



Processing Facility and Mine Development Project



Environmental Assessment Registration

September 27, 2022

Processing Facility and Mine Development Project
Environmental Assessment Registration

Submitted By:
Trinity Resources Ltd.
250 Minerals Rd.
Conception Bay South, NL, Canada
A1W 3J1

September 27, 2022

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ACRONYMS AND ABBREVIATIONS

ASL	above sea level
CBS	Conception Bay South
Dal Tile	Dal Tile International Inc.
DFO	Fisheries and Oceans Canada
ESG	Environmental Social Governance
EU	Europe
GHG	greenhouse gas
IMCN	Industrial Minerals Company of Newfoundland
Leq, LAeq	Equivalent Continuous Sound Level
Mine Site	Oval Pit and Mine Hill deposit
mt	Metric Tonnes
NL	Newfoundland and Labrador
NLDECC	Newfoundland and Labrador Department of Environment and Climate Change
NLDFFA	Newfoundland and Labrador Department of Fisheries, Forestry and Agriculture
NML	Newfoundland Minerals Limited
NOC	National Occupation Classification
PPD	Pollution Prevention Division
US	United States
TSS	total suspended solids
The Project	Processing Facility and Mine Development Project
The Town	Town of Conception Bay South
WRMD	Water Resource Management Division

EXECUTIVE SUMMARY

Trinity Resources Limited (Trinity) operates a world-class pyrophyllite mine, an aluminum silicate mineral, and pilot processing facility, located in Manuels, Conception Bay South. The Manuels mine site is located 3.6 km from the Port of Long Pond.

First discovered in 1902, the mine site was initially operational from 1956 until 1995 under the ownership of the United States (US) -based Armstrong Company which was mining the pyrophyllite ore as a raw material used to produce ceramic wall tile. During their tenure, Armstrong mined 6.6 million tonnes of ore with 1.2 million tonnes of product shipped from the Port of Long Pond and 5.4 million tonnes of non suitable ore stockpiled at the mine site. In 1995, following a merger of the Armstrong Ceramic Tile division with Daltile Co. which is based in Texas, the mine was put in a care and maintenance mode until 1998 when it was acquired by Trinity.

With no product development work completed on applications outside of ceramic tiles, Trinity began the process of developing a process flow sheet and product applications for the alumina silicate mineral and has been producing and shipping pyrophyllite products since 1999. Since this time, Trinity concurrently undertook significant research and development of both ore processing and market applications in the industrial mineral sector of Canada, the US and Europe.

This work culminated with the installation of an ore processing pilot plant in 2019 which has proven, in commercial application, the ability to separate mineralogy at the mine site and expand industrial application of Trinity's mineral products. With current mine resource modelling providing upwards of 30 million tonnes of reserves the company is anticipating a mine life more than 60 years.

Based on commercial approvals from the pilot plant installation, Trinity will be investing in excess of \$8M CAD at the mine site over the 2022/2023 timeline to support its planned development. These developments include:

- Completion of a 1.3 km. by-pass road to reduce transportation safety risk associated with the general public transiting near the mine site to access the back country.
- Installation of a Processing facility with an annual capacity of 500,000 metric tonnes which will separate both mined and stockpiled ore into various products. This facility will use the latest process technology which is **chemical free and produces zero-waste** with materials separated into various mineral qualities and products. The processing facility will also allow a complete reclamation of existing stockpiles at the mine site and will eliminate future stockpiles from being created during mine development.
- Re-establishing active mining operations in the Oval Pit and Mine Hill deposits as required.

Employment will exceed 50 full time jobs with additional direct and indirect expenditures on supplies, service providers and contractors. Annual exports are forecasted to grow which will provide continued support to the Port of Long Pond as Trinity is a significant commercial user of the port for export activities.

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Pyrophyllite products produced through the sorting facility will be exported to serve diverse Canadian, US and International industries which include:

- Foundry Coating
- Refractory Brick Manufacturing
- E-Glass Manufacturing
- Architectural Paint Products
- Industrial Coating Products
- Adhesive and Sealant Products
- Rigid Plastic Products
- Plastic Film Products
- Automotive Engineered Polyolefin Products
- Synthetic Diamond Manufacturing
- Environmental Industry Applications
- Cement Industries
- Personal Care Applications

Trinity has developed a robust Environmental Social Governance (ESG) platform whereby the company is integrating social and environmental concerns across all business operations and interactions with stakeholders. Trinity's ESG platform has three main principles which drive decisions related to our planned investments:

1. Caring for our Planet: protecting the environment, reducing our carbon footprint, and acting on climate change.
2. Empowering our People: ensuring our employees and their families stay healthy and safe, nurturing talent, promoting diversity and inclusion, fostering dialogue, and safeguarding human rights.
3. Building for the future: engaging with the local community, behaving ethically, ensuring responsible purchasing, and promoting sustainable products and technologies.

As part of its ESG mandate Trinity Cares community engagement platform will provide support for underfunded outreach and support programs in the local community.

To support this project, Trinity has engaged with the local municipality in June and July 2022 and is committed to working with our neighbours in a respectful environment to address concerns. Trinity has also consulted with the Newfoundland and Labrador Department of Environment and Climate Change (NLDECC) Environmental Assessment Division regarding the registration of our development plans; have held on-site meetings with DFO and provided a project update to the Long Pond Harbour Authority and commercial user group.

In summary, Trinity's investment represents a significant economic contribution for the local community and to the Newfoundland economy and is not anticipated to result in significant adverse environmental effects.

1 INTRODUCTION

1.1 NAME OF UNDERTAKING

Processing Facility and Mine Development Project (the Project)

1.2 PROPONENT INFORMATION

1.2.1 Name of Corporate Body

Trinity Resources Ltd.
250 Minerals Road
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1.2.2 Chief Executive Officer

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2 DESCRIPTION OF UNDERTAKING

2.1 PURPOSE AND NEED FOR THE UNDERTAKING

The Project involves the following:

- Construction of a 1.3 km. by-pass road for Minerals Road that will divert public traffic from the operating mine site and improve safety for local community and the public
- Construction and operation of a processing facility with supporting infrastructure and utilities
- Reactivation of mining activity at the Oval Pit and Mine Hill deposits

Minerals Road is a public road that runs through the middle of the mine operating area. Trinity is planning the construction of a By-pass Road to divert public traffic around the mine site to facilitate continued mine development and reduce public health and safety risks.

Construction and operation of a processing facility will allow Trinity to produce high valued products for export in a zero waste and chemical free process. Materials will be processed from both from the historical waste stockpiles, and from the *in-situ* resources of the Oval Pit and Mine Hill deposits.

Reactivation of mining activity at the Oval Pit and Mine Hill deposits will substantially increase resource availability and extend the life of operations at the mine in a sustainable manner.

2.2 PROJECT BACKGROUND

2.2.1 Historical Activity

In 1903, Fredrick Andrews (“Andrews”) began the first development of Mine Hill. To this day, the property mining grant is referred to as the “Andrews” Grant. He constructed an aerial tramway from the mine to the railway which transported 6,860 tonnes (7,562 tons) of pyrophyllite from the Mine Hill 1904 to 1905 with an estimated value of \$31,000.

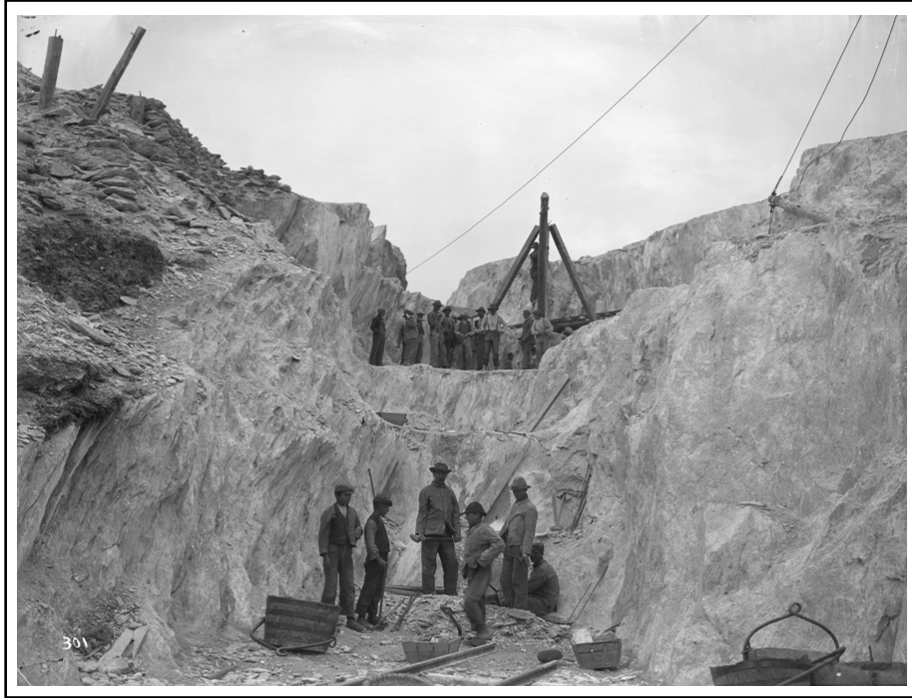


Figure 1 - Early mining at Mine Hill quarry (Archive Photo)

Andrews sold the mine and operation rights after only having operated for a total of three years, in 1906. R. K. Bishop purchased the rights, who in turn reopened the mine from 1909 to 1910.

In 1937, the Government of Newfoundland's Department of Natural Resources released a report entitled "Bulletin No. 7, Pyrophyllite Deposits of Manuels, Conception Bay by John S. Vhay". The study determined that the Oval Pit area would offer a larger tonnage with a lower grade than that of Mine Hill and prompted Industrial Minerals Company of Newfoundland ("IMCN") to acquire the mining and operation rights to the Andrews property in 1938. IMCN would construct a mill on the property to separate the almost pure pyrophyllite and quartz-pyrophyllite schist. They were able to produce 1,016 tonnes (1,120 short tons) of pyrophyllite that year, and in 1942 IMCN commenced operations within the Oval Pit, where they were able to determine that the quality of the pyrophyllite improved at depth.

IMCN finalized operations in 1947, and the Government of Newfoundland retook control of the Andrews property under the Undeveloped Mineral Area act in 1952. No production came from the site, with the exception of 8 tonnes (9 short tons) in 1954 for local markets.

In 1956, the Department of Mines of the Newfoundland Government commenced a drilling campaign focused on the Oval Pit area. Until the end of the drilling campaign in 1958, 12,192 metres (40,000 feet) were diamond drilled within 83 holes. The Oval Pit was the primary focus of the program over the three years, with 20 holes drilled at Mine Hill in 1957. Drill hole intersects encountered pyrophyllite 90 to 120 metres below ground level at the Oval Pit. Additional drill holes were conducted 335 metres north of the Oval Pit and found pyrophyllite 60 metres below the surface (Gillespie, 1959).

From 1959 to 1995, Newfoundland Minerals Limited (NML), a division of Armstrong World Industries, produced approximately 25,000 to 45,000 tonnes of pyrophyllite each year for more than 30 consecutive years. During this operational period the mine site produced the following materials:

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- Exported 1.22 million tonnes of pyrophyllite ore
- Stockpiled on site 5.4 million tonnes of waste ore

In 1995, the mine was put on care and maintenance after Armstrong underwent a merger and reorganization with Dal Tile International Inc. (Dal Tile).

In 1998, Trinity purchased the mine site from Armstrong which included assumption and continuation of mining operations while concurrently researching and developing other high valued market applications.

2.2.2 Current Operations

Currently, Trinity operations include the following:

- Processing pyrophyllite from resource stockpiles
- Primary processing which includes crushing and screening
- Running ore sorting pilot plant facilities for ore processing
- Grinding plants to produce micronized powder-products
- Exporting an average of 100,000 mt of products per year from our ship loading facilities in Long Pond, Conception Bay South (CBS), NL

Trinity continued with the operations of NML, while investing in research and product development for applications outside the traditional ceramic industry. Trinity has successfully developed markets for the existing stockpiles and began reclamation of the resource stockpiles to produce a cement grade feedstock. Additional investments have included the installation of pilot facilities for ore separation and the production of micronized powdered products. These products are being developed for various industrial applications ranging from polymers, refractory bricks to paints and coatings industries across North America and Europe.

In 2021, Trinity shipped approximately 200,000 metric tonnes of cement grade product from its resource stockpiles to the ship loading facility in Long Pond.

2.3 GEOGRAPHICAL LOCATION

The Oval Pit and Mine Hill deposit (mine site) is located on Minerals Road, approximately two kilometres (km) south from its junction with Highway 2, a major two-lane highway 10 km southwest of the south city limit of St. John's, in NL. The mine site overlooks the town of CBS and is approximately 4 km from Trinity's main office and dockside property at Terminal Road (see Figure 4).

The mine site area is accessible on the southernmost section of Minerals Road in CBS, on an existing gravel road. The existing extension of Minerals Road runs through the middle of the mining lease and mining operations area, to wooded and agricultural areas. The northern end of the access route connects to Route 2 and an overpass junction connects to the highway less than a kilometre away. These roads are well maintained for year-round access to the mine.

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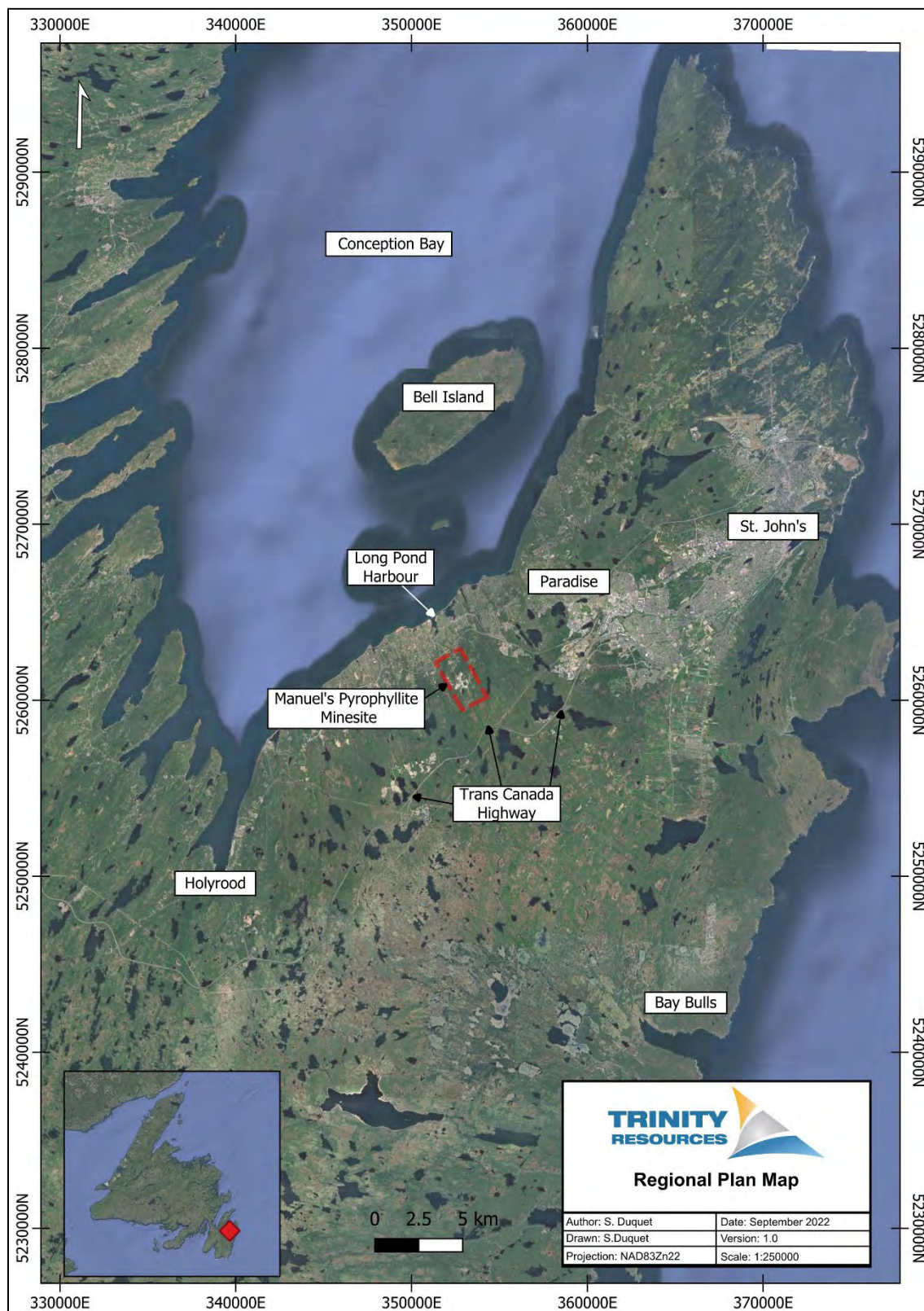


Figure 2 - Regional Site Map - Eastern Avalon

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Figure 3 - Regional Site Map - Conception Bay South

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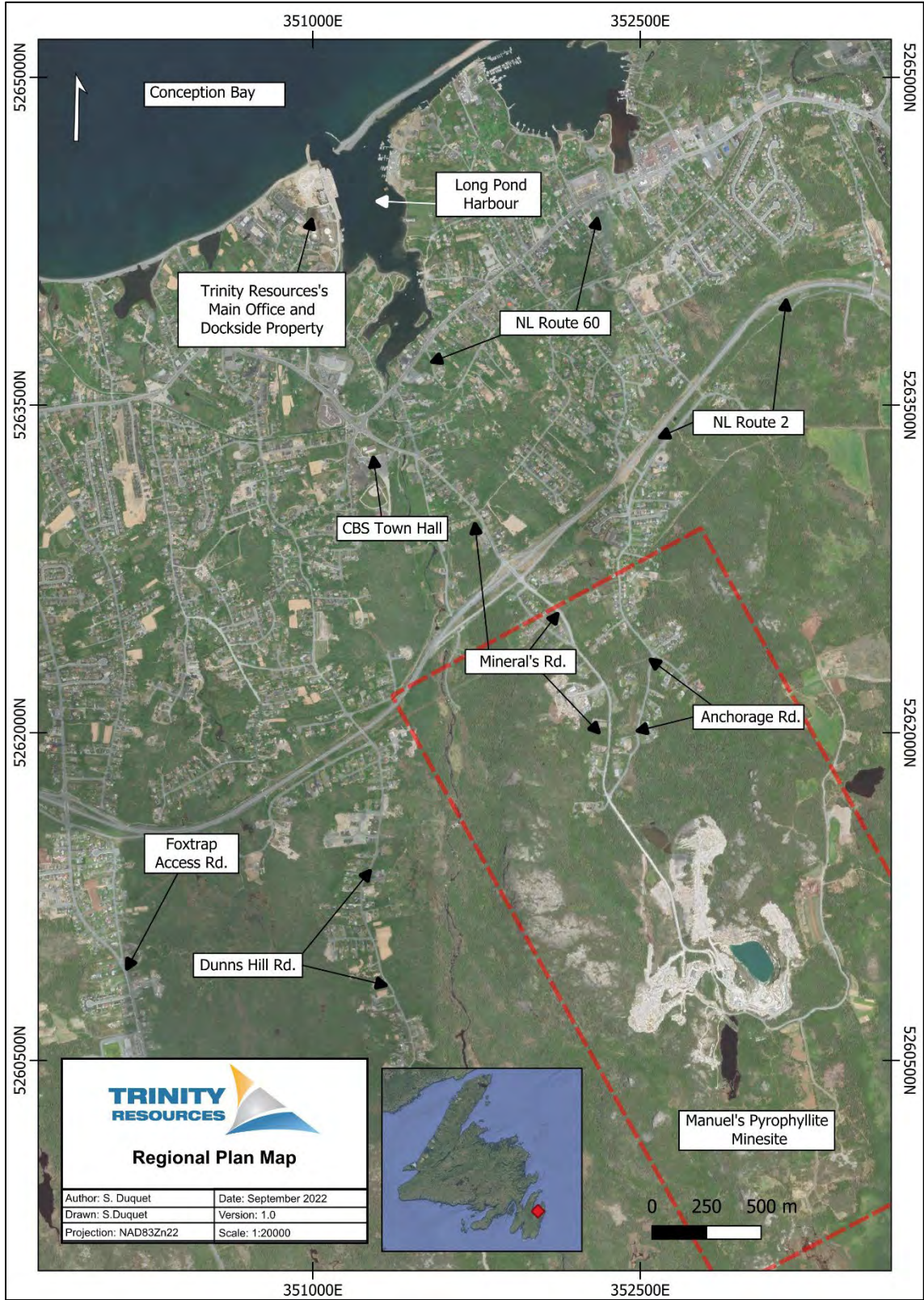


Figure 4 - Regional Site Map – Long Pond and Minesite

2.3.1 Biophysical Overview

This area is consistent with the Avalon's rugged topography with ridges and rounded hilltops. Most of the topography is a result of differential erosion of rock units and some faulting. Ridges are typically orientated southeast to northwest. The Project Area lies on a ridged plateau between two glaciated valleys, one to the west for the Conway Brook River system, and the Manuels River valley to the east. The most western ridge is known as White Hill, while the highest eastern ridge hill is known as Black Hill. Both hills are approximately 210 metres above sea level (ASL) (Vhey, 1956).

The ridges show evidence of differential erosion from geological faulting and the most recent glacial recession. The glaciation has caused the hilltops to be mostly uncovered, with the typical U-shaped valley in between ridge lines that contain various thicknesses of glacial till.

Winters tend to be mild with minor snow cover attributed near the coastlines. Precipitation amounts of 1,250 mm or more have been known to be recorded annually.

Plant and wildlife for the area is typical of near-urban environment of the Avalon. The region is known as Northeastern Barrens Subregion of the Maritime Barrens. The region is known for cold summers with frequent fog and strong winds, but this subregion has lower frequencies of fog and warmer summers when compared to other subregions.

The typical valleys of the subregion allows for good forest growth particularly with almost pure strands of stunted *Hylocomium-Balsam* Fir, with significant forested heath along the coastline. Gleyed podzols or gleysols are usually associated with Fir growths.

Indiscriminate burning by European settlers and the use of railways of the nineteenth century caused the development of extensive heath landscaping in the eastern part of the region. *Kalmia angustifolia* dominate the vast heaths on slopes where snow can accumulate. *Empetrum nigrum* and *Empetrum eamesii* tend to grow on the headlands and hilltop ridges which tend to be windswept.

Although the site has been used for mining and related activities for almost a century, only approximately 11% of the property has been developed for mining and supporting operations. The Project Area is therefore mostly vegetated.

Johnnies Pond lies south of the Oval Pit and immediately east of the Mine Hill deposit. Johnnies Pond discharges into a stream, known as Cross Brook, which flows north until eventually intersecting Conway Brook, which flows into Conception Bay. Figure 5 below presents the Cross Brook watercourse.

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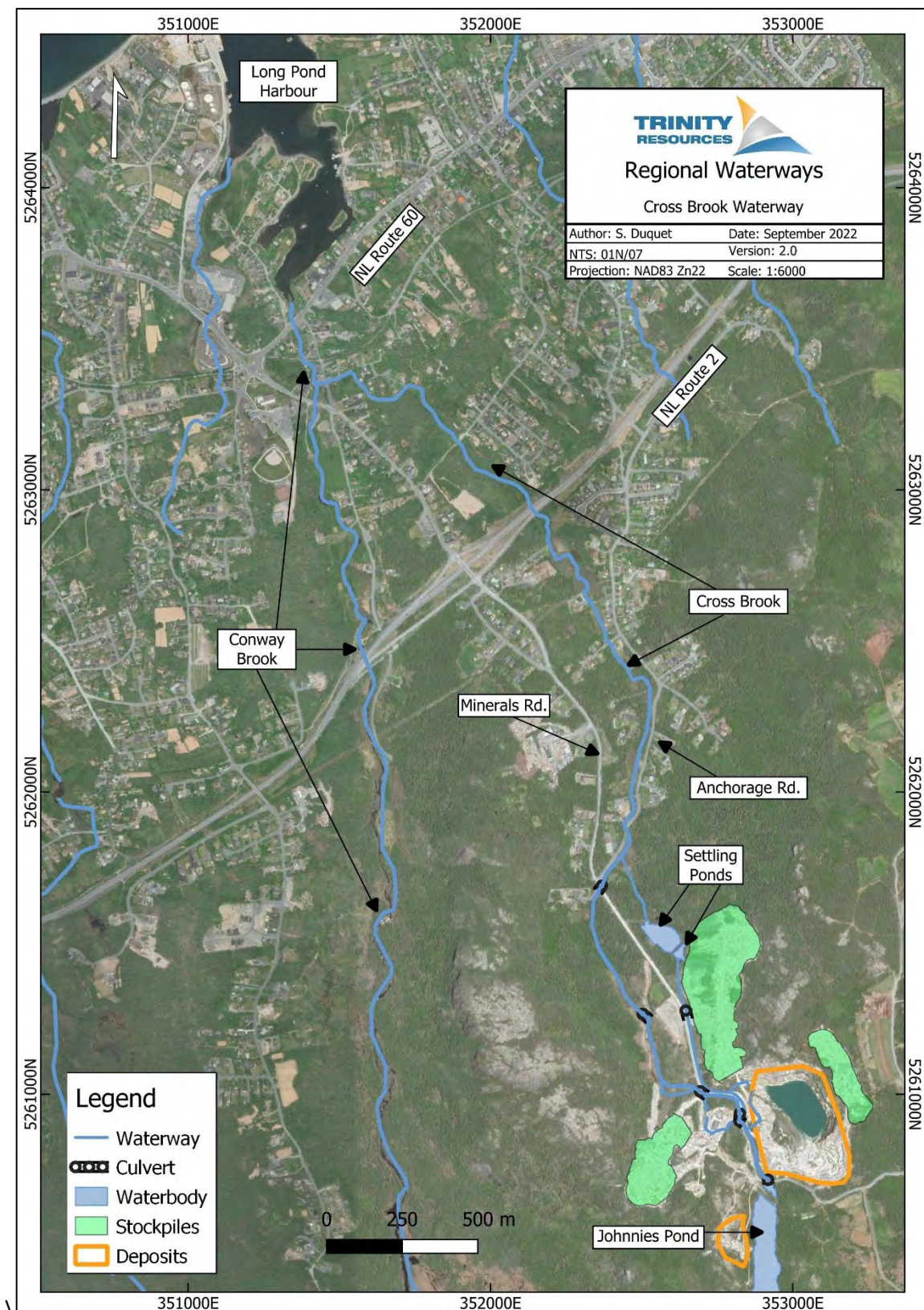


Figure 5 - Cross Brook Watercourse

2.3.2 Leases

2.3.2.1 Mining Lease

A Fee Simple Mining Grant was originally registered on July 4, 1904, to Fredrick W. Andrews in Volume 1 Folio 81 of the Registry of Crown Grants of the Department of Mines, Agriculture and Resources of Newfoundland and became entitled the F.W. Andrews Fee Simple Mining Grant. It encompasses approximately 518 hectares (1,280 acres) surrounding the Manuels pyrophyllite deposit and stockpiles (see Figure 7). Majority of the mining grant is within the Town of Conception Bay South municipal boundary and the developed area predominantly zoned as Mineral Workings, with the undeveloped areas designated as Rural. Of the entire surface area of the mining grant, only 11% (58 hectares) have been developed.

On March 13, 1964, NML was granted mineral rights and a Crown Grant which was registered in Volume 124 of the Registry of Crown Lands for the Province of Newfoundland in Folio 79, replacing the 1904 Mining Grant. NML subsequently amalgamated with Armstrong World Industries Canada Limited

On June 18, 1998, in an Agreement entitled “Asset Purchase Agreement” Armstrong World Industries Canada Limited sold all property and assets consisting of the extraction, crushing, and transporting of Pyrophyllite from the Crown Grant and Crown Leases to Trinity Resources and Energy Limited.

The location of the Crown Grant was downloaded from the GeoAtlas of the Geological Survey of the Department of Innovation, Energy and Technology of the Government of Newfoundland and Labrador.



Figure 6 - Aerial of Stockpile Operations

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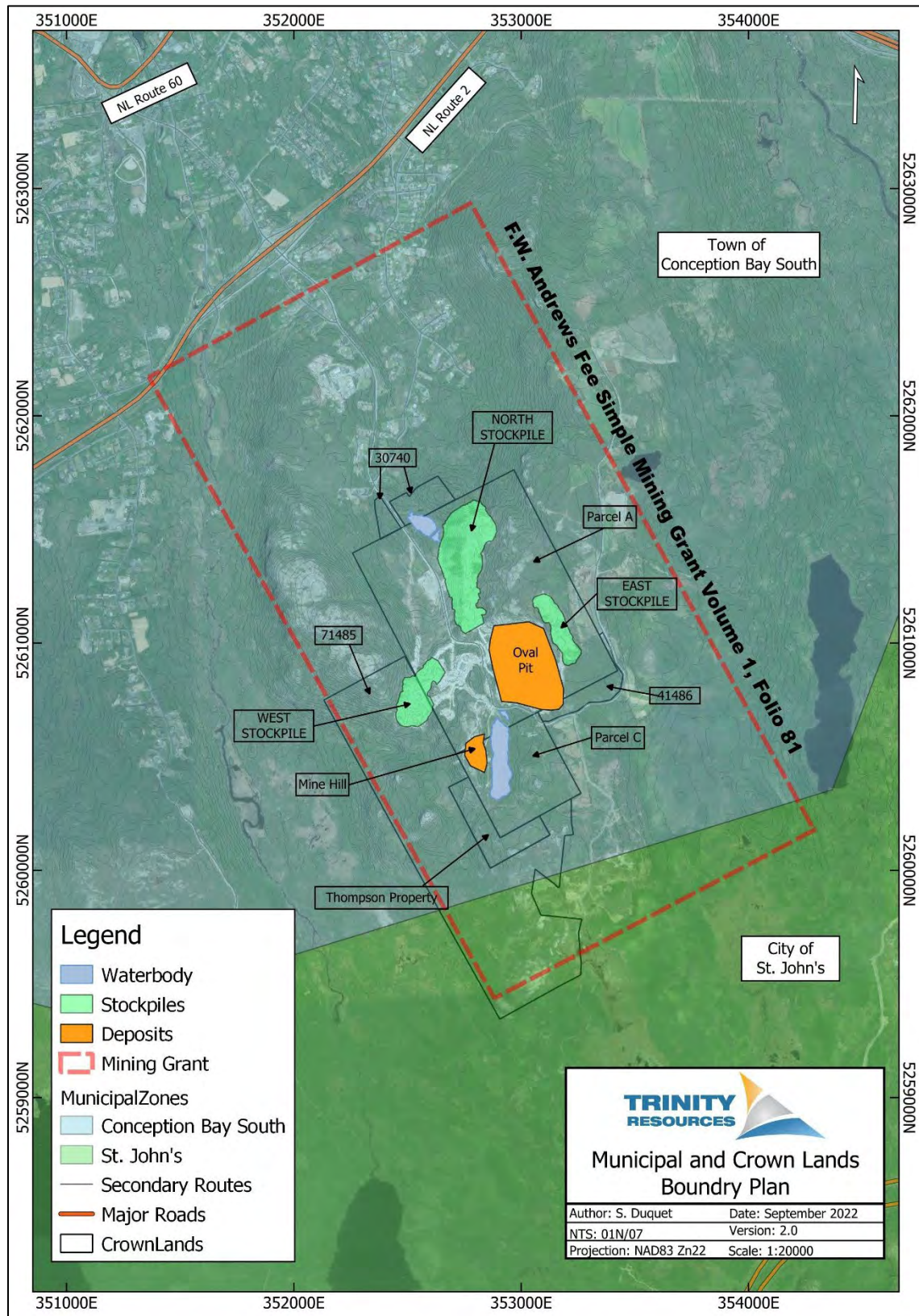


Figure 7 - Boundary Plan Map with Mining Grant and Surface Leases

2.3.2.2 Surface Leases

The Mining Agreement dated November 19, 1997, gives Trinity, in addition to the Mineral Rights, surface rights to 80.0 hectares, known as “Parcel A” (see Table 1). This area and a second 16.2-hectare parcel, known as “Parcel C”, which were surveyed for NML by E.C. Granter and Associates (registered Newfoundland Land Surveyors) in October of 1969.

By an Assignment made on July 30, 1998, Trinity acquired three (3) Crown Surface Leases from Armstrong World Industries. Lease No. 71485 contains an area of 68 hectares that expires with the expiration of the title to the Mineral Rights owned by Trinity. Lease No. 30740 contains two lots of 3.2 hectares and 1.1 hectares respectively and has a term of 50 years from September 16, 1977. Lease No. 71486 contains an area of 3.1 hectares and has a renewable term of 50 years from July 17, 1986 (See Figure 7).

Lease	Lease Commencement	Lease Expiry	Lease Duration	Area (Acres)	Area (Hectres)
Parcel A	June 6, 1956	June 5, 2055	99	197.8	80.0
Parcel C	June 6, 1970	June 5, 2055	85	40.0	16.2
30740 - Lot 1 (West of Minerals Road)	September 16, 1977	September 16, 2027	50	2.7	1.1
30740 - Lot 2 (East of Minerals Road)	September 16, 1977	September 16, 2027	50	7.9	3.2
71485	May 15, 1987	May 14, 2037	50	168.0	68.0
71486	May 17, 1986	July 16, 2036	50	7.6	3.1

Table 1 - Summary of Surface Leases

2.4 CURRENT MINE SITE COMPONENTS

The mine site includes various buildings and infrastructure used to support current operations, including an office, garage/lab, grinding mill, warehouse, and pilot ore sorting facilities. More information on existing buildings and infrastructure is provided below.

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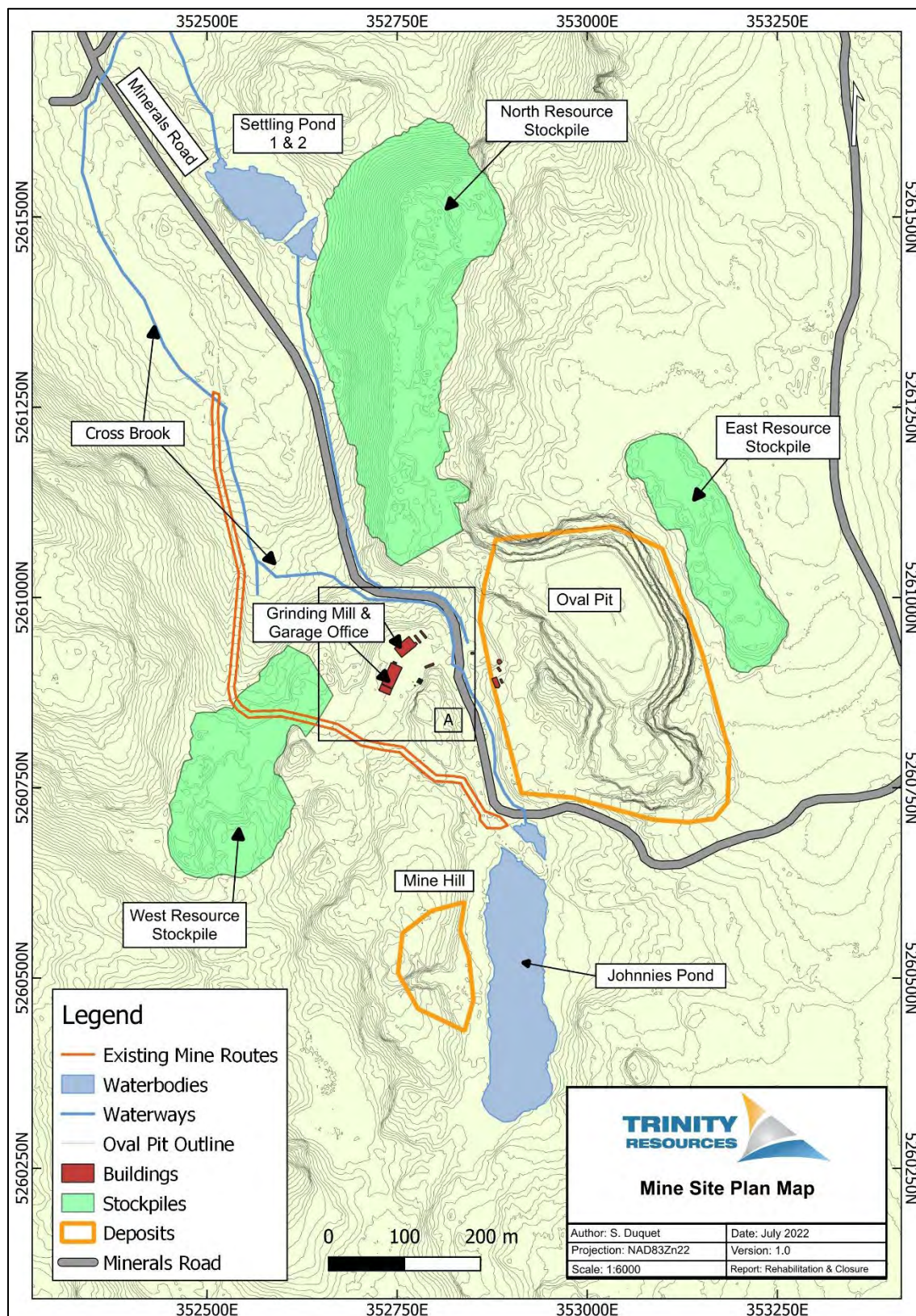


Figure 8 - Trinity Resources Site Plan (Section A is detailed in Figure 11)

2.4.1 Buildings

Existing buildings at the mine site are summarized in Table 2 and depicted on Figure 11.

Building Purpose	Building Type	Dimensions/Size (m)			Description
		Length	Width	Height	
Main Office	Concrete Foundation, Wood Framing	53	7.5	17	Contains office space for 12 offices, kitchenette, 3 bathrooms, and board room
Garage /Lab	Concrete Slab, Block Walls, Metal Siding	24	15	14	Garage and maintenance bays (2), employee lunchroom and bathrooms, offices (3) and laboratory
Grinding Mill / Warehouse	Concrete Slab, Block Walls, Metal Siding	30.5	15	16	Used for product storage, milling components

Table 2 - List of Buildings at the Mine Site

No changes are proposed to the main office, lab, garage repair shop, employee bathrooms or lunch areas as part of the Project scope. These buildings will continue to be used during Project operations. Figure 12 shows the current floor plan of the existing mill and planned expansion.



Figure 9 - Aerial Shot of Minerals Rd, North Stockpile, Mill Warehouse, Garage/Office, and Oval Pit

2.4.1.1 Mill Warehouse

Trinity has installed grinding mills to produce micronized powder products and some warehousing space for finished product. This mill facility includes space for three Raymond Roller mills and associated packaging equipment.

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The mills process ore as a final step in the production process and produces various micron powder sizes for industrial applications. The particle sizes of these products are generally smaller than 325 mesh (45 microns) and products are packaged in either 50 lb bags or 1000 kg big bags.

The production process collects the powder in a dust collection system which retains 100% of the powder for packaging.



Figure 10 - Mill Facility and Warehouse

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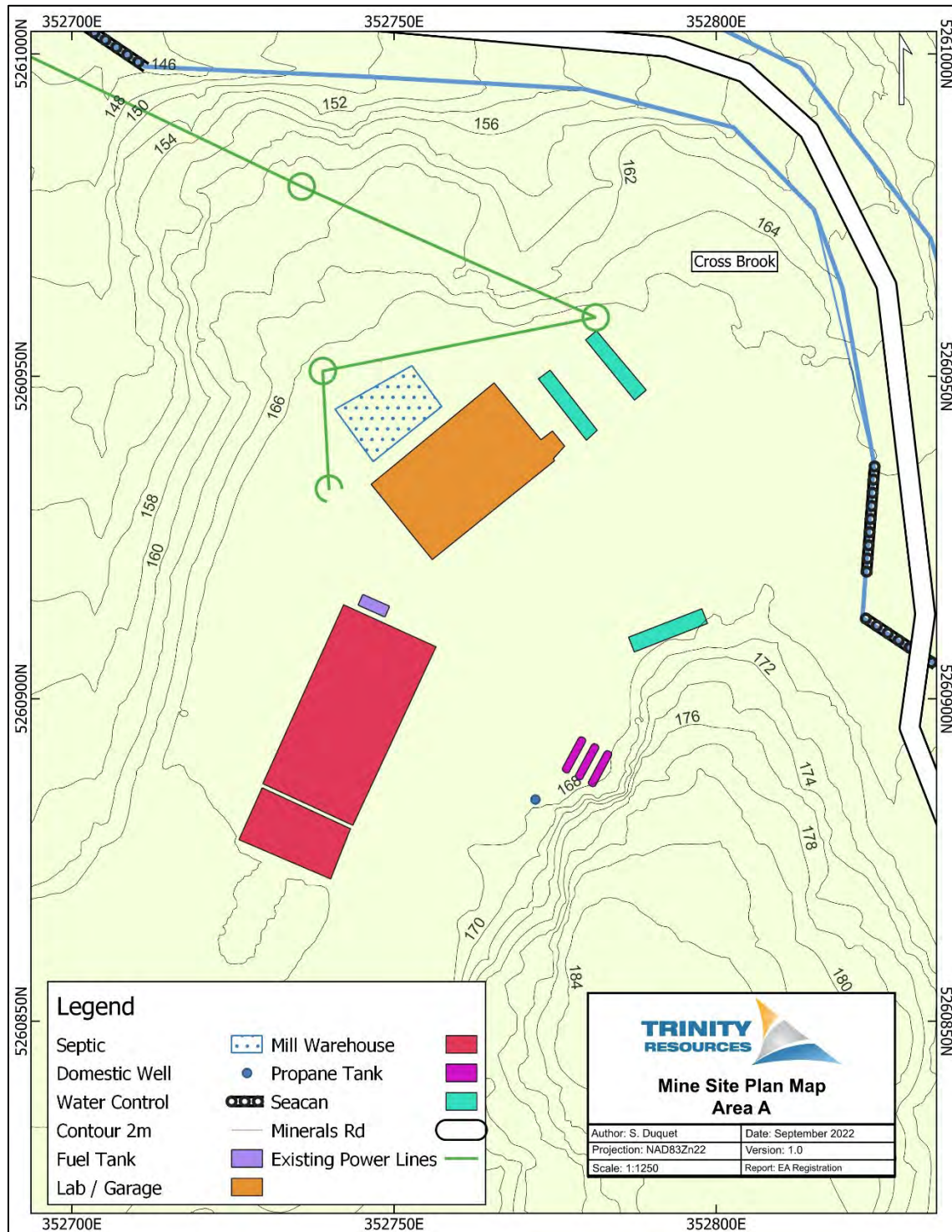


Figure 11 - Mill and Garage/Lab Location

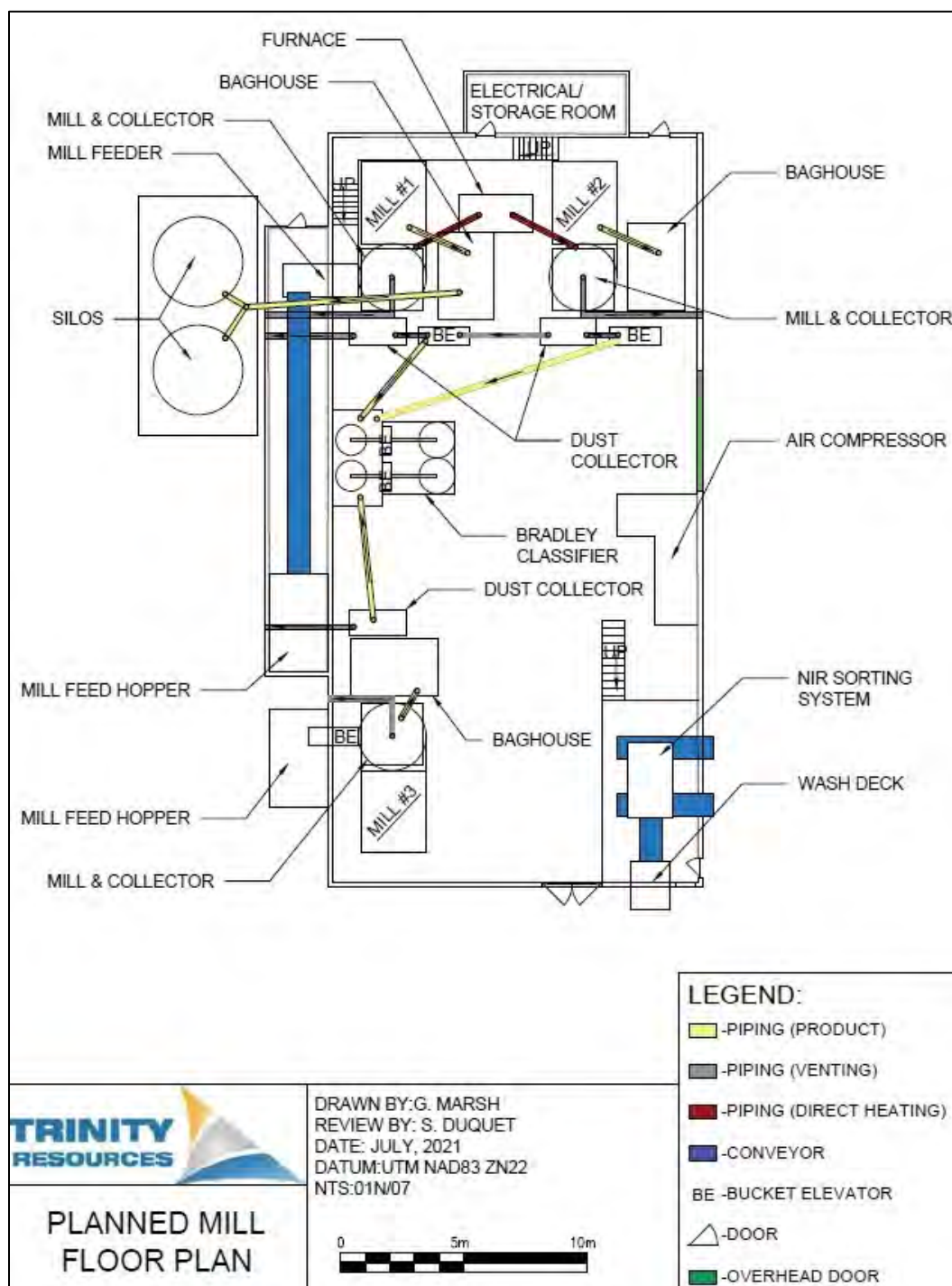


Figure 12- Planned Mill Floor Plan

2.4.2 Infrastructure

2.4.2.1 Power Lines and Communications

Currently, the site is serviced by Newfoundland Power with poles located within the mining lease area. These poles proceed along the current gravel access route and provide power to Trinity's existing buildings. Power line realignment will be needed for construction of the processing facility.

Phone utilities are supplied by Bell Aliant using the existing poles.

2.4.2.2 Fuel and Propane Storage

As noted on Figure 11, Trinity stores both diesel fuel and propane for operational use. Fuel is stored in permitted and certified 9,000 L horizontal tank supplied by a licensed fuel provider and is regularly refilled by local contracting company.

Propane is supplied by contractors and used in the mill furnace for drying ore during the grinding process. This includes three propane tanks with automated monitoring that is maintained by Superior Propane.

The Project will not require changes to current fuel and propane storage.

2.4.2.3 Water Supply and Sewage

Domestic water supply is provided from an on-site drilled well for use in the lab and washrooms within the Lab building. Sewage is collected in an on-site septic system. No changes or additions required.

2.4.2.4 Waste Management

Domestic and industrial waste are contained in proper containers and disposed of by a local waste management company.

2.4.3 Mine Equipment

Trinity operates various mining equipment used for mining and material preparation activities. Maintenance is conducted as required by staff or the equipment supplier. Equipment used in current operations includes the following:

- Wheel loaders
- Excavators
- Rock trucks
- Screeners
- Crushing plants
- Stacking conveyors

2.5 SHIP LOADING AND DOCK INFRASTRUCTURE

Trinity's ship loading equipment and dockside acreage is located at the end of Terminal Rd in Long Pond. The port is managed by the Long Pond Harbour Authority and they maintain the wharf infrastructure that can support ships up to 15,000 mt. The port is also used by other companies including Country Ribbon Inc., CRH Cement, and Woodward's Oil. Trinity is the main exporter from the Long Pond port.

The ship loader system includes two conveyor, steel support structure, and an underground concrete bunker that contains the conveyor feeders. No modifications are required to Trinity's ship loading infrastructure.



Figure 13 - Nighttime Ship Loading Operations

2.6 PROJECT ACTIVITIES

The Project will involve the following change in activities from current operations:

- Construction of a by-pass road for Minerals Road that will divert public traffic from the operating mine site and improve safety for local community and the public
- Construction and operation of a processing facility with supporting infrastructure and utilities
- Reactivation of mining activity at the Oval Pit and Mine Hill deposits

Construction activities associated with the sorting facility and By-pass Road are described below. Mining activities are described under Operations in Section 2.6.2. Figure 14 illustrates the areas that have previously been developed and the additional areas that are planned to be developed as part of this Project.

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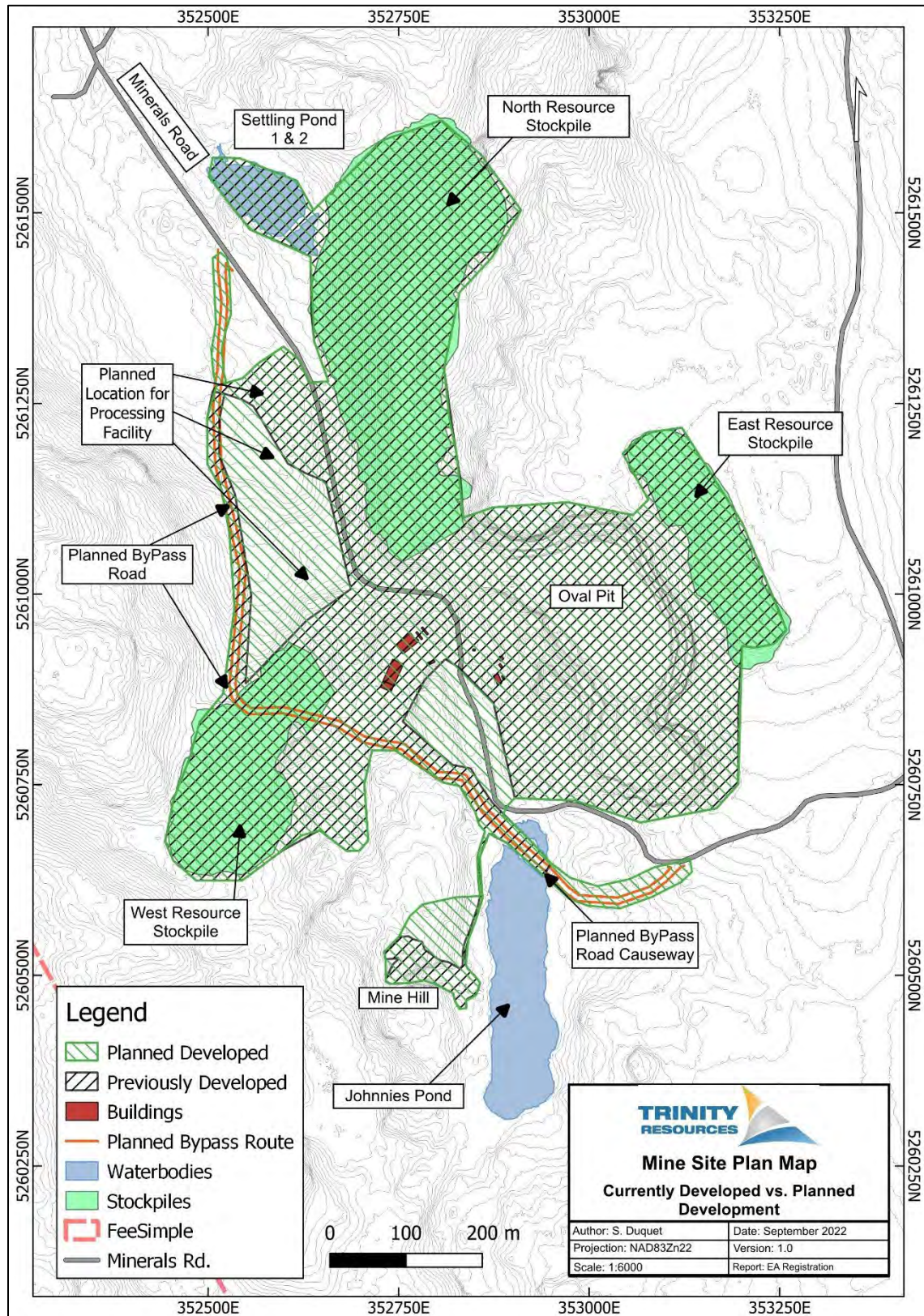


Figure 14 - Previously Developed Area vs. Planned Developed Area

2.6.1 Construction

2.6.1.1 By-Pass Road and Security

Current access to the mine site is via Minerals Road with the gravel section of the public road under the jurisdiction of the Department of Fisheries, Forestry and Agriculture (NLDFFA), Agricultural Lands Section. This road runs through the middle of the mine operating area and poses a significant public health and safety issue which has been previously highlighted to various Government Departments and the Town of CBS.

Trinity will complete a 1.3 km. by-pass road to direct public traffic along the westside of property, to substantially reduce risk of public interaction with active mining operations. Currently, 450 m. of the road has been constructed for mine haulage routing.

Permits from Newfoundland and Labrador Department of Environment and Climate Change (NLDECC) – Water Resources Management Division (WRMD) were received to complete the infilling of a causeway across Johnnies Pond using inert, non-reactive rock material, and for the installation of a culvert at the road crossing of Cross River. Figure 16 illustrates the By-Pass Road location in relation to the mine site and Minerals Road, with locations for gating. With the public and farmers having full access to the back country, Trinity will be installing gates on Minerals Road to eliminate public traffic from entering the active mining area.



Figure 15 - Aerial Shot of Bypass Road, Minerals Road and Mine Site Facilities

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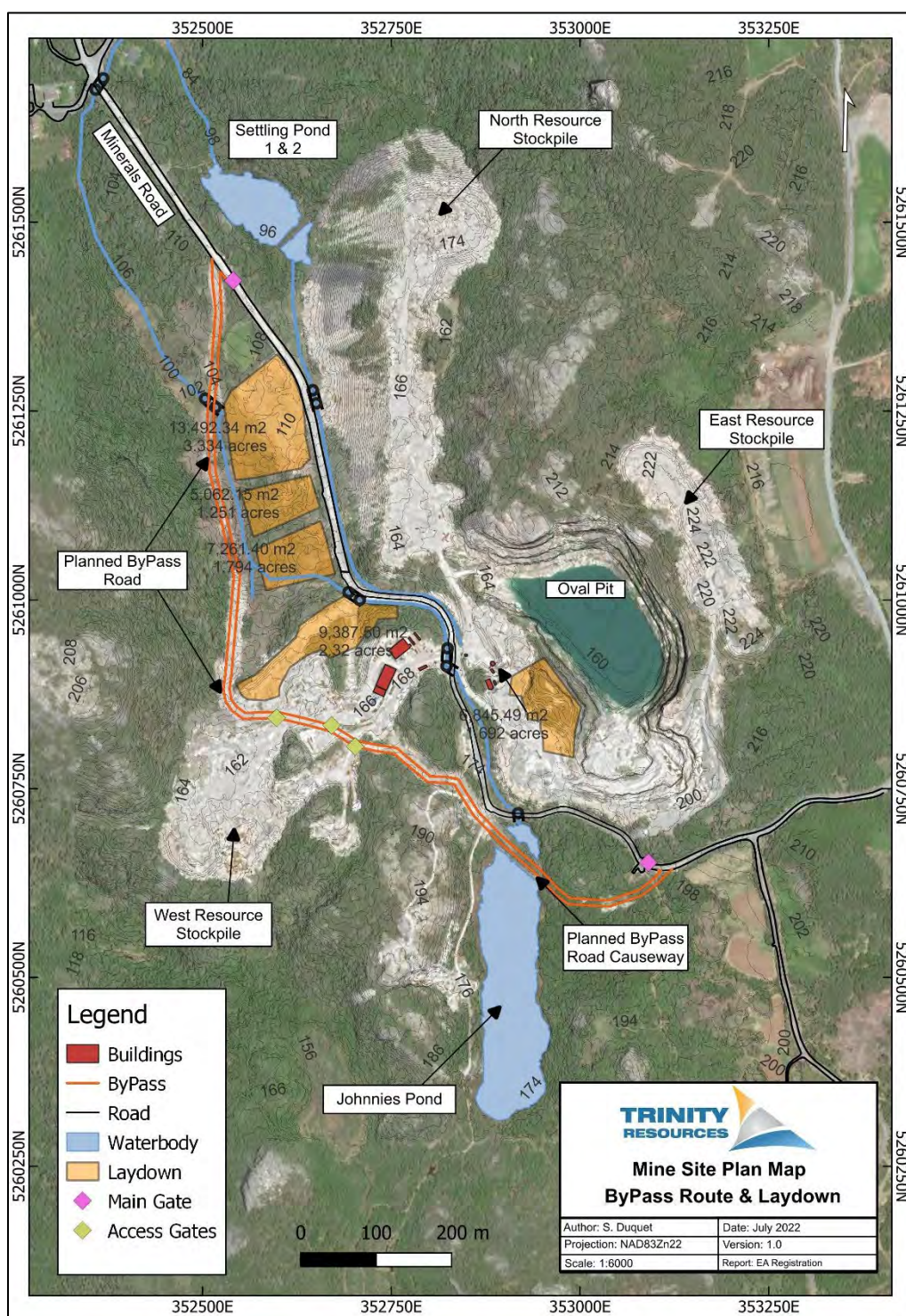


Figure 17 illustrate an example of the By-Pass Road cross-section, while Figure 18 presents the two types of gates to be erected on Minerals Road once the By-pass Road is functional. Construction of the By-pass Road is expected to be completed and open for public use in mid-2023.

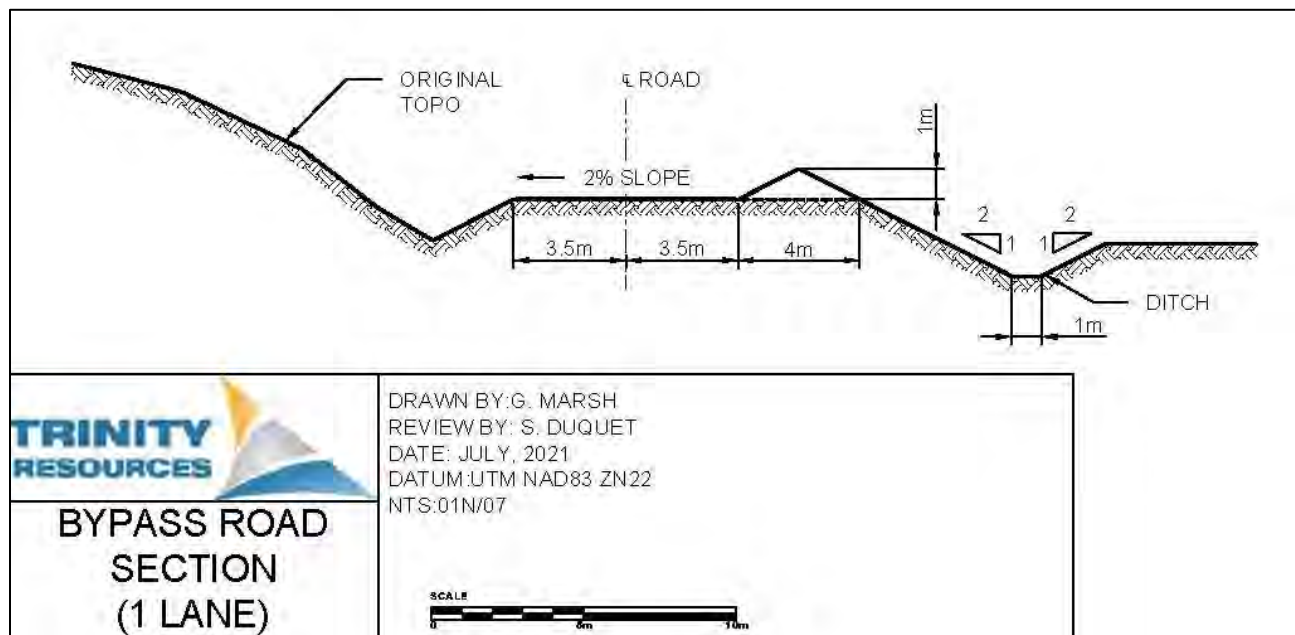


Figure 17 - By-pass Road Section

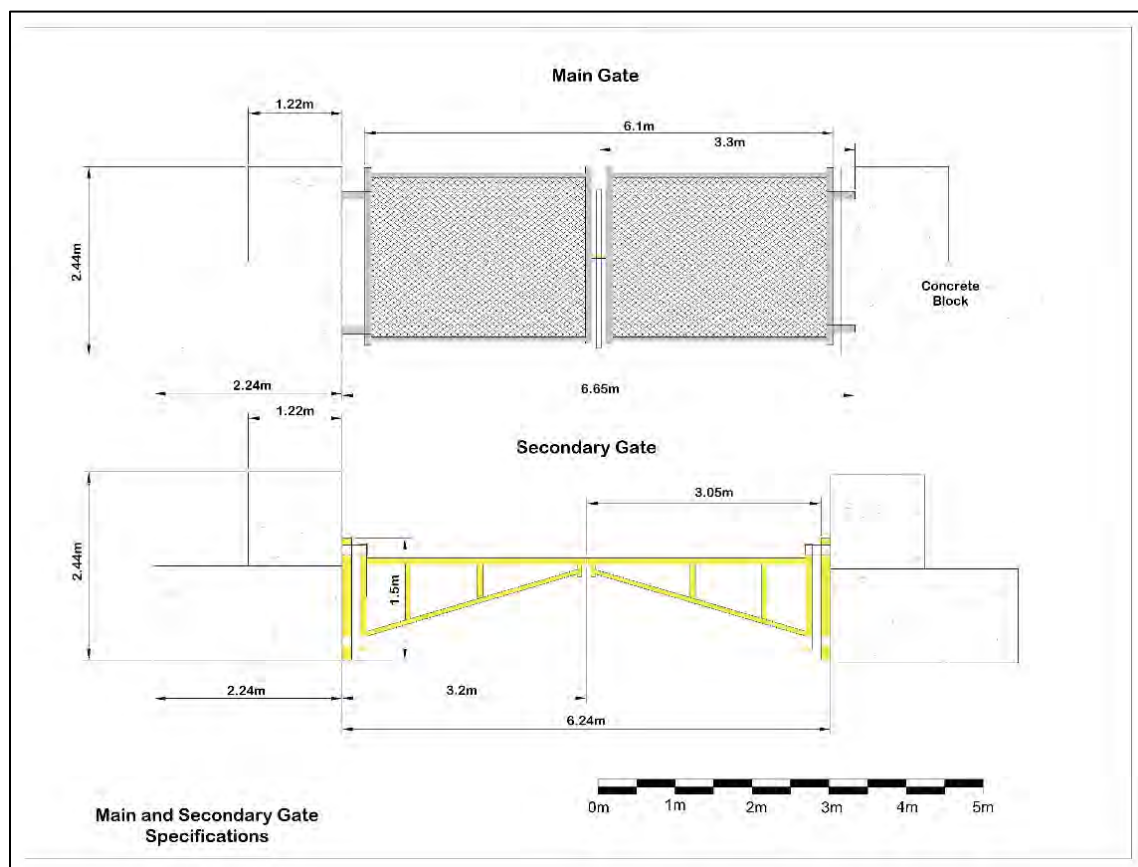


Figure 18 - Gate Specifications

2.6.1.2 Sorting Facility Installation

Trinity's commercial development is completely dependent on the installation of an ore processing facility to produce high quality products from the historical waste stockpiles, and from the in-situ resources of the Oval Pit and Mine Hill deposits.

Figure 19 and Figure 21 presents the possible placement of the proposed facility and how it will use the local topography as part of its construction. Using the natural topography of the identified area will reduce the footprint of the facility and provide the lowest operating cost. There is no waste generated from the processing facility and there are no chemicals used.

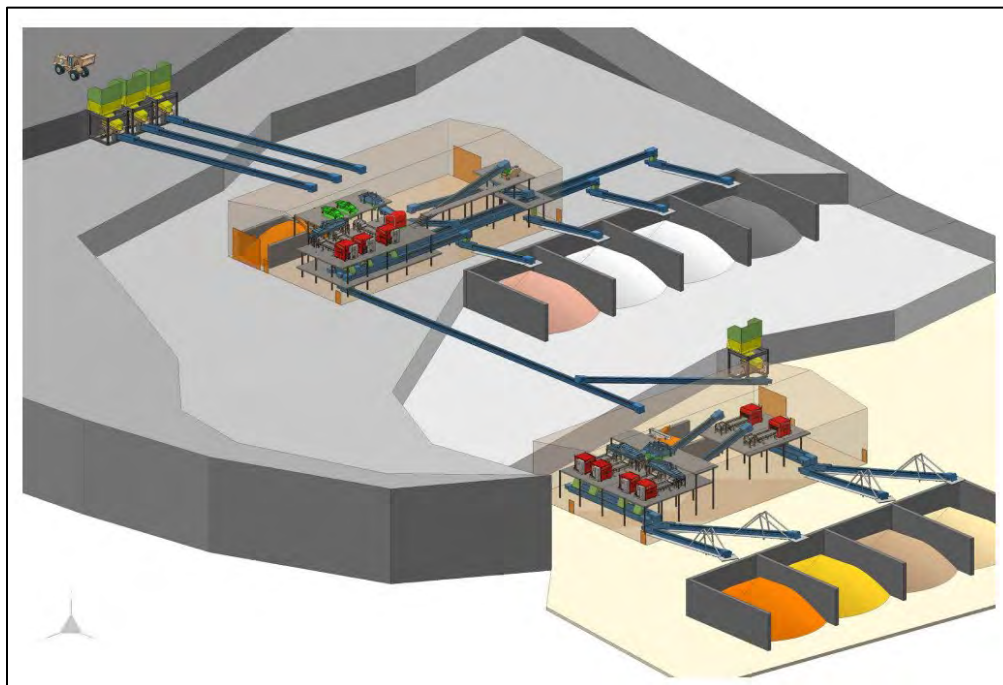


Figure 19 - Rendering of Possible Sorting Facility Layout

Construction of the facility will begin with earthworks. The site will need to be cleared, grubbed, leveled with access routes, and will need water routing and will require erosion and sedimentation controls. Trinity currently has permitted and installed a culvert on the access route as part of its by-pass road construction plans. Major key items are listed and described below.

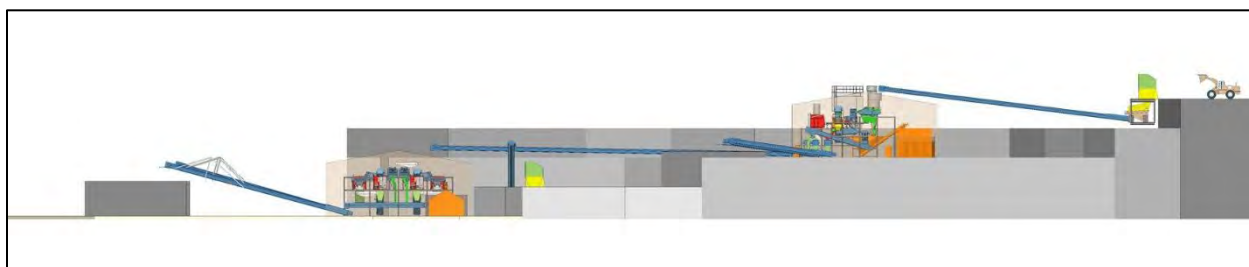


Figure 20 - Side View and Topography Cross Section of Possible Processing Facility Placement

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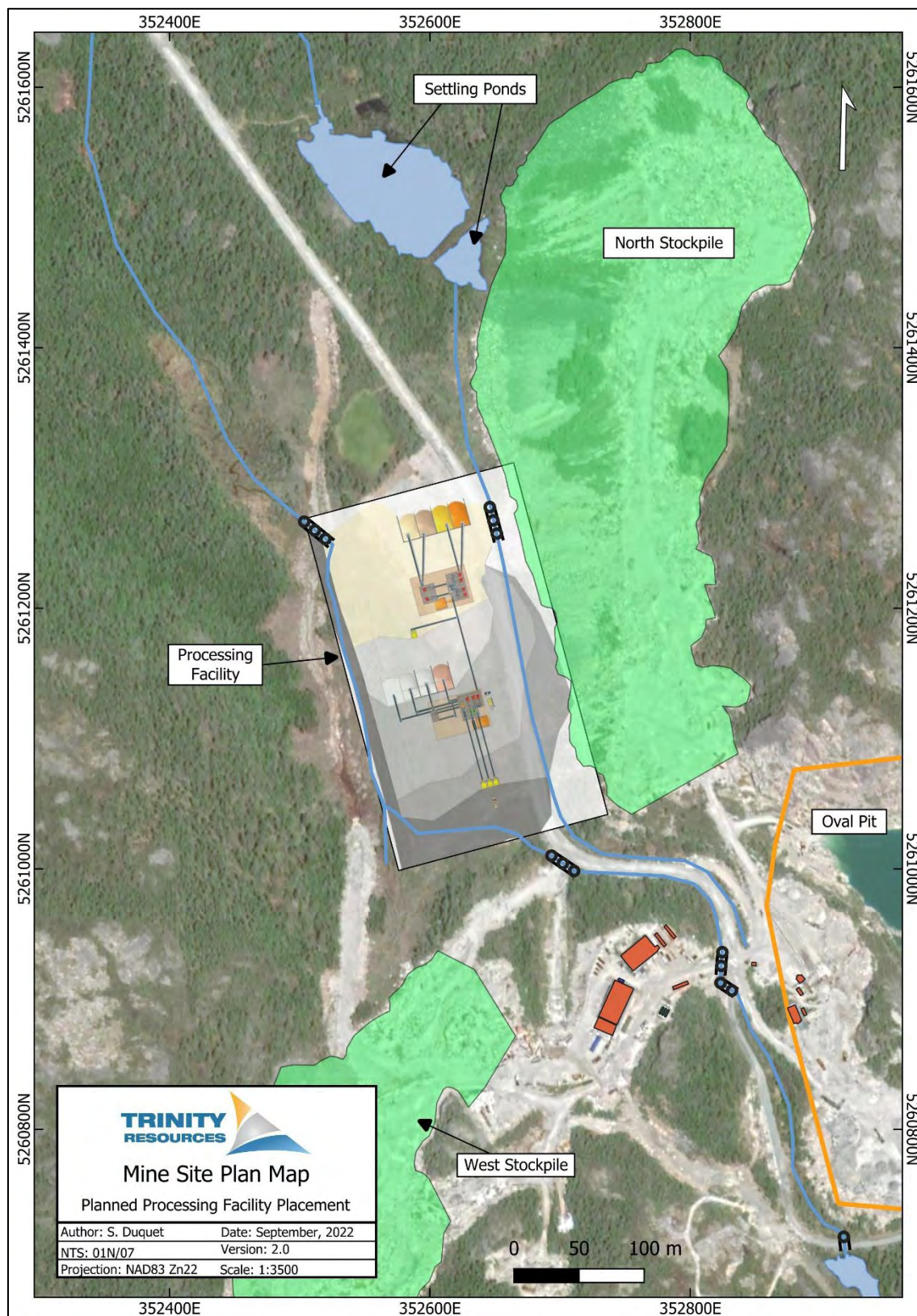


Figure 21 - Planned Processing Facility Placement

2.6.1.3 Laydown

Laydown clearing for facility construction is indicated in Figure 16 and Figure 22. The area is filled with overgrowth vegetation and bedrock outcropping. The area shown will be properly infilled to create level tiered staging areas.

2.6.1.4 Water Management

As part of the initial construction phase, a small section of Cross Brook will need to be diverted. Approximately 125 m of watercourse will be moved an average of 25 m as shown in Figure 22, to accommodate an updated layout for the primary process and laydown for processing plant material. This site layout will provide Trinity the space to maintain the lowest footprint for processing facilities and ore stockpiles.

Trinity has engaged with the DFO Project Review process to initiate this process, and once authorization in the form of an anticipated Letter of Advice is received, Trinity will apply for a permit under Section 48 of the NL Water Resources Act from WRMD for the stream diversion and construction phase erosion and sedimentation controls and an amendment to the site water management Certificate of Approval under the NL Water Resources Act and Environmental Control Water and Sewage Regulations for the additional settling pond.

During operation of the new ore processing facility water is used to clean the rock prior to the separation process with the fines washed from the material being collected as a product through a filtration system and the water recirculated to the washing process. There are no chemicals used in the process and there is no discharge of water to the established settling pond system.

Trinity's processing facility will recirculate 1,000 litres of water per hour for cleaning the lump ore. As noted, fines will be collected with a filtration system and the water recycled. Trinity anticipates that water will be sourced from dewatering activities. Trinity will consult with WRMD as required.

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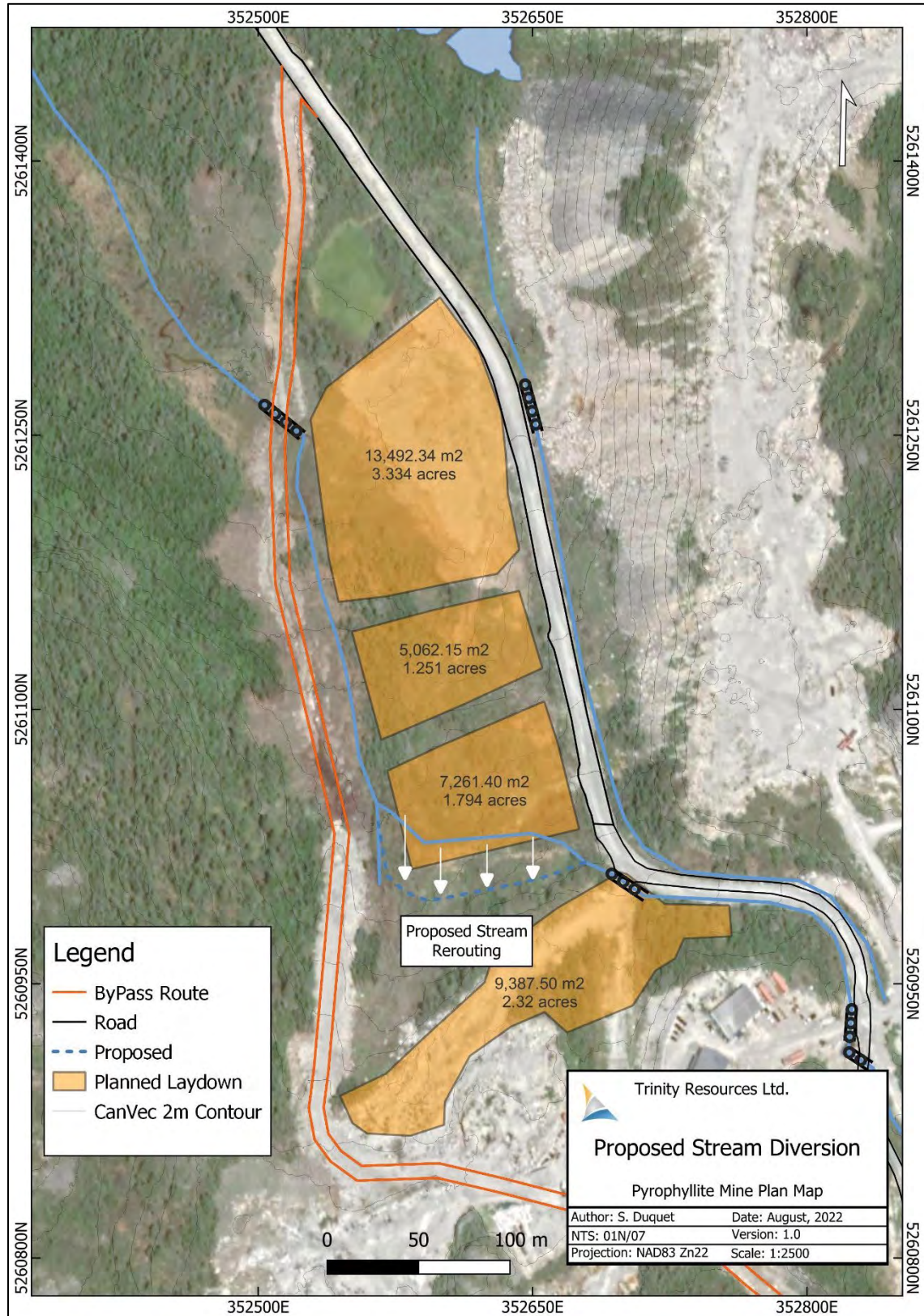


Figure 22 - Proposed Stream Diversion

2.6.1.5 Building Construction

Construction of the processing plant shell will commence once enough of the earthworks is completed to allow for this activity to commence. Local contractors will be hired to complete the building construction. Figure 21 illustrates a possible layout for the plant with a full engineered plan to be completed prior to commencement.

2.6.1.6 Processing Equipment

Ore processing equipment and related material handling equipment will be supplied and installed by the contractor. It is anticipated that the delivery and installation timeline will require 9-11 months from initial start date.

Equipment to be installed will include screeners, wash decks, material handling feeders, filter presses, water pumps, ore processing machinery and electrical and control systems.

2.6.2 Operations

2.6.2.1 Reactivation of Mining Activities

The mining plan of the *in-situ* resource will commence within the current Oval Pit and Mine Hill deposits. Extraction of material from the Oval Pit will align itself to a max pit design, originally designed by Armstrong in the 1990s. Mining will be conducted by blasting and quarrying, along the wall face and on the pit floor. Trinity will progressively rehabilitate the pit as operation activities proceed by placing a series of berms and fencing along the upper pit perimeter.

Trinity is expecting production within the Oval Pit and Mine Hill deposits to commence in 2023, at which point 50-100,000 mt of pyrophyllite will be removed from the pit annually. The company plans to concurrently utilize new mined material and process resource stockpiles currently on site. Trinity's business development plans are aiming to achieve an annual production of 500,000 mt for life of mine.

Future delineation of the deposit will be conducted to determine the future extent of the resources. Figure 24 illustrates the location of Mine Hill in relation to the Oval Pit.



Figure 23 - Oval Pit looking North

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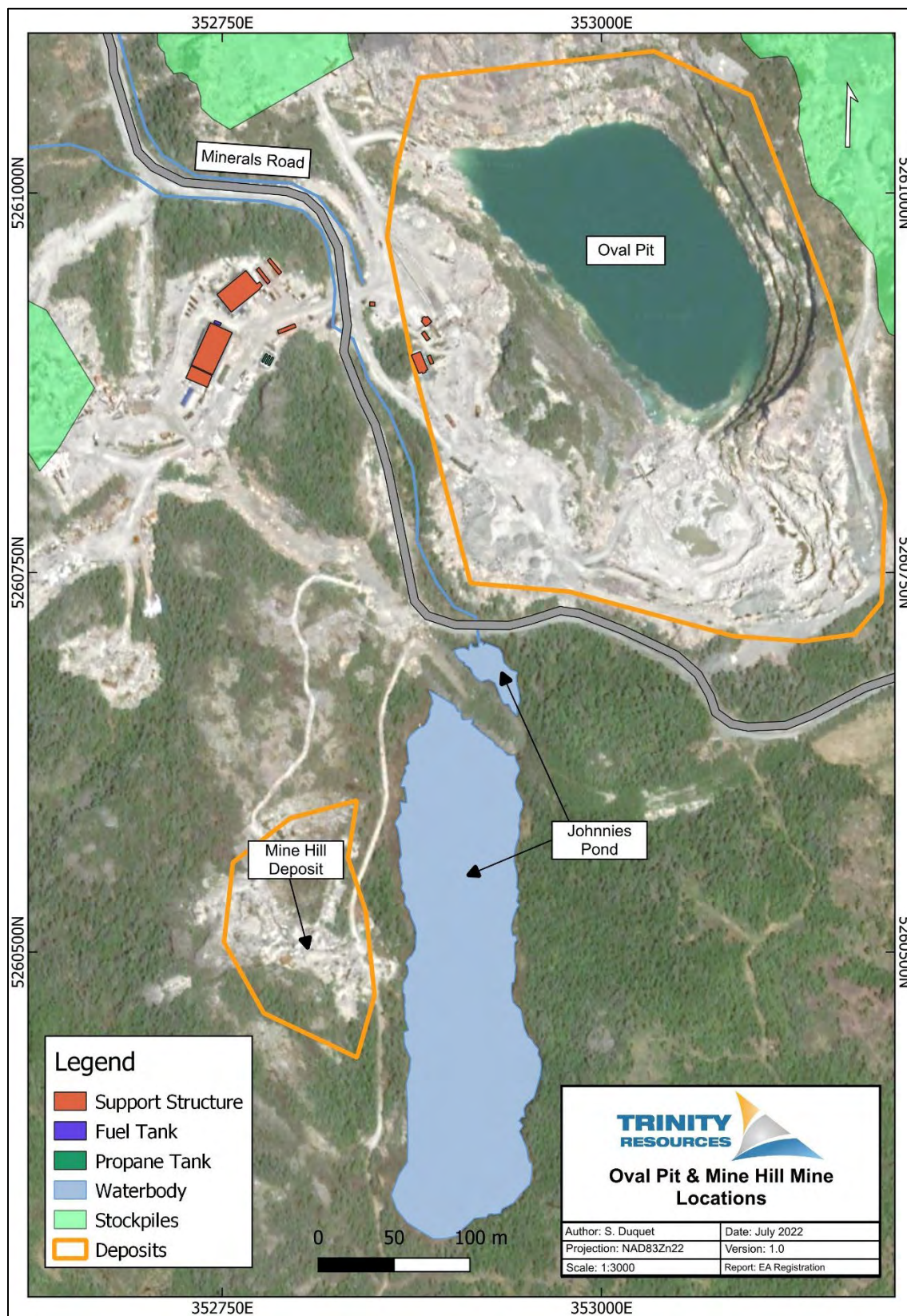


Figure 24 - Oval Pit & Mine Hill Locations

Bench dimensions will mimic current existing benches, with 3 metres high and 5 metres wide. Trinity benching and mining activities will conform to current existing mining standards, with a primary focus on safety.

Preliminary mining plans for the Oval Pit and Mine Hill deposits are currently in progress, and once completed, will be submitted to the Mines Branch of the Department of Industry, Energy and Technology as an update to the Development Plan.

2.6.2.2 Sorting Facility Operations

Ore is crushed and screened to various size fractions using our existing primary crushing and screening system. Wheel loaders will place ore material in a feed hopper which will be feed to the ore processing equipment. Material is washed using water prior to the separation process.

The processing facility will separate the material into the following categories:

- Dark rhyolite rock (which will be sold to the local construction market)
- Various grades of pyrophyllite ore which will be prepared for processing in the grinding plant.

Water used in the washing process will be recirculated in the plant. Fines from the ore sorting process are collected via filter presses and stockpiled for various market applications. Water will be sourced from either the outflow of Johnnies Pond or from the dewatering of the open pit. Water from the washing process will not be discharged and it will be occasionally recharged due to evaporation.

There are no chemicals used in the process.

The process generates no waste from processing and will eliminate any future stockpiles of waste from future mining activities.



Figure 25 - Ore Sorting Process

2.6.2.3 Transportation and Shipping

Trinity's products will be shipped in a combination of lump ore form through the Port of Long Pond or as milled powder products in bags via road transport with companies such as Oceanex, operating out of St. John's Port, or Eimskip, operating out of Argentina. See Figure 26 for the trucking routes. Up to the present, Trinity has exported up to 200,000 metric tonnes annually in lump ore form via the Port of Long Pond.

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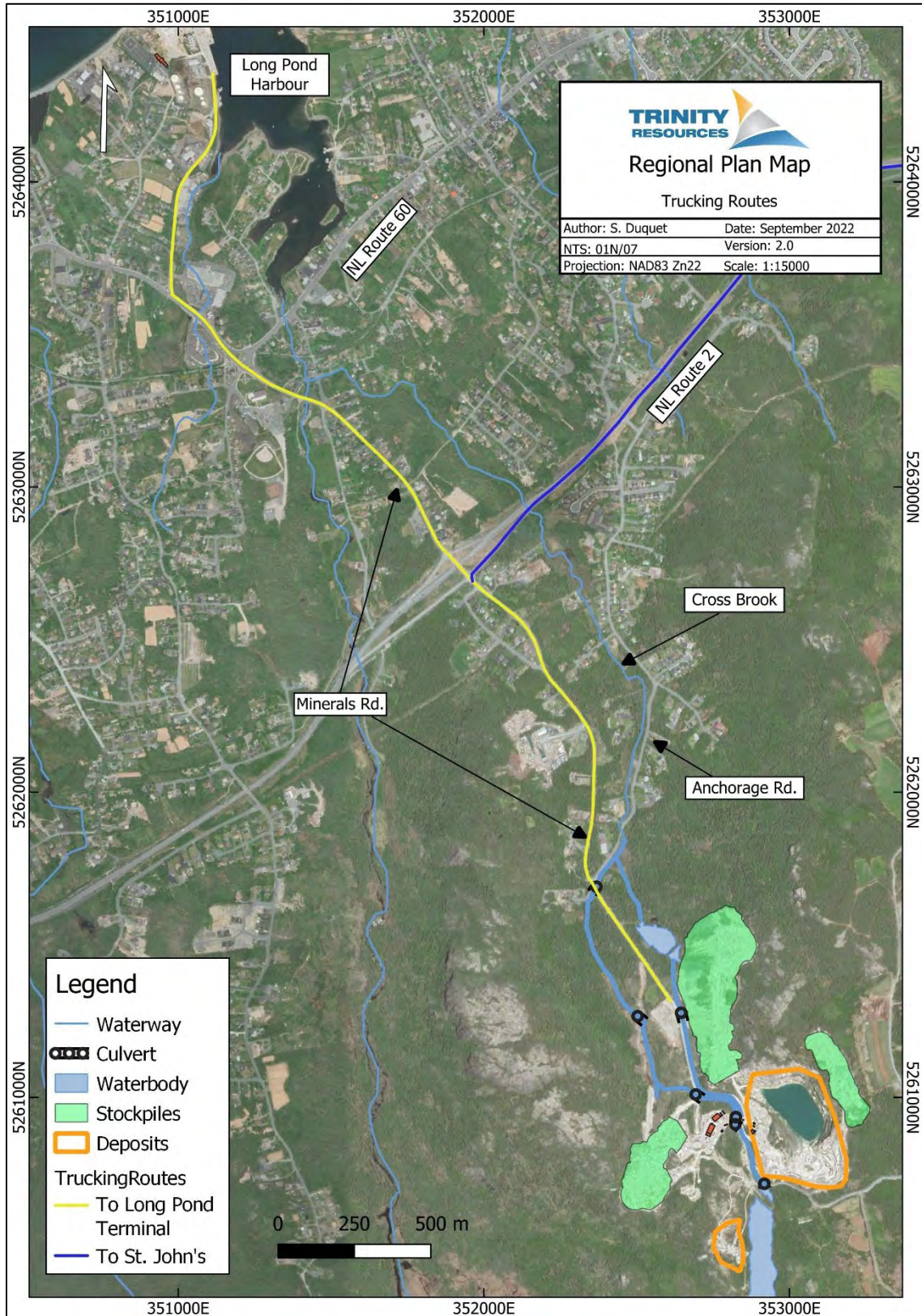


Figure 26 - Trucking Routes

Trucking activities generally operate on a five-day work week during normal working hours between 7:00am and 7:00pm. in accordance with Town of CBS Noise By-Laws. Current exporting of lump ore translates to the majority of trucking being conducted over a two-week period every two months.

While export volumes are expected to increase, Trinity does not anticipate this to pose any impact to the local community. Trucking will still be conducted during the hours of 7:00am to 7:00pm. and Minerals Rd is a major access route to the Town, with high volumes of daily traffic.

2.7 WASTE TO ORE RATIO

No waste products will be produced from mining and ore processing operations. Rhyolite and other “dark rock” encountered will be stockpiled and sold to the local aggregate market, while till or overburden material will either be stockpiled for future remediation or will be used within the mine site as construction material for mineral workings, if the material is suitable. Pyrophyllite will be separated into various grades and shipped as lump ore or milled into powder with various industrial applications.

2.8 DECOMMISSIONING AND RECLAMATION

2.8.1 Progressive Rehabilitation

Progressive rehabilitation are the activities that can be completed, when possible, during mining operations. These activities contribute to the entire rehabilitation process that would be required before full site closure. For some of Trinity’s proposed operation activities, progressive rehabilitation will go hand in hand with operational activities.

Trinity is planning a progressive rehabilitation process be integrated into mining operation activities, to ensure a successful Closure and Post Monitoring period. For the most part, progressive rehabilitation will mostly encompass mining operations focused on stockpile reclamation and once finalized, barricading of the open pits. Progressive revegetation will be conducted where areas can be identified over the life of the operation.

This will be completed in consultation with the Department of Industry, Energy and Technology.

2.8.1.1 *Stockpiles*

To achieve Trinity’s closure objectives in relation to the stockpile reclamation activities, as reclamation operations are progressing and as the original topography is encountered, Trinity will remove as much stockpiled material as much as feasible but will complete grading to align with original bedrock contours as much as possible.

Trinity will revegetate the site using local vegetation species such that the revegetation efforts will be self-sustaining over the long term as part of progressive rehabilitation. Using local vegetation species that are compatible with the soil conditions will help improve physical stability and potentially promote a return of local wildlife.

2.8.1.2 *Oval Pit and Mine Hill Deposit*

During mining operations, pit walls will be properly monitored. Where possible, as an area is exhausted and development is proceeding to another area, progressive rehabilitation of the final pit wall and barricade will be conducted. The Oval Pit walls will have berms, ditching, boulder rock barricades, and

appropriate signage installed along the entire wall parameter, while the west area will be graded to level during operations from the removal of the aggregate stone ridge.

In completed sections of the pit, revegetation will be promoted along the wall and sloped areas, to provide physical stability and wildlife habitat.

Costs for this activity is mostly attributed to working person-hours, as the earthworks, safety fencing and rock barricade material are available on site.

2.8.2 Final Closure Plan

Once mining operations have ceased, final closure rehabilitation can begin. Final closure includes the required activities to fully restore, or as close as possible, the site to its former condition or to an approved condition.

Although historically an impacted site, Trinity will return the mine site and impacted areas to a natural aesthetically pleasing state once the Rehabilitation and Closure Plan is completed.

The subsections described below are illustrated in Figure 27.

2.8.2.1 North, East & South Stockpile

Final closure in relation to the stockpiles will be assessed and completed once each stockpile has been exhausted of material. Ridge-side contouring will be monitored for stability, however, is seen as a low risk as the natural original contours and re-vegetation will be give significant stability from erosion and other physical processes. A large portion of this activity will be completed progressively, as the stockpile is exhausted, well before final closure, and a large portion of the post-monitoring will be completed during the operational stage of the mine pit.

2.8.2.2 Oval Pit & Mine Hill Deposit

At time of closure of the open pits, equipment used for operations will be demobilized and removed from the site. Equipment owned by contractors or third-party companies will also be removed from site. Any open pits will be allowed to flood naturally with water. Currently, water is observed to seasonally flood the pit.

Final rock barricades, a ditch and earthen berm, and proper warning signage at 20-meter intervals will be erected around the pit parameter. The haul road will remain in place as an emergency egress path, and while the entrance will be bermed, ditched and rocked, a water control structure will be installed to allow for overflow of the pit to enter the settling pond circuit.

Figure 28 shows the planned rehabilitation of the Oval Pit.

2.8.2.3 Site Infrastructure

Once all mining operations have ceased, Trinity infrastructure and facilities will be removed. The facilities will be evaluated in relation to the planned future land use, and if any are not to be incorporated into future land use, they will be demolished. In those cases, the building will be completely removed, and the concrete foundation will be completely removed and backfilled.

Equipment and materials will be removed from the site once operations have ceased, and either sold or recycled, depending on item value and condition.

Site infrastructure, which includes water wells, septic system, and utility poles, will be properly removed or secured depending on regulations and current land use, at time of Closure. Gates and other traffic control devices will be removed, and access routes leading into mine site areas will be bermed and ditched, with the addition of a rock barrier to impede public access. The by-pass road, however, will remain open to allow public access to the backcountry as noted in Figure 16 and Figure 27.

2.8.2.4 Post-closure Monitoring and Maintenance

Post-closure monitoring and maintenance activities will be conducted in cooperation with Provincial and Federal government departments using regulations current to that time and will be completed before relinquishment of the site back to the Crown.

Monitoring will be done to evaluate the success of re-vegetation efforts and to confirm site drainage has been properly executed within the mine pit and along areas of stockpile reclamation operation (e.g., water is not pooling or stagnant). Additional revegetation or drainage grading may be required.

Trinity is planning for monitoring and maintenance to be conducted for a four-year period, provided government departments agree that the rehabilitation requirements have been met for full closure.

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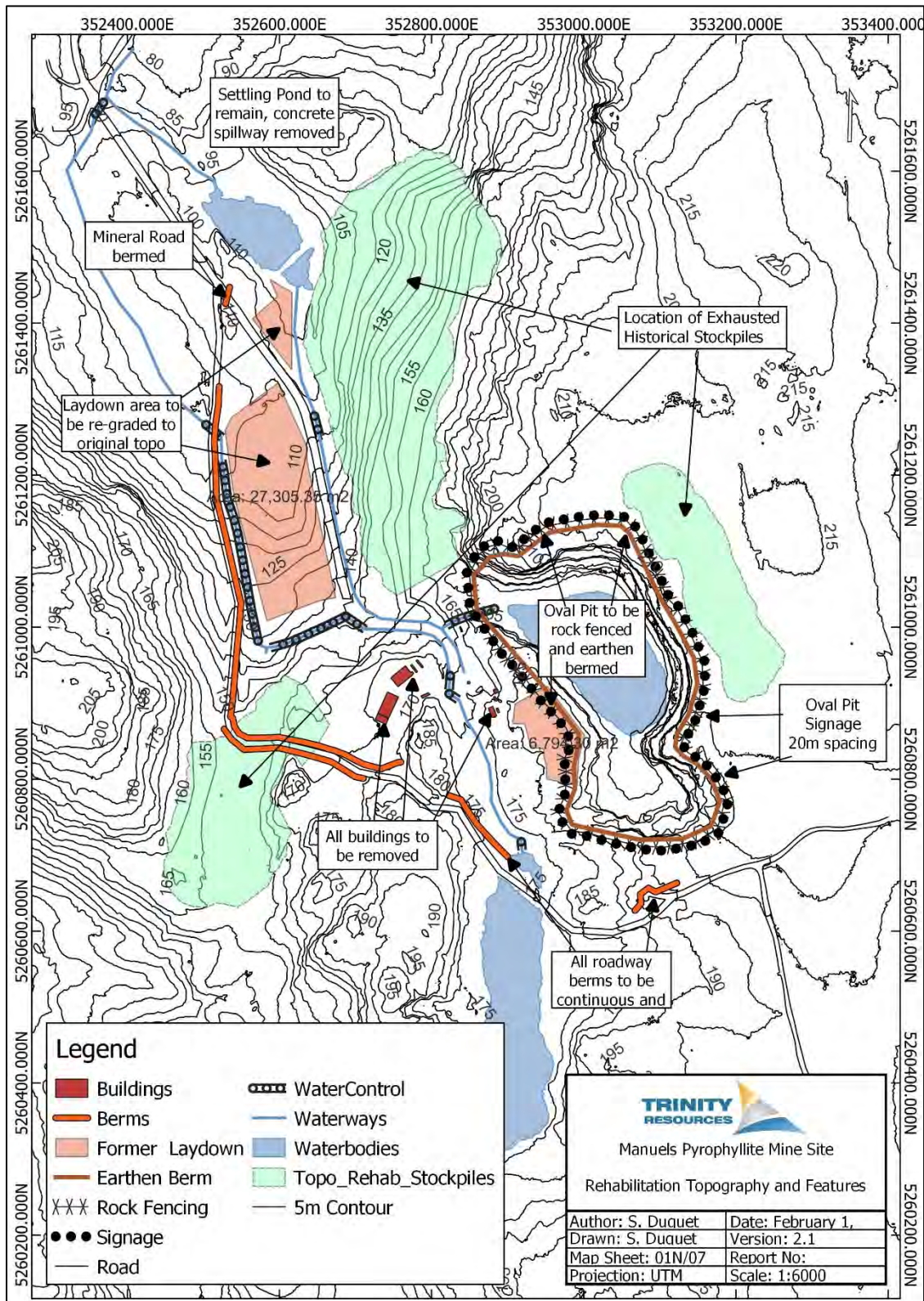


Figure 27 - Final Closure Site Plan

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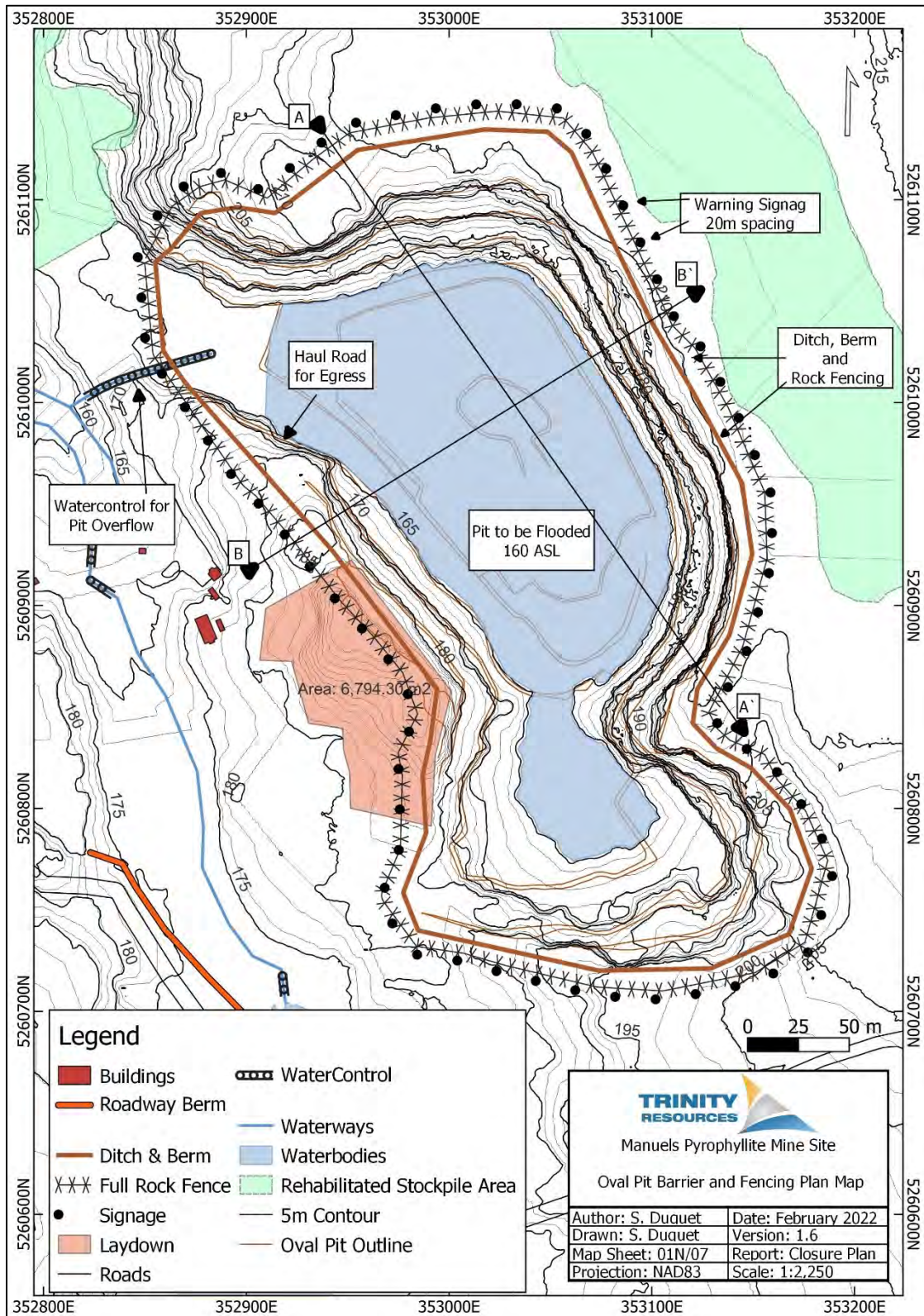


Figure 28 - Oval Pit Rehab Plan Map

2.9 EMISSIONS, WASTES, AND DISCHARGES

Trinity has adopted an Environmental Social Governance (ESG) platform that includes our commitments to reducing our impact on the environment. This includes limiting our waste, discharges and emissions. As described in Section 2.6.2.2, TRL's mining and sorting operations are largely mechanical in nature, and do not require use chemicals or reagents.

2.9.1 Emission Sources - Dust

Trinity's operation will be ramping up to process approximately 500,000 tonnes of ore each year. Mining operations will continue operations of 12 hours a day, 5 days a week for 8 or 9 months of the year with mining operations ceased during the winter period. Ore processing and grinding plant production will operate year-round.

Mining operations involve drilling and blasting within the open pit or reclamation from the existing stockpiles to extract raw material. Once extracted, the material is loaded, via excavators, and transported via 50-ton haul trucks approximately 1 km to the primary crusher (jaw crusher). The material is then crushed, screened, and stockpiled into various size fractions.

From here the material will be transferred via conveyor to the ore processing facility where it is further processed and stockpiled into various grades of product. Some finished products are then transported to the company's ship loading facilities located in Long Pond approximately 3.6 kms from the mine site via Minerals Road. Other grades of ore are further processed at the mine site into micronized powder products in the grind plant and packaged in paper bags or one tonne totes for shipment via transport truck.

During the process of extracting and crushing, emission sources are generally categorized as process or fugitive dust sources. Process sources include those where particulate emissions are captured and subsequently controlled and for Trinity process dust is part of our products and are collected at every stage via dust collection systems. Fugitive dust sources include those that are exposed to the ambient air and re-entrainment of settled particles can occur due to wind or machine movement.

Fugitive dust emissions can occur from the following activities:

- Drilling and blasting
- Crushing and screening
- Conveying and conveyor transfer points
- Stockpiles
- Truck loading and unloading
- Ship loading
- Travel on unpaved roads.

2.9.1.1 Dust Control Measures

Major factors affecting the release of fugitive dust emissions include:

- The size of the material being handled (the fines content)
- The moisture content of the material being handled
- Climatic conditions (wind speed, wind direction, humidity, rain/wet weather)
- Process throughput (the amount of material processed and/or handled)
- The type of equipment in operation.

Trinity has been and will continue to implement industry best management measures for controlling the release of fugitive dust across all areas of our operation. The measures, listed below, will be implemented, and enforced on site.

2.9.1.1.1 Drilling and Blasting

Although drilling and blasting are a source of fugitive dust emissions, due to the distance of these activities to the community they are low priority in terms of requiring additional dust control. Trinity will be using contractors that use a drill equipped with a cyclone and will water down blasted rock piles before moving the material to reduce dust while trucking and processing. Good blasting and drilling practices will also be followed when carrying out these activities.

2.9.1.1.2 Crushing

Best management practices for controlling fugitive dust emissions from crushing activities include:

- Limiting the drop height from the exit of a crusher to the receiving conveyor belt
- Installing and operating a water spray/fogging system on the jaw crusher to moisten the raw material and entrap the airborne dust, as the material is being dumped into the primary crusher bin
- General housekeeping – whenever possible remove built up dust on and around the crusher

2.9.1.1.3 Screening

Best management practices for controlling fugitive releases of particulate matter from screening will include:

- Operating and maintaining existing water sprays at the screen entry points
- Installing and maintaining hoods on each screen that is not enclosed within a building
- Reducing drop heights from screens to conveyors, to limit exposure of the processed material to the wind.

2.9.1.1.4 Conveying and Conveyor Transfer Points

The following measures will be implemented to reduce the number of fugitive dust emissions at conveyor transfer points:

- Limiting the drop distance at conveyor transfer points
- Water suppression at conveyor transfer points

2.9.1.1.5 Stockpiles

Releases of fugitive dust from stockpiles can occur through the loading and/or unloading of material into or from a pile and from the erosion of the pile during periods of strong winds. Best management practices will be implemented to reduce fugitive dust emissions from onsite stockpiles and include:

- Reducing the drop height from the stockpile stackers to the top of the stockpiles
- Installing and maintaining dust curtains (i.e. old conveyor belts) around the edge of each stockpile stacker
- Applying water to temporary and long-term storage piles during windy and dry periods via the onsite water truck

2.9.1.1.6 Truck Loading and Unloading

Best management practices that will be implemented on site to limit the fugitive release of dust during material handling include:

- Limiting the material drop height when loading a haul truck with either raw or processed material via a front-end loader or excavator
- Limiting the amount of material in the haul trucks, as so that it does not go above the tray walls

2.9.1.1.7 Ship Loading

Best management practices will continue during ship loading operations and include:

- Limiting the drop height between the ship loader and the ship's receiving bin
- Applying dust suppression (e.g., water) to the ship loading road when a ship is being loaded

2.9.1.1.8 Travel on Unpaved Roads

Best management practices for controlling fugitive dust releases from vehicle and haul truck travel on unpaved roads will include:

- Applying water to the surface of haul roads as required. The frequency of application may be increased when non ideal conditions are present
- Applying chlorides (calcium chloride or magnesium chloride) or a commercial binding substance to the quarry haul roads and gravel sections of Minerals Road
- Use of low silt material, such as washed crusher stone, for road maintenance
- Grading the roads to remove loose materials.

2.9.2 Emission Sources – Greenhouse Gas

Greenhouse gas (GHG) emissions are expected to occur on the mine site and within the dock yard, as Trinity employs the use of heavy construction equipment.

Trinity has committed to reduce its environmental and carbon footprint as much as possible. Both the primary processing and ore processing facility will be connected to the local power grid.

Heavy industrial equipment and heavy transportation equipment however are diesel powered motor vehicles. Through out Trinity's operational future, Trinity will endeavor to explore alternate powered equipment, either through the increase progression of electric vehicles, or exploring the use of alternate vehicle types to reduce or eliminate the need for diesel fueled vehicles.

2.9.3 Emission Sources - Noise

Noise is not expected to be materially different from the past 63 years of operations. The use of industry standard equipment compliant with applicable noise regulations and effective maintenance systems including regular inspections of noise suppression equipment will be conducted.

Trinity currently operates in accordance with municipal noise bylaw regulations, and currently maintains a 400-meter buffer of natural vegetation and topography to the nearest residential area.

Recently, Trinity conducted noise level readings during full operations and during periods of no operational activity (Table 3). These measurements were taken over approximately an hour at each location.

ID	Measurement Location	Ambient dBA with No Operations	Sorting Machinery Operations	Grinding Mill Operations	Crushing Operations (with dump truck loading)	
1	Next to Grinding Mill	33-56	66-67	76-78	74.2	74
2	Site Entrance Intersection	37-40	70-75	64-65	62	58-60
3	Next to Primary Crusher	31-33	45-55	40	84	70-73
4	Pine Marsh Road	29-31	40-45	40	41.5	38-40
5	Anchorage Road	38-40	43-44	44	42.1	40

Table 3 - Noise Reading Locations and Results (dBA)

Results show that in the residential areas labelled 4 and 5 in Figure 29 noise levels were below the guidelines for locations nearing residential area (as no overall guideline exists in NL). These represent:

- Leq of 65 dBA between 0700 to 1900 hours;
- Leq of 60 dBA between 1900 to 2300 hours; and
- Leq of 55 dBA between 2300 to 0700 hours.

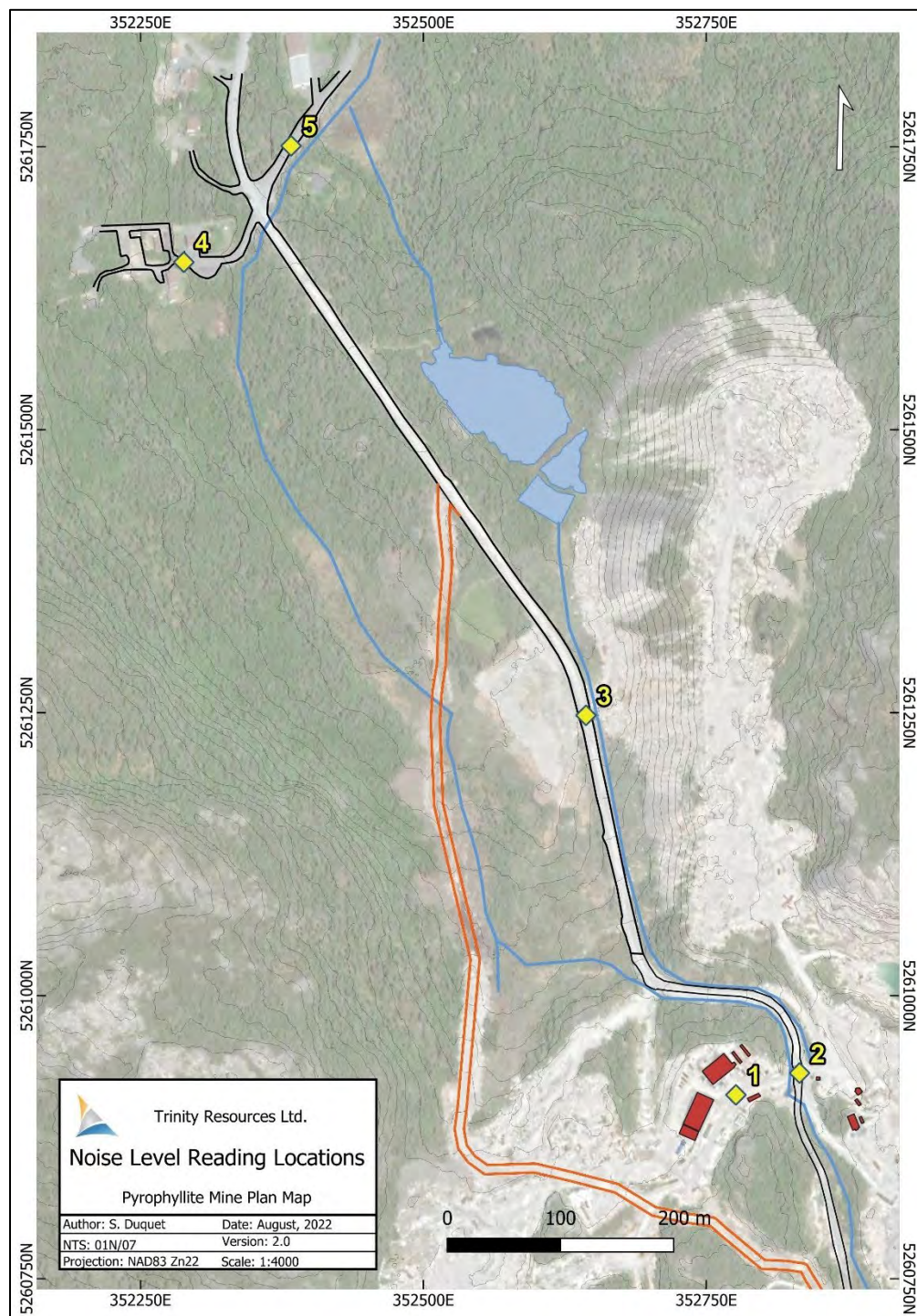


Figure 29 - Noise Reading Locations

2.9.4 Wastes - Solid Waste

The company uses licensed waste management for the disposal and where applicable the recycling of solid wastes such as tires, metal, wood, and construction materials. The company currently recycles beverage containers, tires, paper, and cardboard products where possible in accordance with provincial waste diversion regulations.

2.9.5 Hazardous Waste

It is not expected that the mine will generate large quantities of hazardous waste such as used oils and filters. Trinity currently and will continue to contract with licensed waste management companies for the recycling of waste oils and other petroleum products.

Other hazardous materials that will be encountered or used in operation, will be handled, and disposed of as noted by manufacture specifications and local regulations.

2.9.6 Discharges - Site Water Management

2.9.6.1 Sorting Facility

The ore processing facility will be separating rocks ranging in size from 2mm up to 100mm. Rocks will be washed with water for the equipment to identify the rock type properly. The water used in the washing process will be supplied either from outflow of Johnnies Pond or from open pit dewatering process. The water which will contain suspended solids will be filter pressed to capture the suspended solids (fine grains of ore) as this material is a product which the company can sell to various markets.

The water will then be reused in the washing process. This closed loop system will require some make-up water from time to time due to evaporation however it is not anticipated that water from the sorting facility will be discharged to the local environment. In the event water from the sorting plant requires discharge, the water will be directed to our settling pond system to allow the suspended solids to settle.

Monthly water monitoring practices are currently in place at the mine site with the water quality passing all Provincial and Federal guidelines for chemistry, pH, and suspended solids. The water does not require treatment.

2.9.6.2 Mine Pit

The Oval Pit has been continuously pumped out on a regular basis for the last 63 years with the outflow directed into the established settling ponds. This is done for both maintenance clearing, and to provide access to the open pit for mining purposes. This dewatering process is carried out with electric pumps.

The Oval Pit fills with seasonal waters from the winter season and from rain events. There are some groundwater seepages that add to the water amounts, however, it's observed to be minimal.

Trinity has engaged with FracFlow Consultants to complete a groundwater Study of the pit and the groundwater aquifer. This study will include a water balance of the pit and study the effects of drawdown on the surrounding area.

2.9.6.3 Settling Pond

Site run-off will be limited; however, settling ponds are located at the north end of the site, with a ditch system along the eastern side of Minerals Road. This settling pond was designed and installed by Armstrong to collect run-off from the mine site including dewatering of oval pit, and to allow sediment to settle out before entering the receiving stream Cross Brook During the reclamation process. Surface water accumulation in the work area will be directed into the settling ponds.

Water sampling of the settling pond discharge is completed monthly and sent to external labs for testing of pH and total suspended solids ("TSS"). All results are below the Schedule A requirements of Environmental Control Water and Sewage Regulations. Aluminum is not tested for, as there are no

guidelines for concentrations in discharge water. In fact, Alumina-compounds are used in some types of water filtration and treatment systems globally.

Historic water sampling at the mine site was conducted by Armstrong and Department of Fisheries as early as 1973 which showed no issues with water quality and confirm the current results as provided by our external lab contractor. The ore is not classified as acidic, and it does not yield acid rock drainage (ARD) or metal leaching.

Trinity also conducted water toxicology testing of both LT50 Rainbow Trout, and LT50 *Daphnia*. All testing passed after 96 hours and 48 hours respectively.

Results from our external lab testing are attached in Appendix A.

The only natural surface waterbody within the mining lease area is Johnnies Pond. It is in the south-eastern corner of the mining lease and will not be in contact with project activities as it lays at a higher elevation then that of the mining operational area. Johnnies Pond discharges into Cross Brook, which flows along Minerals Road, until eventually flowing northwest. Figure 31 below illustrates Johnnies Pond, the flow path of Cross Brook, the mine site ditch catchment, and the settling ponds.

The settling pond outlet to Cross Brook is controlled by a concrete spillway and earth dam constructed on the north end of the property.



Figure 30 - Spillway Outlet

The existing settling ponds are used to control erosion and flooding by attenuating site runoff, dewater pits and provide sedimentation to site runoff water prior to discharge to Cross Brook.

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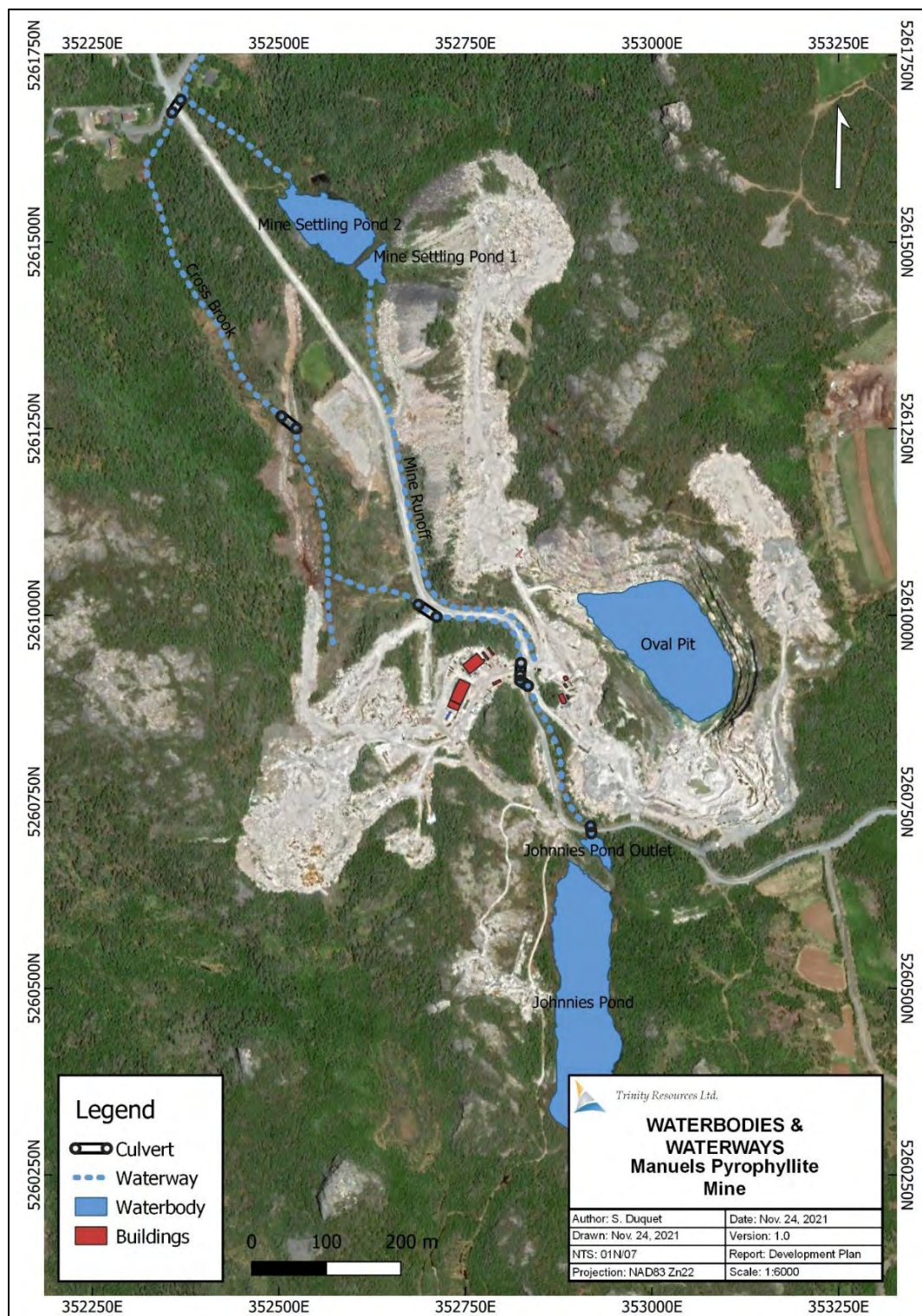


Figure 31 – Current Mine Site Waterbodies and Water Pathways

2.10 ACCIDENTAL EVENTS AND MALFUNCTIONS

This section pertains to possible accidental incidents, and Trinity's preventative and responses to such events.

2.10.1 Accidental Fuel Release

Trinity recognizes that during operations, with the use of a variety of trucks and heavy mobile equipment, that a petroleum fuel release or accidental release is a possibility.

During construction and operations, Trinity will ensure that there is adequate spill prevention and response measures as outlined below:

- Each vehicle will have a spill response kit
- Work areas will have larger spill response kits
- Storage tanks will comply with fuel handling and storage regulations
- Tanks will be inspected and kept corrosion free
- Employees will be trained in fuel spill response
- Trinity will comply with provincial and federal requirements in relation to spills, including reporting, cleanup, and disposal

In the event of a fuel release, Trinity will cease all operations in the area, attempt to stop the source of the spill, contain any material released, and conduct all necessary cleanup with reporting and directions from an Environmental Protection Officer with ServiceNL.

2.10.2 Vehicle Collision

With vehicle traffic in the area, both with mining activities, staff transportation, and public access to the backcountry, there is always the possibility of a vehicle collision. While Trinity is proposing activities with this project to mitigate these issues, such as the completion of the by-pass road, vehicle collisions can still happen. With the planned increase in production, increased traffic is a consideration that led towards the creation of this By-pass Road.

Trinity currently has warning signs placed around the mine site, warning of mining activities and has created stop zones where mine traffic crosses with public routes. Employees are reminded of the traffic regulations and company policies in relation to traffic control and operation of company vehicles.

In the event of a collision, after emergency responses, Trinity will internally review the incident and explore additional preventative measures that could be implemented to reduce the same type of event from taking place again. Staff involved will be interviewed and will assist with this process, to allow for the operators perspective to be considered in future decisions.

2.10.3 Fire

In the event of a fire on company property, staff are trained in the use of fire extinguishers and evacuation routes including muster stations. The local fire department will be contacted immediately.

Trinity is also in regular contact with the local Fire department in relation to site usage and equipment on site, and all suppression equipment are inspected annually and maintained by a local safety contractor.

2.10.4 Settling Pond Spillway Failure

Trinity's settling pond has approximately 1m. of water depth and holds approximately 6926 kilolitres of water. A catastrophic failure of the spillway and earth dam would result in this water being carried into Cross Brook to the north of the property. This would result in an increased water level surge downstream, however the immediate surge would most likely be dissipated within fens located downstream.

We consider this highly unlikely, however as a precaution, Trinity is presently undertaking a Dam/Spillway study in accordance with direction from WRMD and will be comprehensive in scope to determine the projections of an increased water surge downstream.

2.10.5 Wildlife Interaction

Trinity recognizes that in an area that is entirely within the rural area, and as the mine property itself is 90% wilderness, interactions with wildlife is a possibility. Refuse and garbage are properly contained to reduce the instances of rodents and general vermin.

As part of Trinity's commitment to environmental stewardship, interactions with wildlife will be handled in accordance with municipal, provincial, and federal wildlife protection regulations and guidelines. When animals are encountered at the mine site, they will be given space to conduct themselves as they see fit, without harassment or impediment from staff or operational activities. If an animal is encountered to be in distress, immediate aid will be given, and either the local CBS Humane Services or a Provincial government Wildlife Officer will be contacted for advice or assistance, depending on the issue and the type of wildlife.

2.11 PROJECT ALTERNATIVES

2.11.1 Overall Project

Overall project alternatives include not conducting the project activities. This was deemed not in the best interest of the company as the current pilot plant installation is unprofitable and unscalable without investment in the planned installation.

Future development of the in-situ resource would be uneconomical.

2.11.2 Construction Site

The current identified location allows for the smallest footprint and provides the highest degree of efficiency from the standpoint of material handling and processing costs at the lowest capital cost.

2.11.3 Ore Processing

During Trinity's research and development process the company undertook extensive work and assessment into other processing methods.

Based upon the results of the research, Trinity determined that the product quality and the high degree of unusable waste generated would significantly increase the environmental footprint of the mine site

and would not align to the company's ESG platform. Furthermore, these processes would leave an impact within the community for generations to come. Trinity's planned installation will generate no waste and provide the highest economic return to the community, the company, and the province.

2.12 SCHEDULE

Trinity is proposing the following schedule in relation to the project outlined above.

	2022		2023			
	Q3	Q4	Q1	Q2	Q3	Q4
1.0 Bypass Road						
2.0 Reactivation of Mining						
3.0 Ore Sorting Plant						
Construction						
Commissioning						

Table 4 - Planned Project Schedule

2.13 EMPLOYMENT

2.13.1 Occupations

Table 5 provides the expected breakdown of occupations anticipated for this Project and includes the National Occupation Classification (NOC) codes. This table only includes possible positions that will be needed to conduct mining and processing facility operations and does not include contractors for sorting facility construction. Most of these positions will be filled on an annual basis, while most non-managerial positions attributed to the mining operations will be seasonal (April-November).

The company currently employs 18 staff with the addition of 30 more staff positions which can be filled by individuals living within the St. John's metropolitan area.

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Project Activity	Position	National Occupation Codes	Estimated Number
Construction / Pre-Full Scale Operations	Senior Manager	0016	1
	Office Administrator	0114	1
	Operations Manager	0811	1
	Maintenance Foreman	0811	1
	Laboratory Manager	0811	1
	Laboratory Technician	2212	1
	Senior Geologist	2113	1
	Engineer	2141	1
	Heavy Equipment Operator	7521	3
	Industrial Electrician	7242	1
	Millwright	7311	1
	Labourers	9611	3
	Total		16
Full Scale Operations	Senior Manager	0016	1
	Senior Manager	0013	2
	Human Resources Officer	1223	1
	Office Administrator	0114	1
	Operations Manager	0811	1
	Senior Geologist	2113	2
	Engineer	2141	2
	Mechanical Engineer	2132	2
	Heavy Equipment Operator	7521	12
	Laboratory Manager	0811	1
	Laboratory Technician	2212	3
	Crusher/Screening Operator	7521	3
	Mill Operator	9231	3
	Labourer	9611	6
	Industrial Electrician	7242	1
	Millwright	7311	2
	Security Guard	6541	6
	Welder	7237	2
	Total		51
Rehabilitation & Maintenance	Senior Manager	0016	1
	Office Administrator	0114	1
	Project Engineer	2141	1
	Senior Geologist	2113	1
	Environmental Monitor	2263	1
	Heavy Equipment Operator	7521	2
	Total		7

Table 5 - Expected Employment Requirements & National Occupation Classification Codes

2.13.2 Workplace Diversity and Gender Equality

Trinity seeks to ensure that our employees and customers are treated fairly, equitably, and with respect, regardless of race, ancestry, place or origin, colour, ethnic origin, citizenship, creed, religion, gender, sexual orientation, age, marital status, same-sex partnership status, family status, or disability.

To promote workplace diversity, Trinity has instituted the following policies:

1. Trinity's Diversity Policy will be publicly available on our web site.
2. Advertisements for all positions is either unisex or includes both gender descriptions (i.e., Journeyman/woman or Journeyperson)
3. Trinity has implemented policies that support pay scales based on the position and title and setting policies concerning pay increases.
4. Trinity will implement a policy that all collected resumes have racial, and gender specific identifiers and names redacted, to assess each resume equality, without bias.

2.14 APPROVALS OF THE UNDERTAKING

The following is a list of potential permits and authorizations that could be required for this Project:

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Federal, Provincial & Municipal Authorizations		
Government Agency	Permit, Authorization, Approval	Activity Requiring Compliance
Fisheries and Oceans Canada		
Fisheries	Request for Project Review	Project aspects for Review to comply with HADD Provention
Department of Environment and Climate Change		
Environmental Assessment Division	Project Release from Environmental Assessment	Entire Project as described
Pollution Prevention Division	Certificate of Approval	Needed in order to operate the Mine, processing and Milling Operations
Pollution Prevention Division	Environmental Protection Plan - Construction & Operation	Site Construction & Operations
Pollution Prevention Division	Emergency Response Plan	Site Operations
Pollution Prevention Division	Environmental Control Water and Sewage Regulations	Water Discharges
Pollution Prevention Division	Environmental Effects Monitoring Plan	Effluent and Dust Monitoring
Water Resources Management Division	Schedule A - Environmental Approval of Culverts	ByPass Road Construction
Water Resources Management Division	Schedule E - Environmental Approval of Pipe Crossing - Water Intake	Transporting of Water
Water Resources Management Division	Schedule H Infilling, Dredging and Debris Removal	Completion of ByPass Road causeway
Water Resources Management Division	Schedule X - Work Within 15m of a Body of Water	Any work activites near a Waterbody
Water Resources Management Division	Water Diversion	Water control and Diversion
Water Resources Management Division	Certificate of Approval for Site Drainage	Water control of Site Runoff
Water Resources Management Division	Water Use License	Taking / Pumping Water from Waterbodies
Department of Industry, Energy and Technology		
Mineral Development Division, Mines Branch	Development Plan	For Development of a Non-Metal Resource
Mineral Development Division, Mines Branch	Rehabilitation and Closure Plan	Project Closure Requirments
Mineral Development Division, Mines Branch	Finanical Assurance	Development Financial Deposit for Rehabilitation and Closure
Department of Digital Governmnet and Service NL		
Service NL	Certificate of Approval	Septic System
Service NL	Building Accessibility Exemption	Workplace Access Limitations
Service NL	Electrical Permit	Installation or Repair of any Electrical Equipment
Service NL	Pressure System and Pressure Vessals Approval	Cewrtification of Pressured Storage Tanks and Systems
Service NL	Examination of Welders and Blazers	All Welding Requirements
Service NL	Waste Management Plan	
Service NL	Fuel Storage and Handling	Project Fuel Tank Storage
Town of CBS		
Community Development Department	Building Permit & Development Application	Processing Facility and Minesite Expansion

Table 6 - List of Potential Regulatory Authorizations

2.14.1 Fisheries and Oceans Canada

Trinity has engaged with Fisheries and Oceans Canada (DFO) under the Project Review process for guidance and advice on project aspects in or near water to protect fish habitat.

Currently, Trinity has submitted a request for review of the of the proposed Cross Brook stream diversion and will consult with DFO in the future concerning the construction of the processing facility, water extraction for plant processing, and water discharging.

2.14.2 Government of Newfoundland Department of Environment and Climate Change

2.14.2.1 Water Resources Management Division

In response to draft comments from WRMD, Trinity has consulted with Real-Time Monitoring section to monitor the groundwater for changes once development of the in-situ resource has commenced. As part of that consultation, Trinity will conduct a Groundwater Study to study the effects of water table drawdown on the surrounding aquifer.

As well, since Trinity will, from time to time, have the need to extract water for mineral processing, Trinity will seek to obtain a Water Use License issued by the Water Rights section of WRMD. Water usage within the sorting facility will used a closed loop system, that will filter out fine material. Additional water will be needed from time to time as water loss is expected from evaporation and from coating the rocks. No discharging of water is expected, however, if needed, water will be tested and discharged into the settling pond system.

2.14.2.2 Pollution Prevention Division

Trinity has had almost yearly inspections from the Pollution Prevention Division (PPD) and has been open and transparent to the inspectors each time. Advice and guidance given has been accepted and complied with. Trinity will continue to engage with PPD and will commit to regulatory directives the division submits in response to this project proposal.

2.14.3 Occupational Health & Safety

Trinity believes that health and safety is and will always be the company's primary focus. In maintaining this policy, Trinity will comply with OHS Regulations and guidelines in all aspects of the project.

2.15 ENVIRONMENTAL MANAGEMENT

Trinity has developed a robust ESG platform whereby the company is integrating social and environmental concerns across all business operations and interactions with stakeholders. Trinity's ESG platform has three main principles which drive decisions related to our planned investments:

1. Caring for our Planet: protecting the environment, reducing our carbon footprint, preserving biodiversity and acting on climate change.
2. Empowering our People: ensuring our employees and their families stay healthy and safe, nurturing talent, promoting diversity and inclusion, fostering dialogue and safeguarding human rights.
3. Building for the future: engaging with the local community, behaving ethically, ensuring responsible purchasing and promoting sustainable products and technologies.

As part of its ESG mandate Trinity Cares community engagement platform will provide support for underfunded outreach and support programs in the local community.

Consistent with current operations, air quality and noise will be mitigated through the following measures:

- Maintenance of equipment and machinery
- Equipping equipment and machinery with mufflers and air emission controls
- Operating equipment and machinery on-site only
- Servicing equipment and machinery at designated areas only
- Implementing dust control processes across all parts of operations
- Management of operational and domestic waste in compliance with the Newfoundland and Labrador *Waste Management Regulations*

The company has undertaken a dust and silica monitoring with mitigation to reduce dust at all parts of the operation as highlighted. (i.e., watering trucks, dust suppressant usage).

Trinity has worked with DFO to mitigate site impact on operations to limit interactions with waterways and wetlands.

An Emergency Response Plan, including Spill Response, has been prepared and staff continue to be trained in its application. Emergency spill kits are available on site.

3 POTENTIAL ENVIRONMENTAL INTERACTIONS AND RESOURCE USE CONFLICTS

Potential resource use conflicts that could occur during Project construction and operation primarily include water resource use (groundwater and surface water resources) and public access to rural lands. Additionally, the Project will result in increased air and noise emissions, increased traffic, loss and/or alteration of bird and wildlife habitat, sensory disturbance to birds and wildlife, alteration of fish habitat. Table 7 summarizes potential interactions and resource use conflicts as well as key mitigation that will be used to reduce or avoid adverse effects.

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Component	Potential Interactions and Resource Conflicts Considerations	Key Mitigation
Atmospheric	<ul style="list-style-type: none"> Increased air (including dust and GHGs) and noise emissions from Project construction and operations, including but not limited to traffic and mining operations 	<ul style="list-style-type: none"> Dust control measures will be implemented (Section 2.10.1) to reduce dust emissions during Project construction and operation. Trinity will maintain a 400 m buffer between the mine site and residential properties.
Geology/Soils	<ul style="list-style-type: none"> Mineral extraction Erosion and sedimentation 	<ul style="list-style-type: none"> No conflicts will be anticipated as the company holds legal mining and surface rights to mine. Erosion and sediment controls will be installed and their effectiveness monitored to confirm they are performing as intended.
Groundwater	<ul style="list-style-type: none"> Changes in groundwater quantity and quality due to blasting, water withdrawal and/or pit dewatering 	<ul style="list-style-type: none"> Trinity will undertake a Groundwater Study to study the effects of water table drawdown on the surrounding aquifer. A Groundwater Monitoring Plan will be in place to identify and mitigate issues.
Surface Water	<ul style="list-style-type: none"> Changes in surface water quantity and quality due to ground disturbance, site development, water withdrawal, pit dewatering, stream diversion 	<ul style="list-style-type: none"> Trinity will obtain a Water Use Licence for water withdrawal and continue to conduct water quality sampling to confirm compliance with Schedule A of the Environmental Control Water and Sewage Regulations.
Fish and Fish Habitat	<ul style="list-style-type: none"> Changes in fish habitat due to changes surface water quantity and quality as outlined above 	<ul style="list-style-type: none"> Trinity will work with NLDECC-WRMD and DFO to reduce or avoid adverse effects on fish and fish habitat due to road construction and water use. Trinity has a no fishing policy for employees on site.
Terrestrial Habitat	<ul style="list-style-type: none"> Loss or alteration of upland and wetland habitats during By-pass Road and facility construction, and mineral extraction 	<ul style="list-style-type: none"> Minimal clearing and grubbing will reduce loss or alteration of habitat. Site will be progressively rehabilitated.
Birds and Wildlife	<ul style="list-style-type: none"> Loss or alteration of habitat Wildlife encounters with workers Risk of collision with Project vehicles Noise and light disturbance 	<ul style="list-style-type: none"> Minimal clearing and grubbing will reduce loss or alteration of habitat. Trinity has a no hunting policy on company land.

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Land and Resource Use	<ul style="list-style-type: none"> • No conflicts in resource use are anticipated as the company holds legal mining and surface rights to mine. • Public health and safety risks associated with interactions with Project vehicles 	<ul style="list-style-type: none"> • Construction of the By-pass Road will allow for the diversion of public traffic around the mine site, reducing public safety risk. • Trinity will maintain a 400-meter buffer of natural vegetation and topography to the nearest residential area. • Site will be progressively rehabilitated.
Historic and Heritage Resources	<ul style="list-style-type: none"> • Unexpected discovery of historic or heritage resources (low risk due to historic mining activities at site) 	<ul style="list-style-type: none"> • Trinity will implement a Historic Resources Contingency Plan in the event of an unexpected discovery of historic or heritage resources.

Table 7 – Summary of Potential Interactions and Resource Use Conflicts and Key Mitigation

4 CONSULTATION AND ENGAGEMENT

Trinity has engaged with leaders in the local community and consulted with several government departments in preparation for the EA Registration. This includes providing a detailed project overview to the Town of Conception Bay South Planning Department and Economic Development Office. The feedback has been positive with near term presentations planned to various town committees.

Trinity has engaged with DFO for on site meetings to review methods for mitigating impacts on local waterways and accommodating the least amount of disturbance to Cross Brook.

Trinity has also engaged and provided project updates to the Long Pond Harbour Authority which is responsible for the management of the Port of Long Pond.

5 FUNDING

The Project will be funded by investor and operating capital. No Government funding will be needed.

6 PROJECT RELATED DOCUMENTS

No additional documents are submitted with this registration.

7 CONCLUSIONS

Trinity has completed 10 years of research and development to commercialize its pyrophyllite products across a range of industrial applications in North America and Europe. The successful development requires a significant investment in new processing technologies as outlined in this submission.

The result of this investment will provide a significant impact to the local economy with additional jobs and related exports to national and international markets.

Trinity is anticipating that with additional resource delineation the company can expect to see operations continue in the area for future generations.

8 SIGNATURE

I, the undersigned, submit this Environmental Assessment as required under the *Environmental Assessment Act* to the Department of Environment and Climate Change of the Government of Newfoundland and Labrador. This document is up to date as September 27, 2022.



John Hurley
President & CEO
Trinity Resources Ltd.

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