EAC Condition 13 (Construction Environmental Management Plan) requires access management be addressed.
- Condition 23 (Wildlife Mitigation and Monitoring Plan; WMMP) requires a 50 km per hour speed limit be established on all Project roads, installation and maintenance of wildlife crossing signs where

wildlife corridors intersect Project roads; and recording of wildlife observations and wildlife mortalities, and significant interactions and/or conflicts between people and wildlife in the Project area.

- EAC Condition 37 (Community Liaison Committee and Community Effects Monitoring and Management Plan) requires the Community Effects Monitoring and Management Plan provide for employee transportation to the Project site by bus during Operations and by bus and airplane during Construction.
- DS Condition 6.2 requires the establishment of a speed limit of a maximum of 50 km/hour on Project roads and requires that all persons abide by this speed limit during all phases of the Designated Project.

Notwithstanding the EAC and DS conditions regarding speed limits on Project-controlled roads, the Mine Manager or the EMLI Mines Inspector may direct alternate speed limits in accordance with health and safety best practices, or where seasonal conditions require variable speed limits.

4.3 Existing Permits

BW Gold received *Mines Act* permit M-246 on June 22, 2021 and Special Use Permit (SP0001) on July 14, 2021 to construct and operate the MAR. Permit M-246 also authorizes construction of mine site access roads. Exploration Permit MX-13-177 authorizes construction of roads and trails to support exploration and geotechnical site investigation studies.

5. ADAPTIVE MANAGEMENT FRAMEWORK

The MSTCP is a living document that will evolve over time in response to monitoring results and regulatory changes. The plan incorporates adaptive management as follows:

■ Plan

- Identification of road design and operational requirements in accordance with regulatory requirements.
- Establish traffic protocols that enable safe and efficient transportation of personnel and materials.

■ Do

- Construct and operate mine site roads in accordance with the MSTCP.
- Provide relevant training to all on site staff.

■ Monitor

- Inspection for compliance with traffic and access related protocols.

■ Adjust

- Review of effectiveness of management measures.
- Update MSTCP as required.

6. SUPPORT

6.1 Training and Awareness

Employees and contractors and visitors will receive orientation upon arrival at the site and before commencing work. Orientation and training related to the MSTCP include:

- overview of the mine site road network;
- road use procedures;
- radio control and channels;
- wildlife sighting reporting;
- incident, near-miss and spill reporting; and
- emergency contact information and procedures.

Training records will be maintained in an electronic database. Contractors will be required to update their training if they are away from the site for more than 6 months.

Awareness of the requirements of the MSTCP will be reinforced through the use of road signage throughout the mine site and annual refresher training. The Mine Manager may issue periodic updates or advisories between regular plan reviews which all employees, contractors and visitors will also need to adhere to. Exact locations for road signage will be determined by engineering as mine site roads are constructed and in accordance with best safety practices and permit requirements.

6.2 Internal and External Communication

6.2.1 Internal Communication

Department Managers are responsible to communicate any changes or updates to the MSTCP to respective employees, contractors and visitors.

6.2.2 External Communication

External contact numbers relevant to traffic control or management are provided in Table 6.2-1. The Mine Manager, or designate, will be responsible for notifying Emergency Management British Columbia (EMBC) and ENV as required of any traffic incidents or reportable spills on Project roads. Mine emergencies will be managed in accordance with the Mine Emergency Response Plan.

Table 6.2-1: Emergency Contacts

Contact	Phone Number
Mining Operations in Region	
Mount Milligan Mine	250-996-0066
Gibraltar Mine	250-992-1800
Endako Mine	250-669-6211
BC EMLI – First Contacts in Case of an Emergency	
Chief Inspector of Mines	250-952-0494
Deputy Chief Inspector of Mines	250-952-0471
BC EMLI maintains one mine rescue equipment cache for the province located in Kamloops. The Chief Inspector of Mines or the Deputy Chief Inspector of Mines authorize any loan of equipment from the cache.	

Contact	Phone Number
Emergency Services	
EMBC Emergency Coordination Centre	1-800-663-3456
BC Wildfire Service	1-800-663-5555 (or *5555 cell)
BC ENV – Environmental Emergency Program Enforcement and Environmental Safety Programs Officers	1-800-663-3456 (via EMBC)
Transportation Safety Board of Canada (Gatineau, Quebec)	1-800-387-3557
RCMP (Vanderhoof)	250-567-2222
RCMP (Fort St. James)	250-996-8269
RCMP (Prince George)	250-561-3300
BC Air Ambulance	911
BC Ambulance Service (Vanderhoof)	250-567-9039
St. John Ambulance (Prince George)	250-561-1696
Local Hospitals	
St. John Hospital (Vanderhoof)	250-567-2211
University Hospital of Northern British Columbia (formerly Prince George Regional Hospital)	250-565-2000
Other Contacts	
Canfor Administration Centre (Prince George)	250-962-3500
BC Hydro	1-800-224-9376
Fixed Wing and Helicopter Providers	
Northern Thunderbird Air (NT Air)	250-963-9611
Yellowhead Helicopters	250-567-5777
Indigenous Nations Offices	
Ulkatcho First Nation	250-742-3260
Lhoosk'uz Dené Nation	250-992-3290
Nadleh Whut'en First Nation	250-690-7211
Stellat'en First Nation	250-699-8747
Saik'uz First Nation	250-567-9293
Nazko First Nation	250-992-9085

7. IMPLEMENTATION

7.1 Mine Site Access

The MAR will connect the mine site at km 124.5 of the Kluskus FSR and extend south to the mine site (Figures 7.1-1 and 7.1-2). Figure 7.1-3 illustrates the MAR alignment relative to other mine site components. Once the MAR is constructed and operational, the exploration access road will be decommissioned in accordance with the Reclamation and Closure Plan (Chapter 4 of the Application).

7.2 Road Network Design

All Project roads are designed for all-season use during mine construction, operation, closure, and post--closure. Road design incorporates industry best practices and design specifications from the Code (EMLI 2020) and Engineering Manual (FLNRORD 2019).

The mine site access and service road network will develop as the Project progresses as described in Section 7.3. Table 7.2-1 lists primary Project roads, class, length, and the years each road will be in service. Additional access roads will be built temporarily as required to support development and operation of facilities. Temporary access will also be built to support construction of infrastructure.

Table 7.2-1: Access and Service Road Network Summary

Name	Class	Project Phase in Service ¹
Airstrip Access Road	Access Road	C, O, C
Borrow and Preparation Area Service Road	Service Road	C, O, C
Central Mine Site Service Road	Service Road	C, O, C, PC
East Plant Site Service Road	Service Road	C, O, C
Explosives Storage Facility Service Road	Service Road	C, O, C
Mine Access Road	Access Road	C, O, C, PC
Northern Diversion Road	Service Road	C, O, C
Operations Camp Access Road	Access Road	C, O, C, PC
TSF Service Road	Service Road	C, O, C
West Plant Site Service Road	Service Road	C, O, C, PC

¹ C = Construction, O = Operations, C = Closure, PC = Post-Closure

A number of smaller, ancillary roads will also be constructed for construction and maintenance access of tertiary infrastructure (e.g., potable water wells, 25 KV power line, tailings and reclaim pipelines).

The ex-pit haul road network will be built as required to access pit phases. The haul road alignments run from the pit exit:

1. West to the Upper Waste Stockpile;
2. Northwest to the LGO Stockpile;
3. Northeast to access the crushing area;
4. North and west to the Lower Waste Stockpile; and
5. North branch to access the PAG stockpile, upper lifts of TSF C and TSF D.

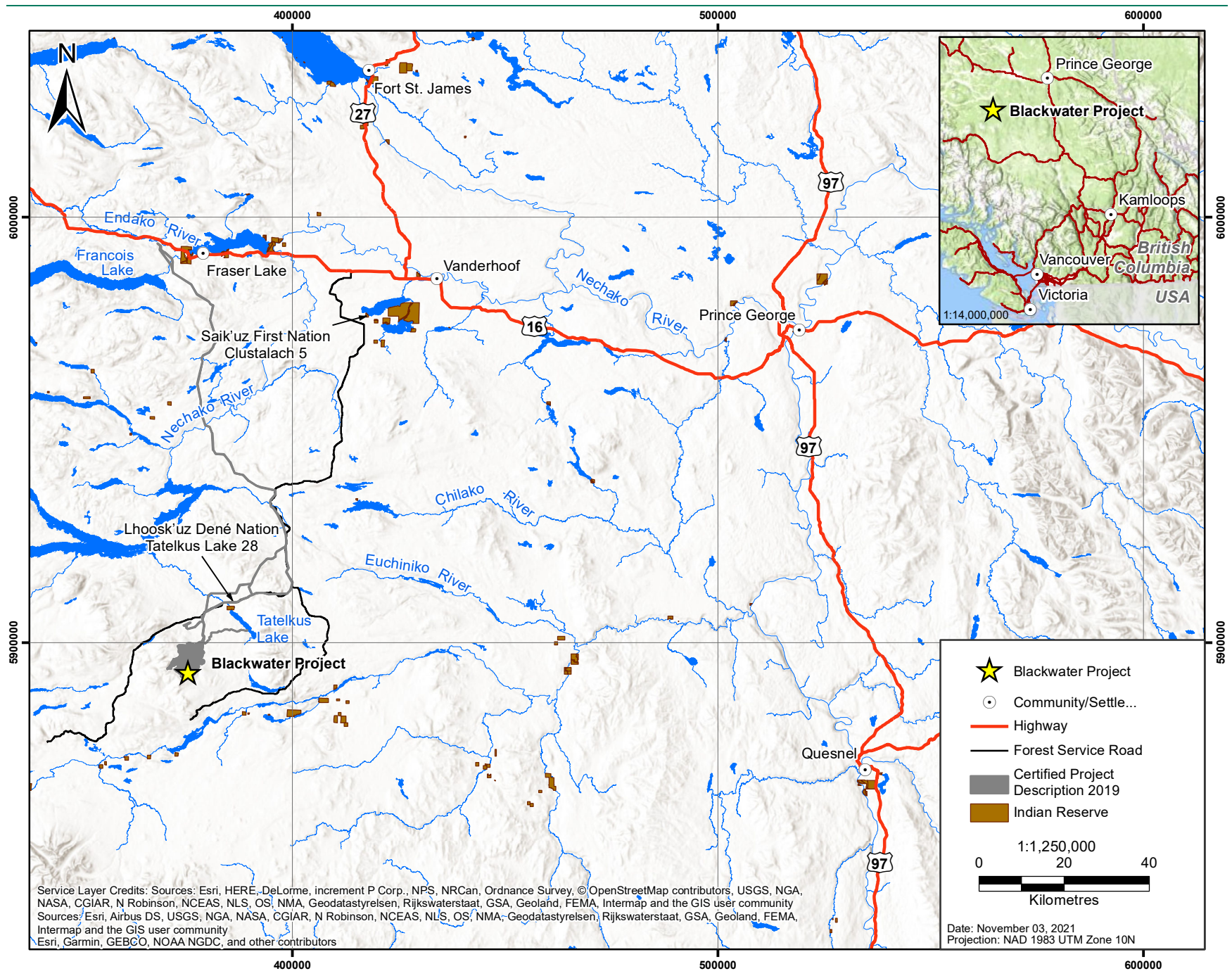


Figure 7.1-1: Location of the Blackwater Gold Project

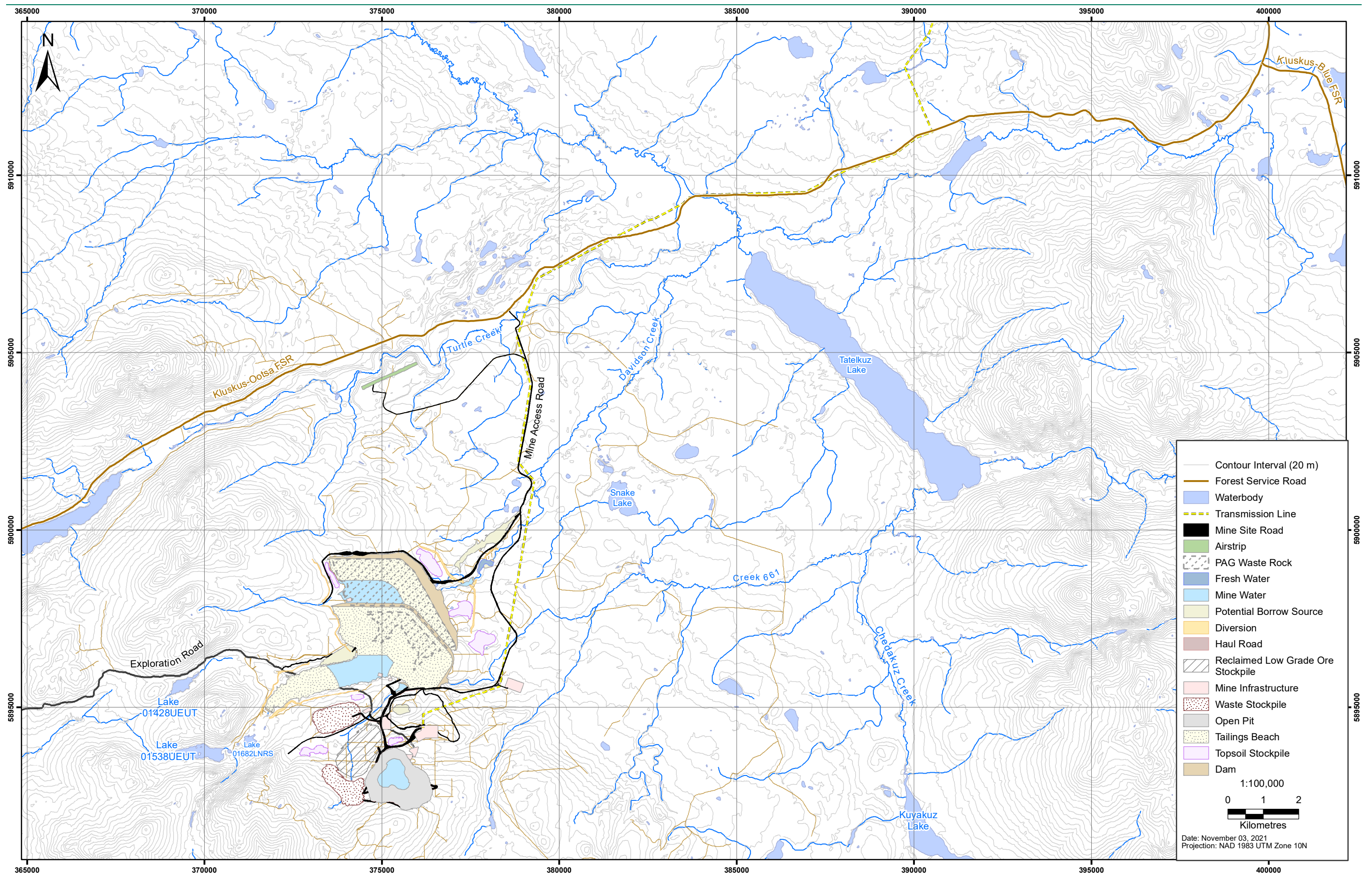
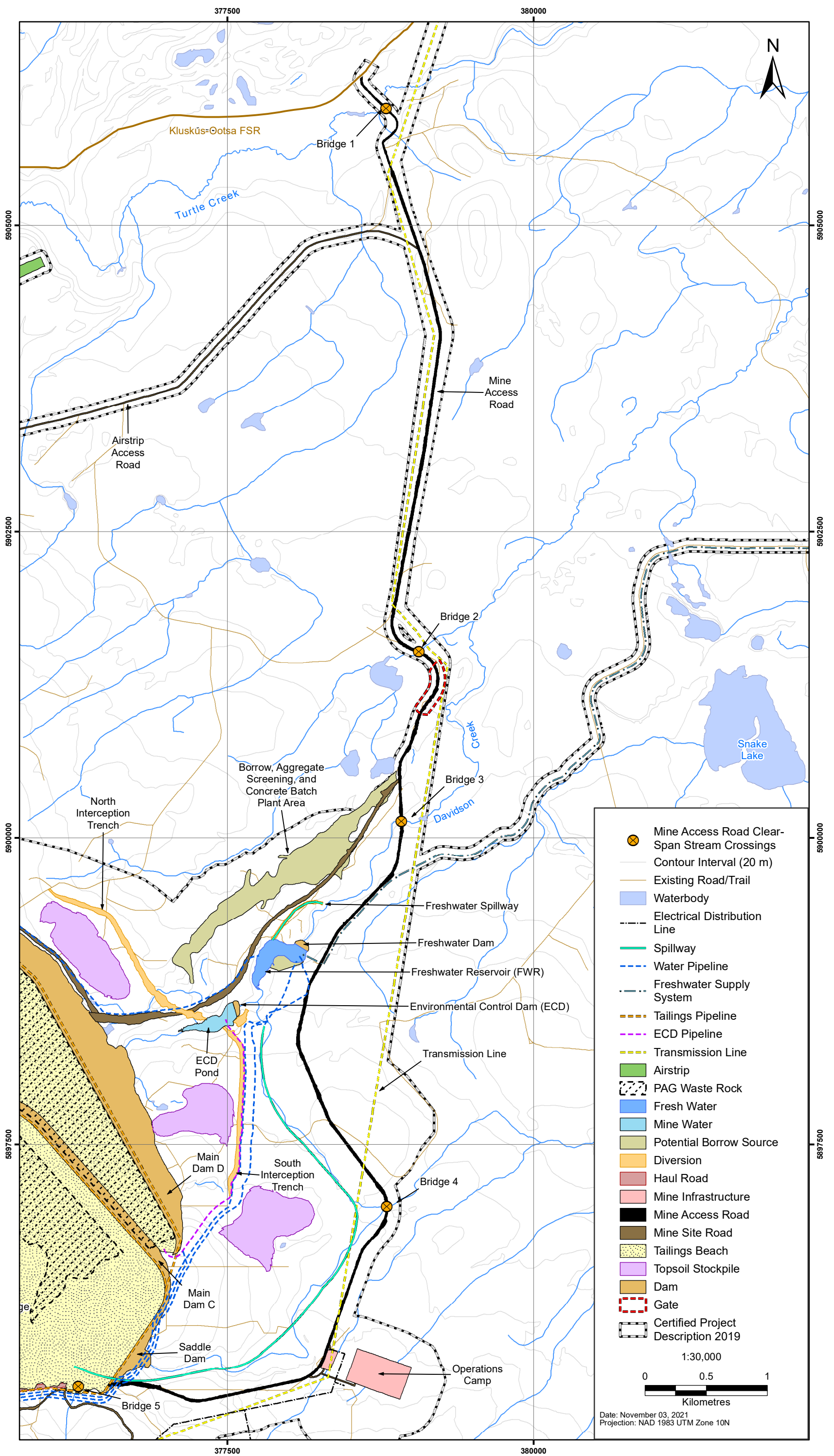


Figure 7.1-2: Mine Site Access Route via Forest Service Road



7.3 Schedule

Mine development will be phased during the life of the mine with the majority of roads constructed during construction. Road development during each phase is described below.

7.3.1 Construction (Year -2 to Year -1)

Mine site roads will be constructed to the level of design that will support full mine operations. Roads existing at the start of Year -2 may be upgraded to support heavier seasonal loads. Figure 7.3-1 shows the road network at the end of construction (Y-2).

7.3.2 Operations (Year +1 to Year +23)

Figure 7.3-2 shows the mine site road network at Year +18, peak operations. Figure 7.3-3 shows a representation of mine service and haul roads traffic flows and parking in the vicinity of the Plant Site, crusher, open pit, low grade ore stockpile.

7.3.3 Closure (Year +24 to approximately Year +45)

During this phase, project activities will focus on the removal of infrastructure, re-establishing final landforms and watercourses, and reclamation and revegetation. Vehicle traffic will include cranes and transport trucks, earthmoving and heavy equipment, backhoes, graders and personnel transport. Roads that are no longer in use will be decommissioned, stream crossings removed and road surfaces prepared for revegetation. Figure 7.3-4 shows the road network at the start of reclamation.

7.3.4 Post-Closure (Year 46+)

Activities during this phase include reclamation, environmental monitoring, remedial works and operation of the water treatment plant, with periodic traffic to replenish supplies. A minimal network of service roads will remain and will be operated on a seasonal basis only. Figure 7.3-5 shows the post-closure phase monitoring and maintenance road network.

7.4 Access Control and Security

The gatehouse and security checkpoint will be located at approximately km 5.8 along the MAR and will be used during the Construction and Operation phases to control and record vehicle access to/from the Project (see Figure 7.1-2). The gatehouse is proposed to be located within the mine site permitted boundary subject to the *Mines Act* permit.

The general public will not be allowed to access the mine site unless as an authorized visitor. Only authorized personnel will be granted entry to the mine site. The security checkpoint will authorize vehicle access to the Project.

Project vehicles will be restricted to designated roads and trails. Signage will be used on all roads to indicate access and road restrictions will be a part of training. Private vehicle access will be limited to authorized personnel only. If personal vehicles are used for site access, they will be prohibited from use on mine site roads.

Any service roads (e.g., Water Supply Pipeline Service Road) that lead to the mine site will have a locked security gate at the mine site boundary or a physical barrier to prevent access by vehicular traffic. Signage will be posted indicating that access is prohibited for snowmobiles, All Terrain Vehicles (ATV) and off-road motorcycles (unless required for Project work), as well as other information as required by the Code.

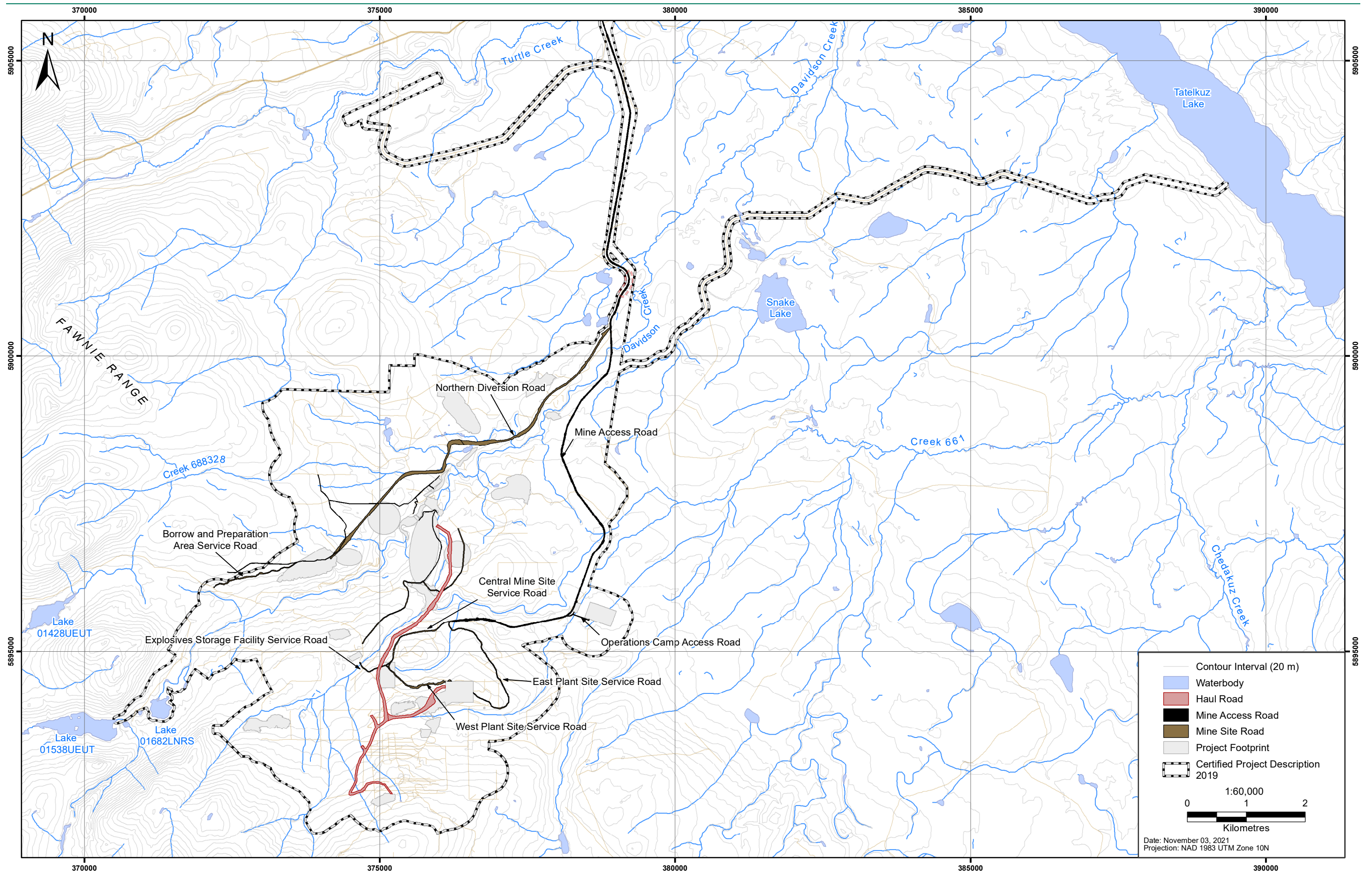


Figure 7.3-1: General Arrangement of Roads at the End of Construction (Year -2)

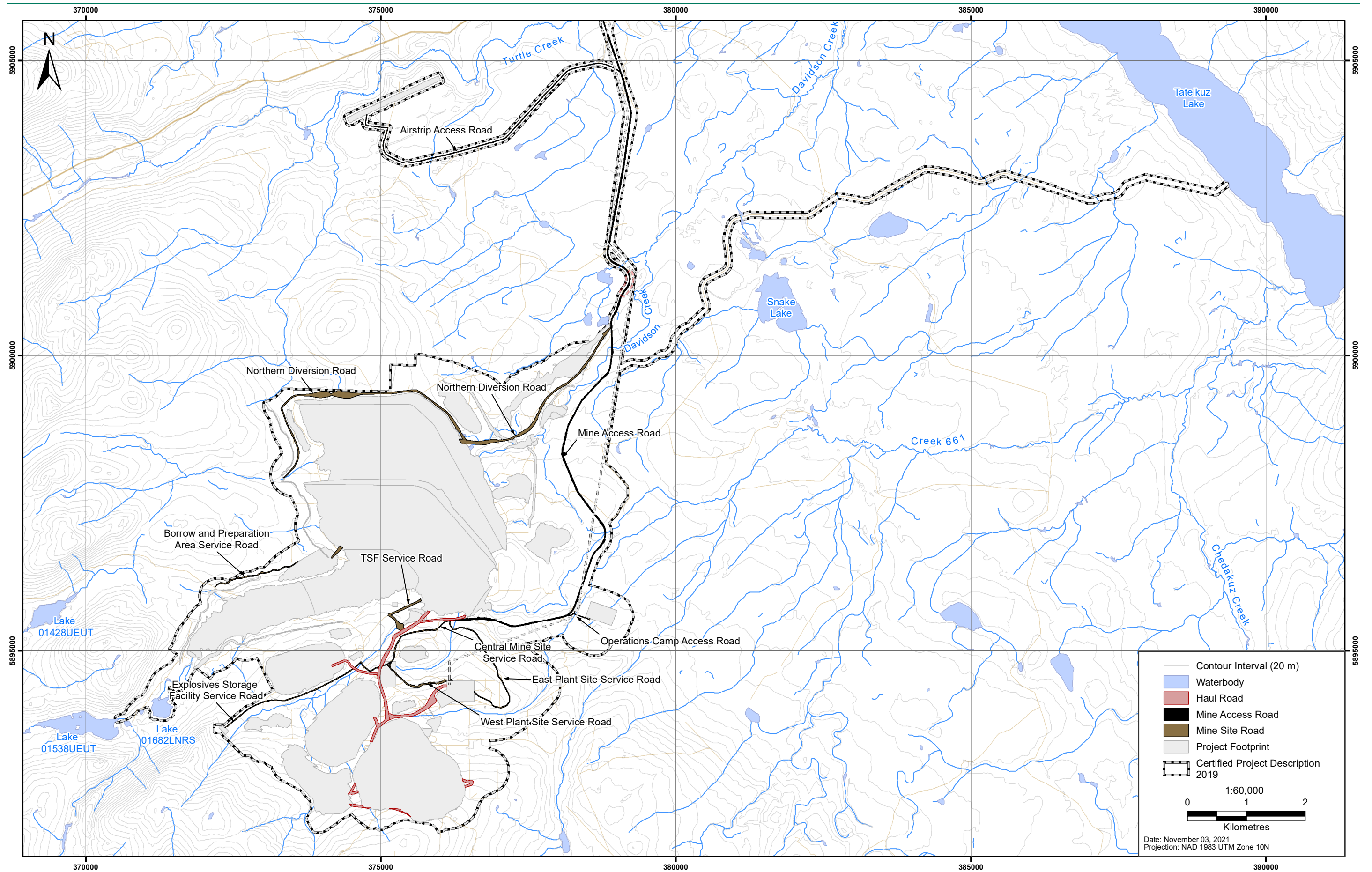


Figure 7.3-2: General Arrangement of Roads at Year +18

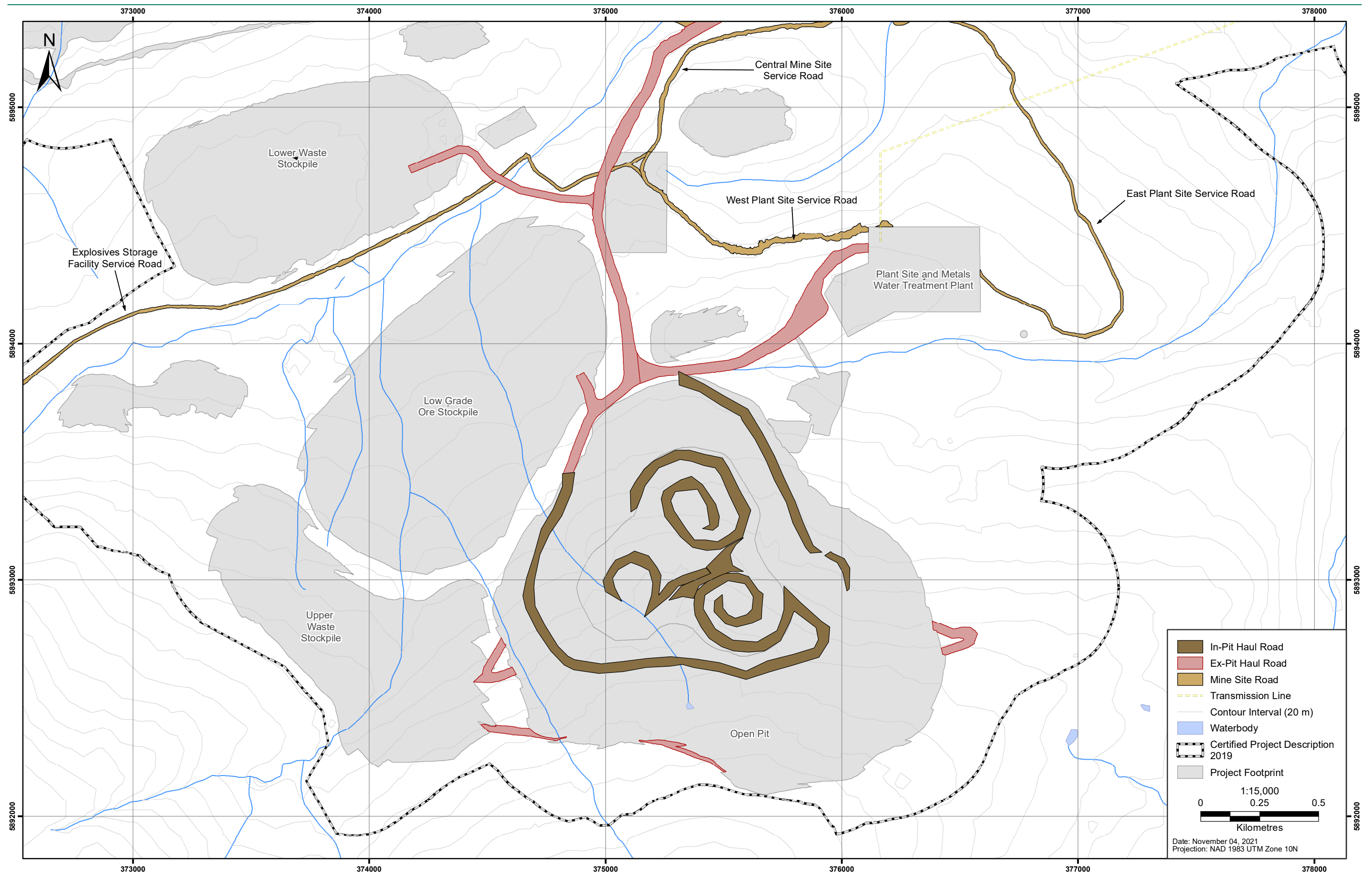


Figure 7.3-3: Detailed Arrangement of Roads in Plant Site and Open Pit Area

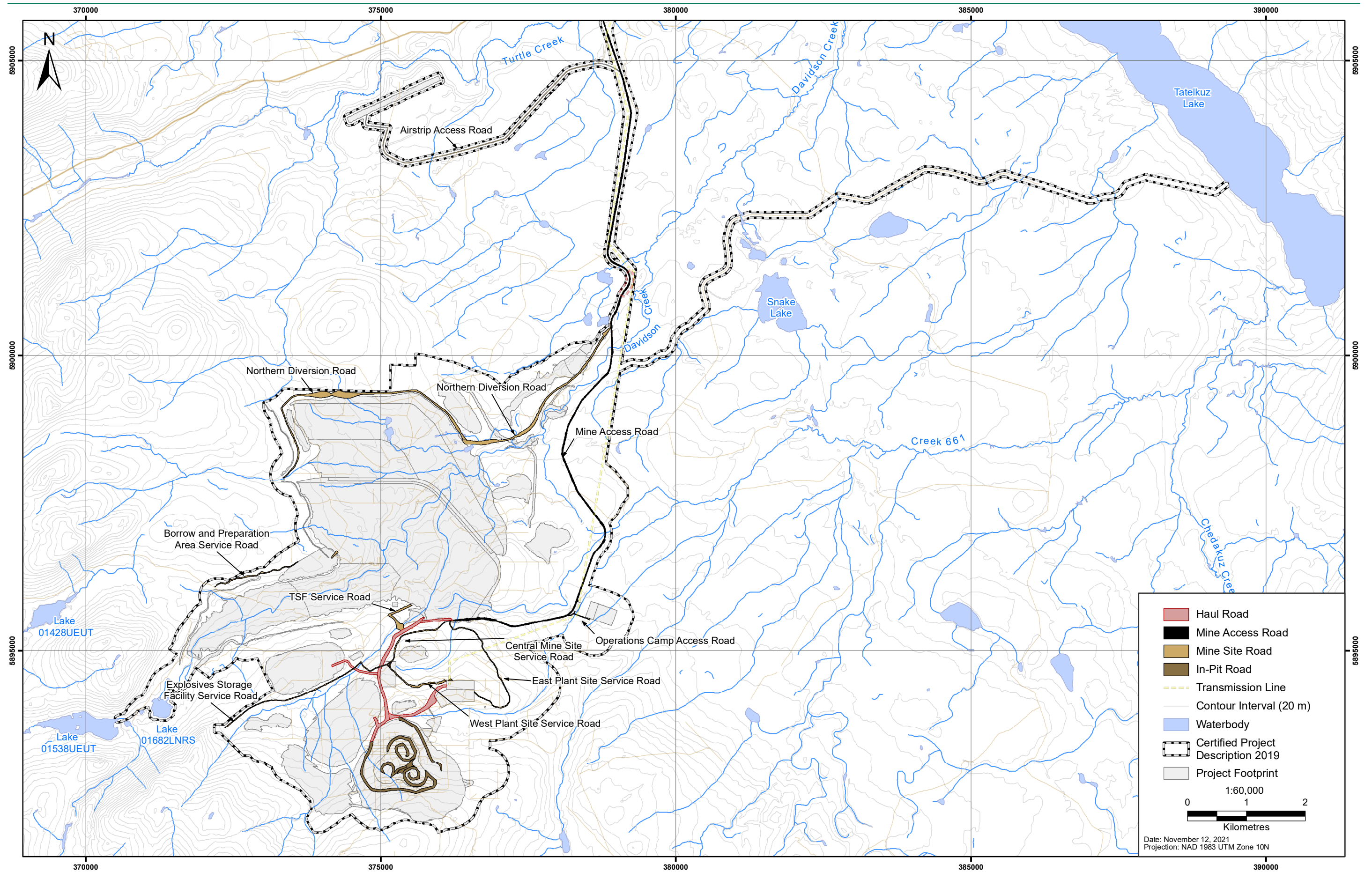


Figure 7.3-4: General Arrangement of Roads at the Beginning of Reclamation (end of Year +23)

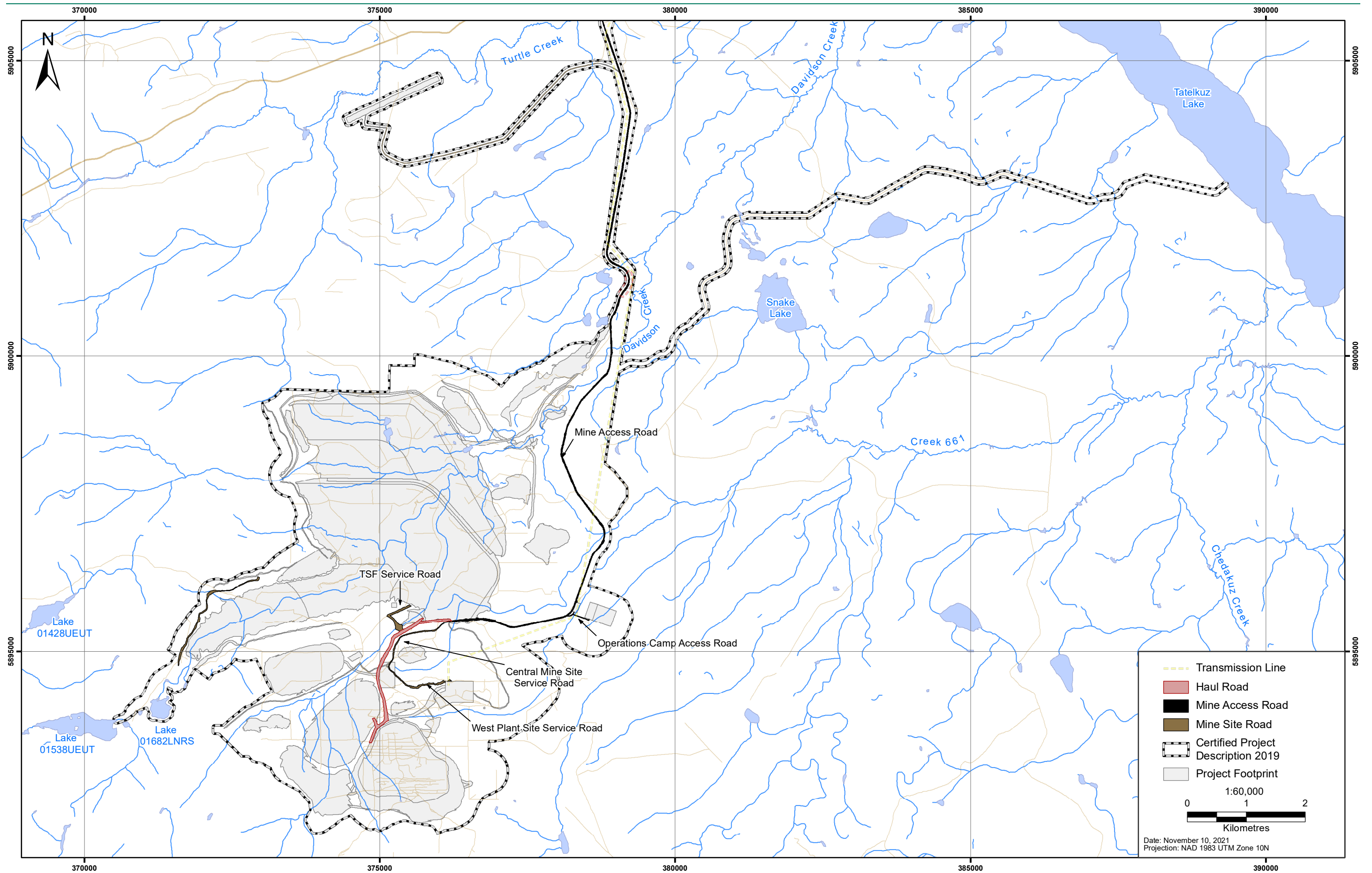


Figure 7.3-5: General Arrangement of Roads Required for Post-Closure

High-risk areas of the mine site (i.e., explosives storage facility and electrical sub-stations) will be fenced to prevent unauthorized entry. Waste transfer areas will also be fenced to prevent wildlife access in accordance with the Waste (Refuse and Emissions) Management Plan (Appendix 9-N).

The decommissioned exploration access road will be sign-posted and a physical barrier will be installed to prevent off-road vehicles from accessing the reclaimed roadbed. A sign will also be posted at the mine site boundary stating that entry is prohibited, in the event off-road vehicles (or pedestrians) are able to progress to that location.

7.5 VHF Radio Communications

The primary means of communications on the mine site is VHF Radio. Table 7.5-1 provides the radio frequencies in use at the Project and the respective areas of use.

Table 7.5-1: Blackwater Radio Channels

Channel	Frequency	Frequency Use
RR#4, RR#14	151.3700/150.5450	Kluskus FSRs
Channel 1	173.6700	Access Road
Channel 2	171.4500	Camp
Channel 3	TBC	Safety/Emergency
Channel 4	TBC	Security
Channel 5	TBC	Mine Operations
Channel 6	TBC	Processing Plant
Channel 7	TBC	Warehouse

As the MAR is a radio-controlled single lane road with pullouts, all vehicles travelling in either direction will be required to call km's up and down to communicate location to other users. Radio communication will be via Channel 1.

While on site, Channel 4 will be used to communicate with other vehicles and Security.

While travelling on the Kluskus and Kluskus-Ootsa FSRs, Channel RR#4 and RR#14 will be used to communicate with other industrial users of the FSRs up to the MAR junction.

7.6 Traffic and Vehicle Management Protocols

Traffic and vehicle management, protocols and rules are described in Table 7.6-1.

Table 7.6-1: Traffic and Vehicle Management Protocols

Category	Protocol
Communications	Mine site vehicles and mobile equipment, including authorized private vehicles, will be equipped or escorted by vehicles with two-way radios when travelling on Project-controlled roads.
	Individual radio frequencies will be assigned to respective operating units and two-way radios will be able to access every Project frequency.
	Site maps will be readily accessible to all site employees, contractors, and visitors.
	Changing road conditions are expected to be communicated as part of safety meetings and as they arise between drivers.

Category	Protocol
Communications (cont'd)	Horn signals will be used when initiating movement of all vehicles: <ul style="list-style-type: none"> ■ 1 horn blast before initiating forward movement, and ■ 2 horn blasts before initiating reverse movement.
Design	<p>Traffic patterns will be designed to separate light and heavy vehicle traffic to the greatest extent possible. Signage will be posted in areas of potential interaction between light and heavy vehicles.</p> <p>Haul roads will be designed and constructed in accordance with Part 6, section 6.9.1 of the Code.</p>
Road Condition Management	<p>FSRs will be maintained in accordance with the road use permit, maintenance agreement and FLNRORD Engineering Manual.</p> <p>Dust suppression measures will be implemented to allow good line of sight,</p> <p>Snow will be ploughed from roads when necessary, and products having low environmental impact (e.g., sand, gravel) will be used as needed to ensure safe road conditions.</p> <p>Snow bank heights will be managed using blading or other clearing techniques, and escape pathways will be maintained at wildlife corridors along roadways to keep banks and pathways within heights decided in consultation with regulators and Aboriginal Groups once the road is constructed in accordance with Wildlife Mitigation and Monitoring Plan (WMMP).</p> <p>Road salts will not be used for de-icing unless other methods for de-icing and traction control do not meet safety requirements in accordance with the WMMP.</p> <p>Roadsides will be revegetated with species that avoid attraction of wildlife (e.g., no clover or other highly palatable species) in accordance with the Vegetation Management Plan.</p>
Night Operation	<p>Night operation of vehicles will follow the same rules as daytime operation.</p> <p>Lighting will be supplemented by a flashing light above the cab of the vehicle to be used when outside of areas with direct illumination by overhead lights.</p>
Parking	<p>All drivers will use the "Back-in" or "Drive Through" protocol when parking their vehicle or bringing their vehicle to a stop for an extended period of time so the direction of travel is forward after parking or when initiating movement of a vehicle.</p> <p>Vehicle chocks will be used where there is a potential for the vehicle to roll.</p>
Passing	<p>Light Vehicle Passing Light Vehicle – Passing anywhere on Project roads is prohibited unless the lead vehicle pulls over to a complete stop and signals the overtaking vehicle that it is safe to pass. This may be communicated by radio or physically waving the operator past.</p> <p>Light Vehicle Passing Haul Truck – Passing anywhere on Project roads is prohibited unless the haul truck operator communicates via radio to the light vehicle that it is safe to pass.</p> <p>Light Vehicle Passing Mobile Equipment – The same procedure will be followed when passing working mobile construction equipment when there is no flag person. When passing construction equipment, vehicles must use caution to stay out of a machine's swing radius until positive communication is established with the operator. The operator will indicate that it is safe to pass by stopping all machine movement (e.g., placing the bucket on the ground).</p>
Restrictions	<p>Authorized use of on- and off-road vehicles will be restricted to established roads and designated trails, except as needed to access monitoring sites and remote communications equipment. Use of private recreational vehicles will be prohibited at all times.</p>

Category	Protocol
Right of Way	The hierarchy for determining vehicle priority and right-of-way is as follows: 1. Active mine or construction equipment such as haul trucks, loaders, dozers, and graders. 2. Heavy haul equipment such as fuel trucks, semi-trailers, etc. 3. Light vehicle transport.
	Vehicles with a lower priority must yield to vehicles of higher priority.
	Loaded vehicles have priority over unloaded vehicles regardless of direction of travel.
	Loaded vehicles going down have priority over loaded vehicles coming up.
Road Grade	Maximum operating road grade is 10% with grades up to 15% allowable for short sections of road as per Code regulation.
	In-pit haul road grades are limited to a maximum of 10%
Runoff Protection	Any roads requiring run-off protection will have a ramp installed to ensure safety in an emergency situation. In accordance with Section 6.9 of the Code, on roadways where the grade exceeds 5%, runaway lanes or retardation barriers will be provided.
Shoulder Barriers	Haul road shoulder barriers will be constructed and maintained in accordance with Section 6.9.1(b) of the Code: i. at least 3/4 of the height of the largest tire on any vehicle hauling on the road; ii. of a construction or a specification that is in general conformance to accepted engineering practice; iii. located and maintained along the edge of the haulage road wherever a drop-off greater than 3 m exists; and iv. incorporating breaks that do not exceed the width of the blade of the equipment constructing and maintaining the breaks to allow for drainage and snow clearance.
Signage	The final location for signage will be determined by the Engineer of Record as the Project is constructed and installed prior to road commissioning, and a minimum, will include: ■ stop signs or yield signs; ■ road names; ■ one-way traffic situations; ■ km markers on MAR; ■ radio frequencies; ■ restrictions; ■ directions to site infrastructure; and ■ speed limits.
	Signage along mine site roads will include: ■ wildlife corridor or habitual crossings; ■ speed limits; ■ advisory signage warning drivers of speed limit changes; ■ advisory corner speeds; ■ road segments with limited visibility, and ■ any other identifiable hazards such as overhead crossing wires and wildlife crossings.
Speed Limit	The maximum speed limit on Project roads is 50 km/h.
	The maximum speed limit through the Plant Site and all other areas where encounters with pedestrians may occur is 10 km/h.
	Travel speeds must be reduced based on road conditions, weather, and wildlife presence when and where required.
Traffic Volume	Non-managerial employees will be transported by bus to the Project site during construction, and bus and airplane during operations to limit traffic utilizing the FSRs and MAR.
	Employees will be restricted from driving personal vehicles to the Project site.

Category	Protocol
Traffic Volume (cont'd)	Minimum traffic levels will be maintained along the MAR to the extent possible.
	Staff will be bused or shuttled from camp operations to work sites, where possible, to limit traffic disturbance over the course of a day.
Disabled Vehicles	The vehicle's emergency flasher will be turned on and flares will be placed in front and behind the vehicle to warn approaching traffic.
	Any person directing traffic will wear reflective clothing.
Vehicle Requirements	All vehicles will be equipped with spill kits.
	All light duty site vehicles (including snowmobiles and ATVs) will be equipped with a buggy whip with a beacon at the top.
	Additional procedures will be required for use of vehicles without roll over protection.
	Use of snowmobiles or ATVs will be restricted on roads with other types of traffic.
	All site vehicles will travel with their daytime running lights or low beam lights on at all times.
	High beam lights will be used at night when possible. High beams will not be used within 60 metres of following a vehicle or within 150 metres of an approaching vehicle.
	All site-based vehicles will have a visibly marked unit number for identification and tracking.
	All vehicles will be equipped with a fire extinguisher, first aid kit, and between October 1 to May 31, a winter emergency kit.
	All BW Gold vehicles, contractor vehicles, transport vehicles, and visitors intending to enter the mine site will carry appropriate insurance, and registration.
	Back-up alarms will be installed on all mine site equipment including light vehicles (does not apply to off-road vehicles unless required by the Code).
	Back-up alarms will be used at all times.
	All site vehicles will be inspected prior to use and have the inspection recorded in each vehicle's log book. Any deficiencies will be appropriately noted and dealt with accordingly.
	All traffic on the site is right hand traffic.
	All vehicle operators will have a valid drivers' license appropriate for the vehicle under their operation and have received appropriate site drivers training.
Wildlife / Vehicle Collisions	Wildlife will be given the right of way along all Project-controlled roads.
	Employees and contractors will receive training on wildlife sightings and incident reporting in accordance with the WMMP.
	All wildlife sightings, interactions, and incidents will be recorded and reported to mine environmental and other relevant personnel as soon as safe to do so (Section 3.6 of the WMMP).
	Wildlife incidents will be reported in the annual WWMP, which will be provided regulators and Aboriginal Groups.

8. MONITORING

Monitoring of MSTCP compliance and effectiveness will be conducted by Site Security, and other departmental managers or as directed by the Mine Manager.

8.1 Monitoring and Evaluation

Monitoring of MSTCP compliance will be the responsibility of Site Security, and other departmental heads as directed by the Mine Manager. Monitoring of the road system will include:

Tracking vehicle operators to ensure completion of the site orientation;

- Enforcement of project road speed limits;
- Tracking of road safety incidents, including wildlife interactions/collisions, to determine trends and identify areas requiring further mitigation;
- Monitoring the effectiveness of animal escape way breaks in snow clearing banks;
- Monitoring unauthorized development of snowmobile trailer pullouts;
- Monitor and record unauthorized ATV access to mine site;
- Record incidental observations of wildlife locations;
- Record general observations of wildlife occurrence; and
- Record the amount and nature of traffic use by BW Gold and its Contractors.

Monitoring will also include:

- Tracking the results of vehicle inspections to identify necessary improvements;
- Periodic vehicle inspection by Site Security for excess dirt and invasive plants when vehicles enter or leave the mine site; and
- Inspection of security gates by Site Security during regularly scheduled rounds to assess effectiveness or signs of forced entry. Signs of forced entry will be reported immediately to the security departmental manager.

9. REPORTING AND RECORD KEEPING

9.1 Reporting

Reporting will be in accordance with the *Mines Act*. Periodic health and safety audits will assess the implementation of the MSTCP, and training and incident records.

The following incidents will be reported immediately to departmental managers after the appropriate protocols identified in the respective management plans are enacted to control the situation:

- Near-misses;
- Failure to observe mine site vehicle operator rules;
- Vehicle collisions or near misses involving single vehicles, multiple vehicles, or wildlife;
- Evidence of unauthorized access to the mine site by a vehicle; and
- Evidence of unauthorized hunting, fishing, trapping, or any other prohibited activity on the mine site.

Reporting will be done weekly and monthly by the Health & Safety and Environment staff as part of overall site safety reporting. Reports will be reviewed internally by department managers. Where required, reports will be forwarded to relevant government agencies as stipulated by regulations and permits.

9.2 Record Keeping

Monitoring data will be entered into an electronic database and have quality control checks completed upon receipt of results. Data will be entered into a standard format that allows for data reporting and analyses. Data and data comparisons will be stored in a single file format for each type of survey or monitoring activity. Monitoring records will be stored for maintained and retained in accordance with government requirements. Monitoring data shall be available on request by Mines Inspectors.

10. EVALUATION AND ADAPTIVE MANAGEMENT

The MSTCP will be reviewed annually to assess the effectiveness of the measures in the plan and whether plan objectives are being met. Other updates to the plan may be undertaken in response to:

- changes to Code requirements;
- near-miss or other incidents involving mine vehicles or mobile equipment;
- changes to mine site traffic patterns or access rules; and
- new training requirements for employees and contractors.

11. PLAN REVISION

The MSTCP is a “living” document as required based on annual evaluations and feedback. BW Gold will revise the plan as required based on annual reviews and feedback. All proposed revisions will be reviewed and discussed with the Blackwater Joint Occupational Health and Safety Committee prior to implementation. Revised versions of the plan will be filed with EMLI, FLRNORD, and Aboriginal Groups.

12. QUALIFIED PROFESSIONALS

This management plan has been prepared and reviewed by the following qualified professionals:

Prepared by:



Mark Welsh, M.Sc.
Senior Consultant

Reviewed by:



Rolf Schmitt, P.Geo.
Technical Director

13. REFERENCES

Definitions of the acronyms and abbreviations used in this reference list can be found in the Acronyms and Abbreviations section.

Legislation

Environmental Assessment Act, SBC 2018, c. 51.

Fisheries Act, RSC 1985, c. F-14.

Forest Act, RSBC 1996, c. 157.

Forest and Range Practices Act, SBC 2002, c. 69.

Forest Practices Code of British Columbia Act, RSBC 1996, c. 159.

Impact Assessment Act, SC 2019, c. 28.

Mines Act, RSBC 1996, c. 293.

Mining Right of Way Act, RSBC 1996, c. 294.

Motor Vehicle Act, RSBC 1996, c. 318.

Occupational Health and Safety Regulation, BC Reg. 269/97.

Species at Risk Act, SC 2002, c. 29.

Transport of Dangerous Goods Act, RSBC 1996, c. 458.

Transport of Dangerous Goods Regulation, BC Reg. 231/2002.

Transportation of Dangerous Goods Act, 1992, SC 1992, c. 34.

Transportation of Dangerous Goods Regulations, SOR/2001-286.

Water Sustainability Act, SBC 2014, c.15.

Wildfire Act, SBC 2004, c. 31.

Wildlife Act, RSBC 1996, c. 488.

Workers Compensation Act, RSBC 2019, c. 2019.

Secondary Sources

BC EAO. 2019a. *Assessment Report for Blackwater Gold Mine Project (Blackwater) With respect to the Application by New Gold Inc. for an Environmental Assessment Certificate pursuant to the Environmental Assessment Act, S.B.C. 2002, c.43*. Prepared by the Environmental Assessment Office. May 17, 2019.

BC EAO. 2019b. *Summary Assessment Report for Blackwater Gold Mine Project (Blackwater) With respect to the application by New Gold Inc. for an Environmental Assessment Certificate pursuant to the Environmental Assessment Act, S.B.C. 2002, c. 43*.

BC EAO. 2019c. *In the matter of the ENVIRONMENTAL ASSESSMENT ACT S.B.C. 2002, c. 43 (the Act) and in the matter of an Application for an Environmental Assessment Certificate (Application) by New Gold Inc. (Proponent) for the Blackwater Gold Project Environmental Assessment Certificate #M19-01*.

- BC EMLI. 2020. *Health, Safety and Reclamation Code for Mines in British Columbia*: Victoria, BC.
https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/code-review/feb2021_health_safety_reclamation_code_2021_rev.pdf (accessed March 2021).
- BC EMLI. 2021. *Health, Safety and Reclamation Code of British Columbia*. British Columbia Ministry of Energy and Mines.
- BC EMPR & ENV. 2019. *Joint Application Information Requirements for Mines Act/Environmental Management Act Permits*.
- BC FLNRORD. 2019. *Engineering Manual*. British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development. July 26, 2019.
- CEA Agency. 2019. *Decision Statement Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 to New Gold Inc. c/o Ryan Todd, Director, Blackwater Project. Sunlife Plaza Suite 610, 1100 Melville Street Vancouver, British Columbia V6E 4A6 for the Blackwater Gold Project*.