

MARINE CONTRACTORS INC. WATSONS POND QUARRY

Environmental Assessment Registration Document

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1.0 NAME OF UNDERTAKING

Watsons Pond Quarry Permit Application

- Quarry Permit Identification
 - File 711:13234 covering 49 ha
- Environmental Assessment Registration Identification
 - File Reference No. 200.20.3422

2.0 PROPOSER

2.1 Name of Corporate Body

Marine Contractors Inc.

2.2 Address

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3.0 THE UNDERTAKING

3.1 *Nature of the Undertaking*

The proposed project, referred to as the Watsons Pond Quarry, is a 49 ha quarry permit application, submitted Jan 31, 2024 and situated within the municipality of the City of Corner Brook on NTS map sheet 12A/13 (**Figure 1**). The project has been operated by Marine Contractors Inc. (MCI) since 2015 when two existing quarry permits were acquired from Humber Valley Paving and the site has become MCI's main asphalt production and operations center. The quarry application area encompasses the two existing quarry permits (File #711:8208; 2ha & File #711:12183; 4.9 ha) and two private land grants (104308; 94689) covering ~29.82 ha and owned by the Marine Group of Companies.

Future quarry development under a quarry lease tenure will secure the available rock aggregate resource and overlying till for long-term use to produce aggregates and asphalt. Current production utilizes Recycled Asphalt Pavement (RAP) where possible, mixed with native and imported materials to ensure sustainable development of the aggregate resource and to meet local paving demands. Minimal additional disturbances will be created during the proposed quarry expansion development which will include the current quarry permit and grant areas. The Watsons Pond quarry contains a fully operational and closed loop aggregate wash plant setup, scale house, asphalt batch plant, product stockpiles and laydown area. These operations are mostly concealed from view by nearby sensitive receptors due to privacy screens and the natural topography of the surrounding landscape.

3.2 Purpose/Rationale/Requirement for the Undertaking

Marine Contractors Inc., incorporated in 1989, is a locally owned and operated heavy civil construction service company and supplier of aggregate and asphalt products to Western Newfoundland. MCI has seen substantial growth and has become a significant employer in the province, exceeding two hundred employees during the construction season. Completed projects include critical civil infrastructure such as water-sewer and highway development. MCI has determined that one of the key factors for the success of their business is to maintain the quality of their aggregate products, which is only achievable by sourcing aggregate material of a consistently high quality and in large quantities. MCI's goal is to continue to strengthen its presence in the province of Newfoundland and Labrador and provide consistent employment.

In order to provide products and services in the safest, and most cost-effective way possible, MCI has proposed a 49 ha quarry permit in the Watsons Pond area (File #711:13234, **Figure 2**). This new permit application will be converted to quarry lease and include the two established quarry permit covering 2 Ha and 4.9 Ha for a total quarry lease area of 55.9 Ha. The MCI head office is located ~200m south of Watsons Pond

Quarry in the Watsons Pond Industrial Park. Production and processing inside the lease area will create a 'closed loop' flow of operations that minimizes material transport on public roads, thus increasing public safety, greatly reducing the projects carbon footprint, and maximizing cost efficiency. The demand for MCI's business is projected to grow continuously in the coming years and the company believes that having their raw material production centered in its current location is sound planning from a safety, environmental and regulatory point of view.

Access to the site is gained from the Lewin Parkway that runs parallel to the southwest quarry lease boundary. Two secured gravel access roads are ~200 m in length and lead to the main quarry processing operations (**Figure 3**). The main access road passes beneath an NL Hydro transmission line on the northwest boundary. The scale house attendant upon entrance provides additional site security as each individual is documented entering the site. A secondary gated access road in the southern quarry development area provides additional access when required. A 70 m forested road buffer zone along the Lewin Parkway in addition to constructed privacy berm screens conceal most of the quarry operations from view. Views of the quarry from the south and north are presented in **Figures 5 & 6**.

The aggregate and asphalt materials produced on site will consist of, but are not limited to Class A, Class B, 10 mm to 14 mm stone, blending sand, asphalt and packaged cold patch. Processing utilizes a mobile crusher/ screener setup using primarily aggregates produced in the quarry with some imported aggregates as required to meet industrial use specifications. Permanent operations, including the asphalt plant, are in the central portion of the lease area on crown land granted to MCI. Sorted aggregate stockpiles exist across the lease area and come from quarried and surficial materials from within the lease area (**Figure 3**).

Historically the region has seen quarry permits issued to Penny Paving, West Coast Sand and Gravel, and Humber Valley Aggregates and Asphalt Ltd. between 1998 and 2014. Active quarry permits in the broad area are operated by Humber Arm Contracting Inc., and JCL Investments Inc (**Figure 2**). The proposed and existing quarry operations will continue to conform with these industrial activities while ensuring minimal impact to the surrounding natural landscape and environment.

Previously removed grubbing and organics from the quarry area are stockpiled in the quarry site for later use as reclamation material (**Figure 3**). Reclamation of the site will include 30-degree sloping of all exposed quarry faces, spreading a layer of preserved organic material over all developed areas, followed by hydroseeding and possibly planting trees native to the area. Where possible, progressive rehabilitation of the site will slope the exposed quarry faces once depleted. Reclamation completed to date includes sloping of specific areas adjacent to the permit application boundary in addition to installing

visibility screens and posting signage to warn the public of potential hazards inside the quarry area. Site visibility is discussed in **Section 4.2.3** and Reclamation and Closure are discussed in **Section 4.7**.

Future quarry development is proposed within the two existing quarry permits and expansion is planned to occur primarily in the southern area to utilize the available resource within the quarry lease application boundary. No additional site clearing is immediately required for either of the quarry development areas and the current development footprint will generally remain as it is currently. Annual quarry production volumes are estimated at 15,000 m³ and may fluctuate to meet specific business demands. The quarry development areas will be produced along a single 10 m high development face initially with additional benches considered during the design presented in a set of Development, Reclamation and Closure Plans. The development and operation of the quarry is discussed in **Section 4.3.5**.

4.0 DESCRIPTION OF THE UNDERTAKING

4.1 Geographic Location

The project area is located 100 m north of Watsons Pond and adjacent to the Lewin Parkway within the City of Corner Brook's southern municipal boundary. The immediate area has a long history of quarry development since 1997. Current nearby quarry operations include JCL Investments (File #711:12236 & 711:13124) located 1.2 km to the east and Humber Arm Contracting Inc. (File #711:7603) located 2.4 km southwest of the quarry permit application boundary.

Municipal land use zoning of this area is rural with permitted uses for forestry and agriculture. Discretionary uses within the rural zoning include mineral workings. The project area borders the Watsons Pond Industrial Park with permitted uses including light industrial and this area contains the main office and storage yard for Marine Contractors Inc. Access to the quarry site is gained directly from the Lewin Parkway from two gravel access roads with restricted access.

Newfoundland Power and Paper Co. Ltd. own crown titles in the area that include the 3-mile dam a water intake point for electricity generation. Also, the City of Corner Brooks water treatment facility is located 500 m from the quarry permit application area (**Figures 2 & 3**). Corner Brook Pulp and Paper Timber Limits are partially within the project boundary (**Figure 2**). A NL Hydro powerline is adjacent to the western lease boundary and a 150 m buffer zone is established where no blasting will occur (**Figure 3**). Environmental protection areas include the White Lakes area located ~370m southeast of the project area (**Figure 2**).

The quarry development is expected to have minimal effects on the natural landscape and environment. This is due in part to the natural topography surrounding the lease area, the abundance of forested land and established buffer zones surrounding waterbodies and watercourses. Also, the established nature of the quarry area leads to minimal additional impacts. No development will occur within 50 meters of nearby ponds and watercourses. The water management plan to be established during design of the future quarry will conform to the regulations for environmental protection set by the Water Resources Management Division of the Department of Environment and Climate Change (discussed in **Section 4.2.1**).

The closest sensitive receptor to the project is the Lewin Parkway and Watsons Pond Industrial Park adjacent to the southern boundary (**Figures 4 & 6**). Other important receptors include the Massey Drive residential area, a snowmobile trail, and the Western Long Term Care Home (**Figures 4 & 5**). MCI accepts full responsibility to continue to operate and progressively rehabilitate the land to help minimize visual impacts to these receptors and the City of Corner Brook in general. The proposed quarry activities are not anticipated to influence nearby sensitive receptors any more than existing quarry operations in the area. At the end of the quarry life the complete reclamation and rehabilitation of the quarry development areas is a requirement of the Department of Industry, Energy and Technology, Mineral Lands Division. At this time the longevity of the site is unknown as a detailed design is to follow under a set of Development, Reclamation and Closure Plans but it is thought the quarry will be active for several decades.

4.2 Physical Features

4.2.1 Project Site Description

Marine Contractors initially began operating within the lease area in 2015 after acquiring the southern quarry permit from Humber Valley Paving, later to include a second quarry permit in the north. MCI expanded to include two separate but adjacent private land grants which contain the main operations area and asphalt plant and utilizes Recycled Asphalt Pavement from the region. Stockpiles of processed aggregate material including blending sand were generated from the glacial till cover and is used in asphalt production and other various end uses. Approximately 73% of the lease area has been developed and the removed grubbing and topsoil are stockpiled for use as future reclamation material (**Figure 3**). Exposed production benches exist in the two active quarry permits and are under the 10 m height restriction. Rehabilitation completed within the quarry site includes partial reworking and sloping of any developed areas outside the issued quarry lease boundary in addition to creating visibility screens as per requirements implemented by the DIET.

Elevations inside the quarry range from ~239 m to ~283 m above sea level (asl). The highest elevation is within the northern quarry permit (File #711:8208). A second high

point of 273 m asl is situated in the southern quarry permit (File # 711:12183) and contains the bulk of the future quarry resource. These areas will be further lowered during quarry development. The lowest elevation is in the undeveloped area of the northeast boundary. Drainage towards the north is protected by a crest of land that separates the two quarry areas from this undeveloped area. A 5-10 m lease boundary buffer zone will be maintained for windrowed grubbing material which serves to restrict access and minimize visibility to the quarry site (**Figure 3**). Currently elevations in the quarry area decrease gradually towards the southwest where site water will be directed for eventual discharge along the main quarry access road (**Figure 3**). Water management implemented during development is established to minimize impact of site water on the surrounding environment so that site drainage conforms to the Environmental Control Water and Sewage Regulations, 2003.

The 3 Mile Dam and Corner Brook Stream are located ~350 m northeast of the quarry permit application boundary and sit at ~212 m asl. An undeveloped and forested area outside the northeast and eastern lease boundary separates the quarry site from Corner Brook Stream which sits between 212m - 228m asl. At its closest point the stream is 73m east of the southeast lease boundary. Adjacent to the northern lease boundary is a small pond (~40m by ~100m wide) at 256 m asl which is the assumed depth of the local water table, but this may be a perched small, isolated body of water. This depth will be the maximum quarry floor elevation for future development to mitigate any groundwater disturbance until otherwise determined that the water table would not be impacted. Watsons Pond is located ~100 m opposite from the southwestern lease boundary across the Lewin Parkway and sits at 245 m asl. No development is planned outside the boundaries or within a 50 m buffer to such waterbodies and watercourses (**Figure 3**).

A transmission line belonging to NL Hydro is located 40 m outside the western lease boundary at its closest point. A 150 m buffer zone has been established from the Right of Way line where no blasting is to occur (**Figure 3**). This area overlaps the quarry permit application boundary and has been used for stockpiling grubbing and other produced aggregate material. No quarry development is planned to occur within the buffer zone.

A snowmobile trail is being constructed outside the proposed quarry boundary area by the Newfoundland and Labrador Snowmobile Federation. Warning signs have been placed along the western lease boundary in this area to avoid accidental access to the quarry site along the snowmobile route and there is a treed buffer restricting access. The quarry application area does not interfere with the trail development. Additionally, access to the quarry area is secured with gates and implemented privacy screens that prevent incidental access by recreational users that might frequent the area.

Two quarry access roads are used to enter the quarry site from the Lewin Parkway along the southwest lease boundary and contain constructed visibility screens as previously noted. The main quarry access road passes under the NL Hydro powerline where it crosses the Lewin Parkway. This access road enters the west side of the quarry where

the scale house, parking area, central processing area, asphalt plant and processes aggregate stockpiles are located. The southern quarry development area is accessible by a secondary secured access road and is used as required during peak operations.

4.2.2 Existing Biophysical Environment

The site is located within the *Corner Brook Subregion of Western Newfoundland Region* and in the provincial Forest Management District 15. This ecoregion is characterized by a humid climate with a relatively longer frost-free period. It contains some of the most favorable sites for forest growth, although there is considerable variation due to altitude and proximity to the coast. Annual precipitation is between 102 and 140 cm with the larger amounts associated with higher elevations. Annual snowfall is in the 317 to 508 cm range and often small patches of snow remain until late July in sheltered north facing valleys above 600 m.

The subregion (District 15) is characterized by hilly to undulating terrain. The soils are derived from slates and limestone in bedrock and till. Areas with calcareous tills are distinguished by the occurrence of light-colored marl deposits around ponds and in valleys. The till consists of shallow, stony silt loam underlain by limestone bedrock or calcareous basal till. The rugged topography is dominated by the *Taxus*-balsam fir and *Dryopteris*-*Rhytidadelphus*-balsam fir site types. The hilly, non-calcareous terrain in this subregion is dominated by shallow loamy soils over shale bedrock. However, the shallowness of the till does not adversely affect forest growth since nutrient rich seepage waters are held in the rooting zone by bedrock or a fragipan layer. The steep topography is dominated by the *Dryopteris*-balsam fir forest and supports some of the most productive stands in Newfoundland.

Conditions in this ecoregion are suitable for red fox, coyote, moose, and to a lesser extent black bear and lynx. Snowshoe hare, and mink may occupy the forest and shrub habitats, and beaver and muskrat are found near ponds and streams. Other mammals, including the little brown bat, eastern chipmunk, masked shrew, meadow vole, and red squirrel are also known to occur in the broad area. The area is not known to be inhabited by woodland caribou.

Migratory bird species found in forested areas of the subregion include ruby-crowned kinglet, northern water thrush, hermit thrush, white-throated and fox sparrow, and yellow-rumped warbler. Dark-eyed junco and pine grosbeak are found year-round in forested areas. Partridge and grouse may also be present year-round. Other migratory species include the American pilot, savannah sparrow and horned lark. Swamp sparrow and shorebirds, e.g. common snipe, greater yellow legs, and least sandpiper, are migratory breeders found in wetlands in the subregion.

Fish species that may reside in nearby ponds and watercourse include Atlantic salmon, brook trout, American eel, rainbow smelt, and stickleback. Established buffer zone widths to water courses and water bodies beyond the required 50-meter minimum help to ensure the protection fish habitat adjacent to the quarry area.

The rehabilitation plans for the quarry area including resurfacing and hydroseeding are discussed in **Section 4.7** and will be further addressed in the drafting of the quarry lease plans/development reclamation and closure plans required by DIET for approval before additional site work can occur.

4.2.3 Site Visibility

The northern boundary contains a crest of high land that conceals the main quarry processing area from northerly views including the Massey Drive residential area 1.5 km to the north (**Figure 5**). All that will be visible are the highest points of land in the lease which over time will be lowered on the southwest side of the height of land during quarry development leaving a crest of forested land in view along the northern lease boundary. Reclamation (**Section 4.7.**) of the developed and quarried areas will include hydroseeding which will ensure minimal effects of development are noticed from Massey Drive.

The southern boundary is located outside a 70 m road buffer zone along the Lewin Parkway (248 – 258 m asl) that contains a undeveloped and forested green space. Visibility of the site from the Lewin Parkway is obscured by this forested road buffer in addition to installed visibility screens and a sharp rise in topography along the northeastern road with some road development blasting that has exposed blasted rock faces (**Figure 6**). This natural topography and established mitigation methods help to minimize disruptive views of the quarry site to the public along the Lewin Parkway.

The Watsons Pond Industrial Park is located ~200 m southwest of the southern lease boundary at its closest point. Elevations inside the Industrial Park range between 240 m and 261 m asl including a crest of land that separates the majority of the Industrial Park from the Lewin Parkway. The quarry lease area is mostly obscured from view by this crest of land and the numerous warehouse spaces that occupy the area (**Figure 6**).

The city of Corner Brook sits at significantly lower elevations than the quarry lease area and visibility of the quarry is mostly concealed from view behind this steep rise in topography (**Figure 4**). The rolling, forested hillside along the Lewin Parkway will obscure views of the quarry area from the west including the Western Long Term Care Home located 1.6 km northwest at an elevation of ~190 m to 200 m asl. Additionally, as the quarry area will be progressively lowered and reclaimed during development visibility will be further minimized from the city of Corner Brook. It is thought that the site will be no

more visible than what it currently is as 73 % of the proposed quarry area is currently disturbed.

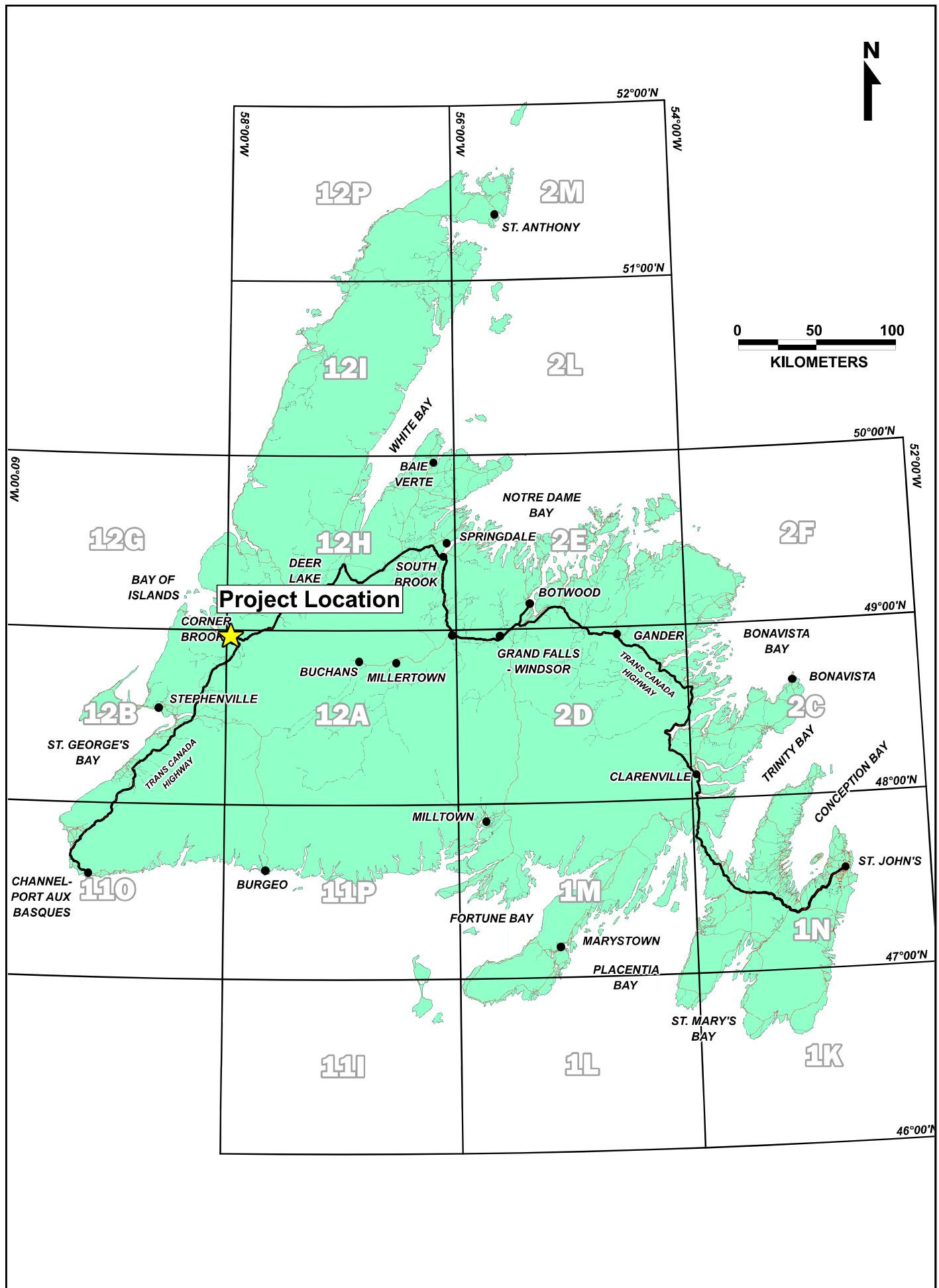


Figure 1 : Project Location Map (N.T.S. 12A/13)

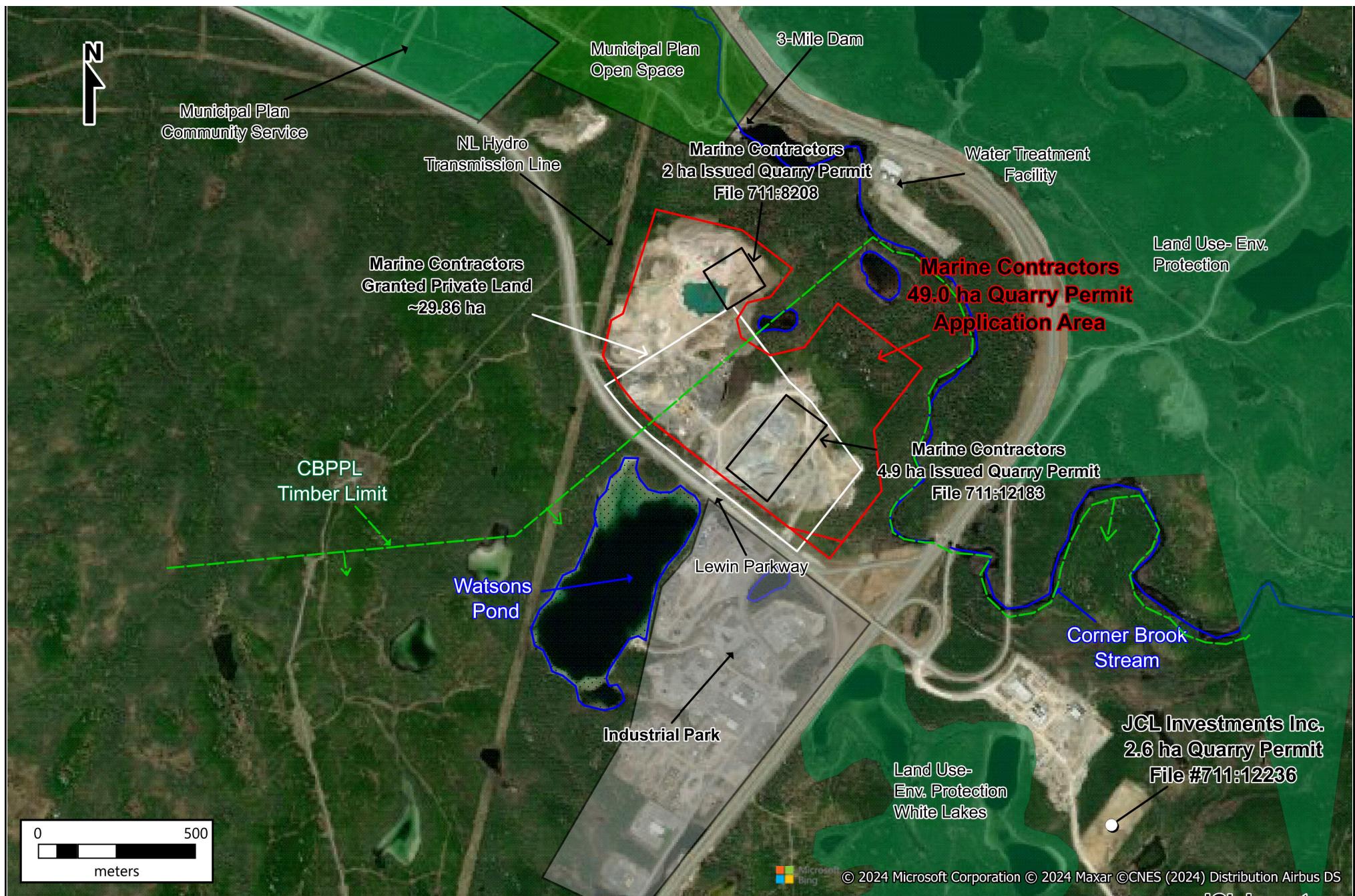


Figure 2: Quarry Area Location Map

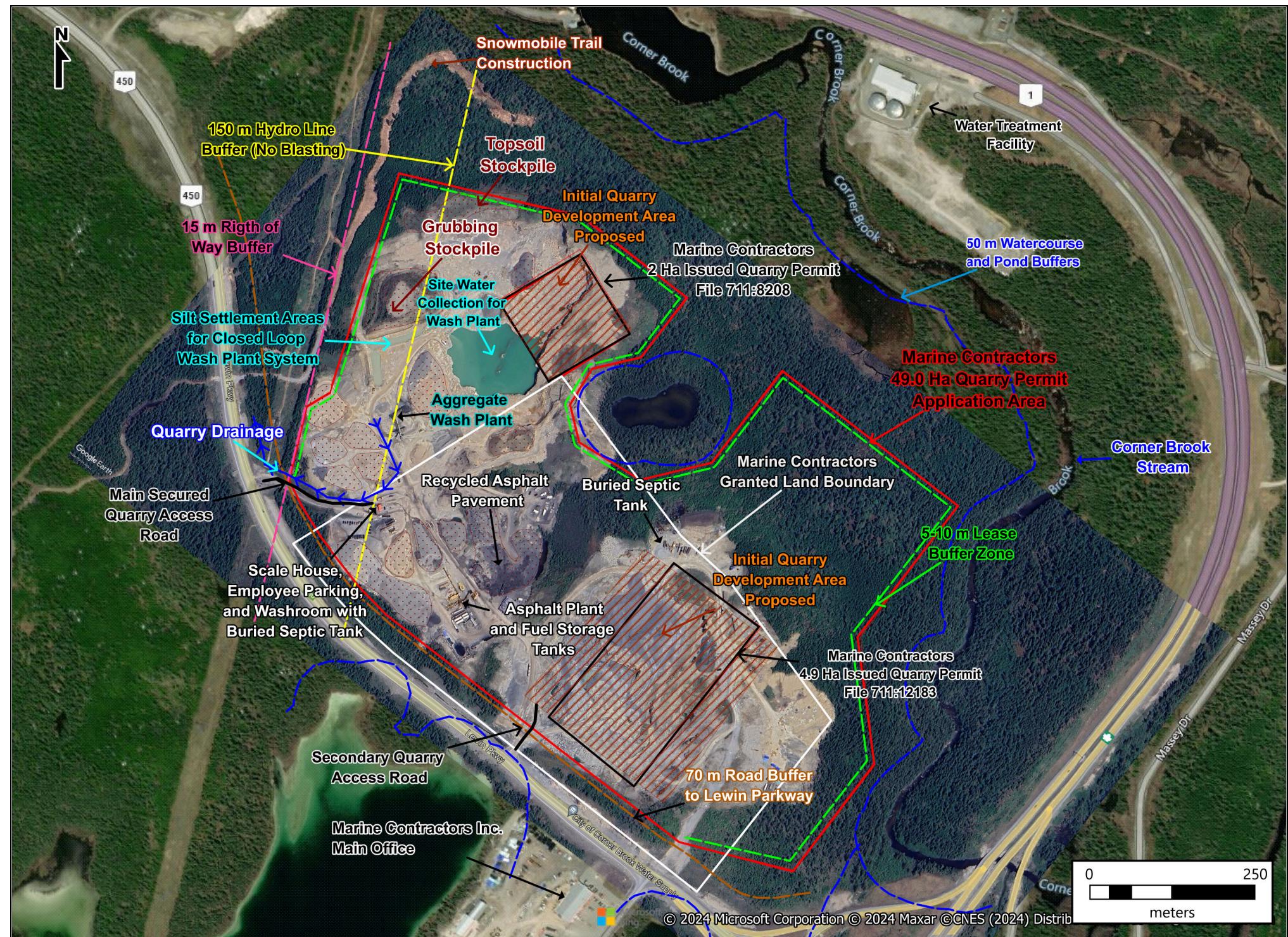


Figure 3: Detailed Quarry Application Area Map



Figure 4: Receptor Location Map

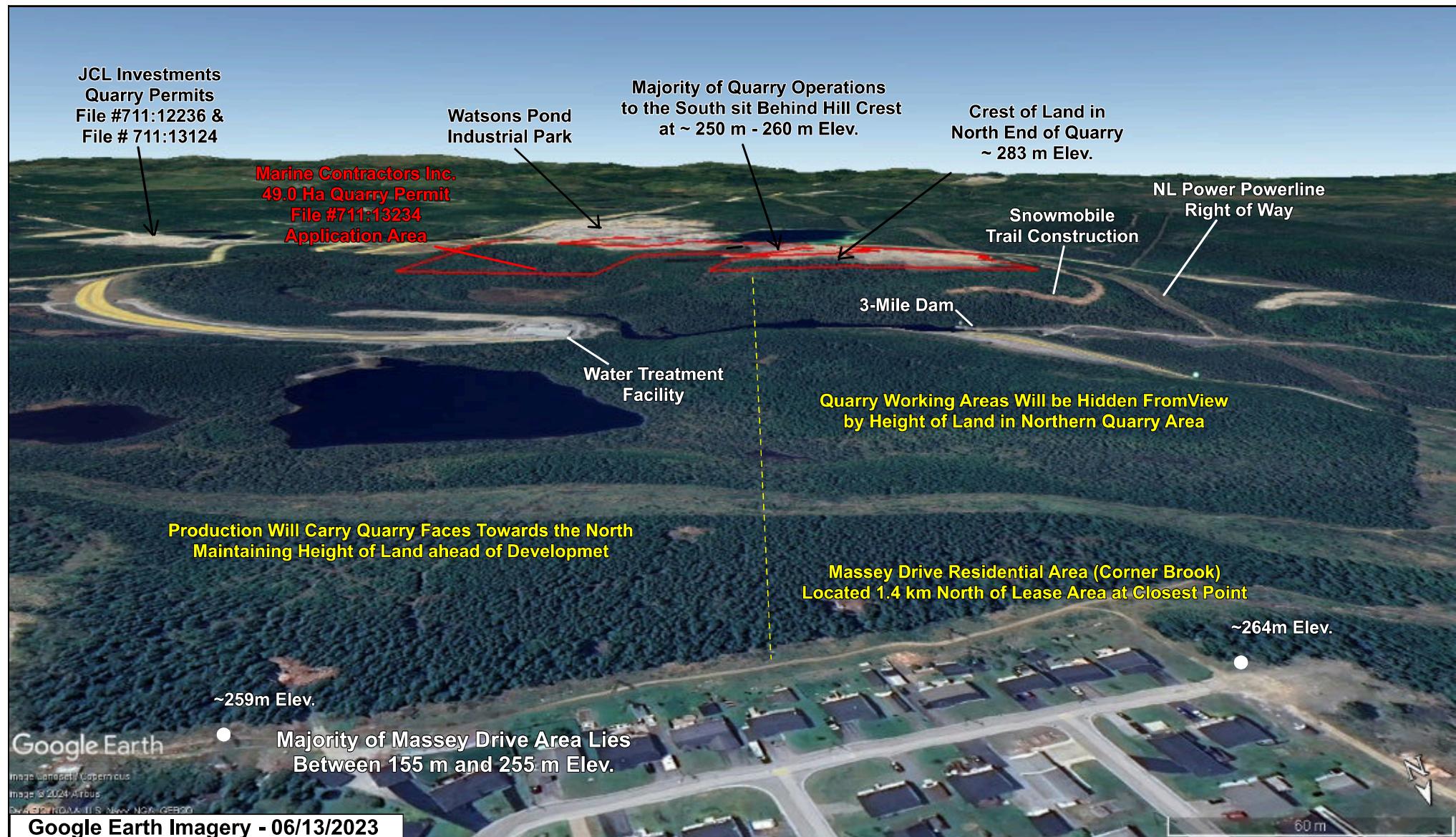


Figure 5: Example of Site Visibility from the North (Looking South) - Aerial View

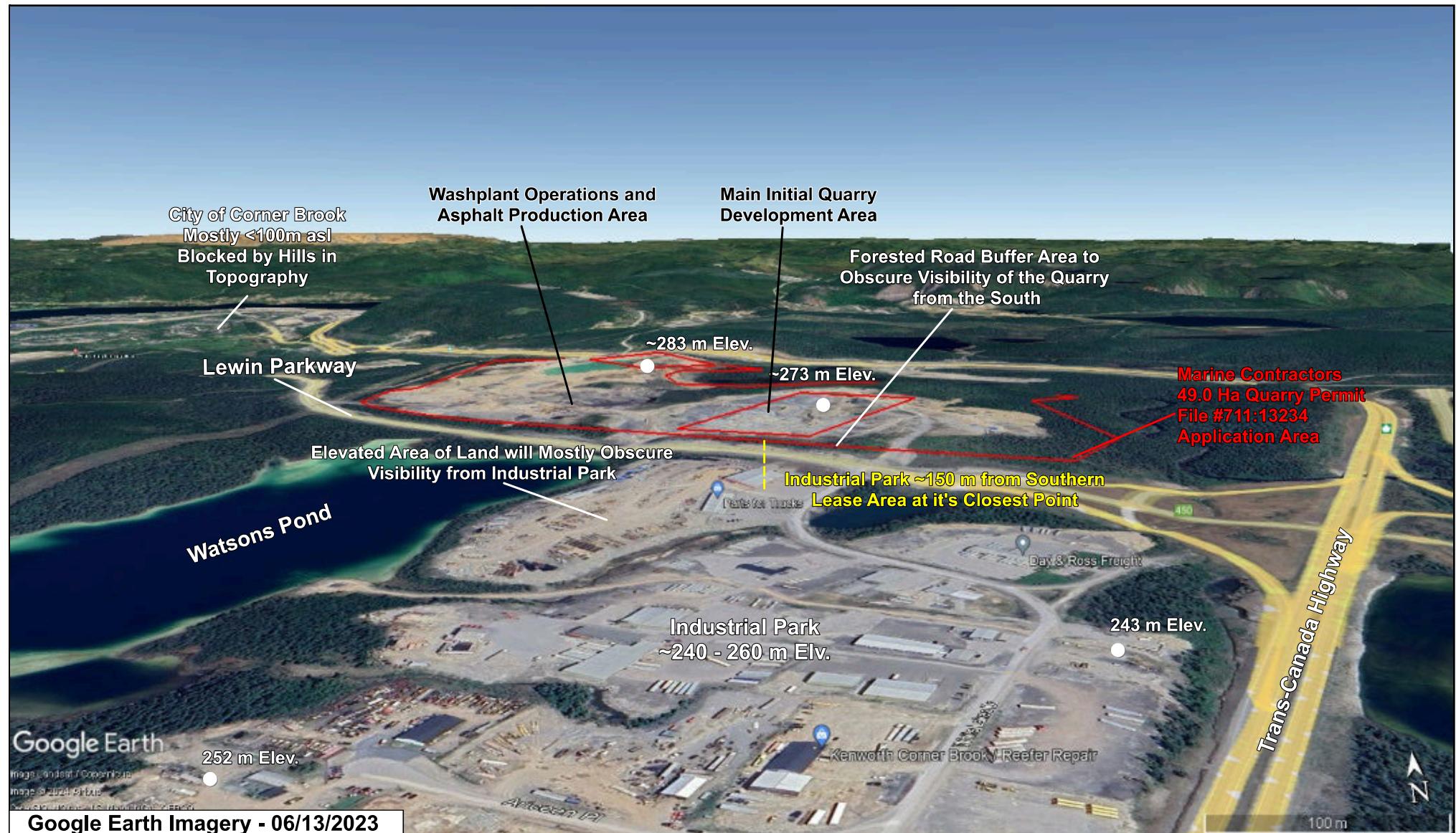


Figure 6: Example of Site Visibility from the South (Looking North) - Aerial View

4.3 Construction, Operation and Maintenance

The quarry permit application area has been developed since 2015 by MCI including two quarry permits and two crown land grants issued to MCI. Marine intends to continue with their crushing, screening, washing and the production of asphalt material for trucking to project sites in the region. To minimize disturbances of the land within the quarry area MCI will continue development in areas already cleared of trees and overburden material. To maximize the available rock resource, current stockpiles of material will be utilized before continuing in the two main initial quarry areas (**Figure 3**). Once the northern quarry resource is exhausted quarrying will continue in the southern development area. The northern portion of the quarry will be maintained as the aggregate wash plant, and stockpile area for the various sorted aggregate materials for use in the asphalt plant and for other construction related purposes. The current quarry layout, with a central processing area is considered most practical from a development and safety perspective in addition to being most cost effective and efficient.

4.3.1 *Road Maintenance*

Marine Contractors will maintain the existing two roads that provide access to the quarry permit application area. These roads grant access to the private land owned by MCI which contains the main asphalt operations area. Since the existing roads are gravel, they will over time, typically require maintenance. Maintenance will be completed using an excavator and/or grader to smooth or fill in ruts, settled areas and potholes as required. This may require the additional placement of material from the quarry for the purpose of road upkeep (for a list of required personnel/equipment see **Section 4.6**).

4.3.2 *Site Clearing*

Of the entire **49ha** permit application area **~13.32 ha** remains undeveloped. The remaining **35.68 ha** area has been previously cleared to allow for the current quarry operations and establishing of the asphalt plant on private land. Preserved grubbing and organics are stockpiled in areas within the proposed lease boundary to be used for future reclamation of the development area (**Figure 3**). Quarry operations will continue in developed areas to maximize available rock resources before creating new disturbance on the site.

If new areas are cleared, the organic material (peat/topsoil) will be stockpiled separately from other grubbing materials as much as possible. Removed surficial soils, subsoils and mineral soils will be windowed within the 5-10 m lease buffer zone along the lease boundary (**Figure 3**). This material will be added to the available reclamation stockpiled material on site and used in future reclamation. Often times due to poor topsoil development all grubbing and underlying diluted mineral soil is mixed which ends up

producing a high-quality reclamation material over time due to decomposition. MCI may choose to utilize or relocate the current or future reclamation stockpiles as needed to allow efficient flow of operations during quarry development.

4.3.3 Water Management

To mitigate any interaction of surface water within quarry with the adjacent watercourse and waterbodies, MCI will implement drainage channels on the quarry floor to direct site water towards the quarry drainage area at the main access road entrance in the northwest (**Figure 3**). Quarry floor elevations will remain above the groundwater table so as not to interfere with natural groundwater conditions. Overland runoff from the quarry will follow the topographic profile of the development area that gently dips towards the west. The vegetated land within the 70 m road buffer with the Lewin Parkway will provide additional filtration as it leaves the lease boundary flowing northward along natural topography and the Lewin Parkway Road ditching. Watsons Pond will be protected by a small rise in land that separates it from this drainage point with water flowing away from the pond. Before discharging any water from the quarry area MCI will filter site water through installed rock check dams, hay bales and silt fencing for sediment control when necessary. Additional drainage channels may be required to direct and control overland surface water inside the quarry during development.

MCI utilizes a closed system wash plant setup for washing various aggregate products on site (**Figure 3**). The wash plant setup consists of a slurry tank, sand washer, multiple wash screens and stackers adjacent to the washed product stockpiles. Water is pumped from the containment area to the wash plant, then collected, and recycled back into the containment pond after passing through two smaller (<75 m long) settling channel areas. Silt material is removed regularly from these settling areas and stockpiled or utilized in progressive reclamation inside the quarry lease boundary. The water depth in the water collection/containment area is 5-8 feet deep and is accumulated from overland flow. The water level in the containment area fluctuates and provides an adequate water supply for the wash plant. A Water Use License (WUL-24-13564) has been issued by the Water Resources Management Division for this man-made water withdrawal site. The water containment area is above the estimated water table depth as it is higher in elevation than a small pond located ~120 m east. Any excess drainage from the wash plant area will follow established drainage channels leading to the main quarry drainage area (**Figure 3**).

4.3.4 Quarry Construction, Development and Operation

MCI has estimated that up to **12,000 m³** of aggregate material will be extracted from the quarry area on a yearly basis based on current demand that can fluctuate. This volume of material is what MCI anticipates will be required to supply their business operations

going forward. The number is somewhat speculative at this time and may be adjusted at later stages of the quarry design process due to changes in market demands or the timeframe of the quarry's release from EA.

The initial future development areas depicted in **Figure 3** will be quarried in phases/blocks each with a maximum 10 m face height to stay compliant with Occupational Health and Safety Regulations. A more substantial and defined dataset will be utilized for the final production plan design during the eventual drafting of the Quarry Lease Plans (QLP) to be reviewed and approved by the Department of Industry, Energy and Technology under the Quarry Materials Act. This design will also incorporate the long-term development of the undisturbed areas within the proposed quarry area.

Production operations will consist of drilling and blasting the defined bedrock resource from the two proposed initial quarry development areas (**Figure 3**). The blasted material will be crushed and screened to various aggregate sizing. The crusher and screener setup are mobile and can be moved between quarry sites as required to allow better flow of operations. Screened material is loaded into the wash plant for further screening, washing of fines and stockpiling using stackers.

The processed aggregate stockpiles are then transported to the asphalt plant as per the required asphalt specifications. Recycled asphalt pavement, when it can be used, is fed into the asphalt plant, in addition to sand processed from the overlying till material, and imported materials thus maximizing the project's cost efficiency and available resources. An automated packaging system adjacent to the asphalt plant produces cold patch asphalt for direct sale as required. The required heavy equipment, such as excavators, front-end loaders, and dump trucks in addition to employee requirements are discussed in **Section 4.6**.

All extraction activities will adhere to the Government of Newfoundland and Labrador's Occupational Health and Safety Regulations under the Occupational Health and Safety Act, including maintaining a maximum quarry face height of 10 m. Further detailed production plans for the entire quarry area will be outlined with the eventual drafting of a set of Quarry Lease Plans (QLP) that will be regularly updated and approved by the regulator.

As stated by MCI in **Section 3.2**, utilizing the available quarry material and processing operations inside the quarry lease area will create a 'closed loop' flow of operations that reduces the need for unprocessed aggregate to be trucked on public roads, thus increasing public safety, greatly reducing the carbon footprint, and maximizing cost efficiency. With the anticipated future approval of the quarry development plan and anticipated release from EA review, typical quarrying activities will resume in the near future. The expansion of the proposed quarry areas will then proceed to meet the

demands for MCI's aggregate products produced on site in the future and within the regulations provided by the Department of Energy, Industry and Transportation.

4.4 Potential Sources of Pollution During Construction and Operation

The construction and operation of the quarry in the development areas will utilize drilling/blasting, crushers, conveyors, excavators, bulldozers, and dump trucks. The equipment and related activities represent a potential source of noise and vibrational disturbance, exhaust emissions, the potential release of petroleum hydrocarbons, the generation of dust, domestic waste, and general refuse.

4.4.1 Air

Air pollution will be controlled by having all equipment on site fitted with the appropriate emission-control equipment. Dust created by operating equipment on gravel roads will be minimized by the watering of roads as required during dry conditions. Dust or silt contained in crushed aggregate material will be removed in the wash plant setup prior to loading into the asphalt plant. All activities within the quarry will be conducted in a manner that respects the province's *Air pollution Control Regulations (2004)*.

4.4.2 Noise and Vibration

The extraction and processing operations on site will create noise and vibration that may affect some nearby receptors but will mostly be on par with that created by industrial business activities in the area and at previous levels. Blasting activities possess the most noise and vibrations and as such will be minimized as much as possible. Blasting activities will be implemented only by persons/companies that poses a valid blasting certificate and will follow regulations outlined in the Occupational Health and Safety Act including the confinement of explosive energy. No explosives are to be stored on site. Heavy equipment will be kept in good operating order to ensure that maximum manufacture decibel levels produced are not exceeded. Workers will have proper hearing protection and the work site will be a controlled/restricted work environment. Normal operating hours will adhere to regulations for Occupational Health and Safety.

4.4.3 Domestic Waste and Sewage

Two existing washroom facilities are located within the quarry application area. Domestic waste and sewage are collected in two underground self-contained septic storage tanks located at the scale house and in an area within the private land grant (**Figure 3**). The water for these washrooms is sourced from a dug well located on crown land. Sewage held within the septic tanks with no distribution field is regularly removed and disposed of by an approved sewage service provider.

4.4.4 Fuel

Diesel fuel is required to operate heavy equipment and maintain operations within the quarry project area and more specifically the asphalt plant. Two 56,755-liter double walled fuel tanks are registered for use and located on site adjacent to the asphalt plant (**Figure 3**). The fuel tanks are owned and maintained by Marine Contractors (serial # D-955008 & D-955007), held under Gasoline and Associated Products (GAP; registration #31617 & #31598) and Used Oil Control (UOC13-0674 & UOC13-060753). The fuel tanks are placed in spill trays that exceed the capacity of the storage tank placed within it.

Fuel storage areas are regularly checked, and emergency spill kits are available on site for containment and cleanup of any hydrocarbon leaks. All equipment will be kept in good operating order with regular inspections to proactively prevent spill incidents and identify leaks. Any leaks or spills more than 70 liters or any amount of fuel interacting with nearby watercourses/ waterbodies, will be immediately cleaned up and reported to the Provincial Environmental Emergency Telephone Line.

4.4.5 Effluent

During quarry development any overland runoff from the quarry area will be controlled to reduce suspended fine-grained particles. The appropriate water management methods will be implemented in line with industry best practices. This includes installing rock check dams, hay bales, and silt fencing in drainage ditches to filter water prior to leaving the site in the designated area (**Figure 3**). Site runoff will then be directed towards vegetated areas and existing ditching outside the quarry area that will act as a buffer to minimize any impact on the surrounding environment.

During larger scale runoff events shallow depressions may be constructed to temporarily hold water within the quarry site while additional check dams, hay bales and silt fencing may be implemented. This will ensure that the excess water is filtered prior to being released from the quarry. All water released into the surrounding environment will meet the regulatory requirements of the *Environmental Control Water and Sewage Regulations* (2003).

4.5 Potential Resource Conflicts During Construction and Operation

Potential resource conflicts during operation of the quarry could include encounters with wildlife, and use of the area by the public and tourists for recreational purposes such as ATV riding, snowmobiling, hiking, berry picking, and caving. Additionally, the lease area is partially within Corner Brook Pulp and Paper timber limits and adjacent to the NL Hydro powerline.

Any encounter with wildlife shall follow regulations stated in the Wildlife Regulations under the *Wildlife Act* (CC. 96-809). The operations will follow the *Migratory Birds Convention Act* (1994, Migratory Bird Wildlife Act) regulations and apply preventative measures to avoid incidental disturbance or destruction of bird nests and eggs.

Recreational uses of the broad area include ATV riding, snowmobiling and other activities including caving along the nearby Corner Brook Stream. Access to these activities will not be impacted by the quarry slightly expanded quarry footprint or the ongoing quarry operations. The access roads to the quarry are gated. Additionally, signs are placed along the western lease boundary where a snowmobile trail is ~50 m from the quarry boundary, with a mostly treed area, to warn the public of the quarry operations and to mitigate risk to recreational users in the area.

The project lies partially within the Corner Brook Pulp and Paper timber limits. The immediate use of land for commercial or domestic cutting is not anticipated to have an impact because of the little remaining merchantable timber in the quarry area. Resource conflicts with NL Hydro will be avoided as a 150 m no blasting buffer will be maintained from the transmission line in the west.

During quarry development and operations, the 50 m buffer to the nearby Corner Brook Stream, Watsons Pond, and small pond adjacent to the northern boundary will be maintained (**Figure 3**). These buffers will allow the quarry to maintain adequate distance from all water bodies and water courses (including wetlands) as per the Water Resources Management Division of the Department of Municipal Affairs and Environment and the Mineral Lands Division from the Department of Industry, Energy and Technology, Government of Newfoundland and Labrador.

The following quarry development design parameters will be applied as a precautionary measure to prevent suspended solids from reaching any watercourses:

- A 5-10 m wide buffer zone within the quarry boundary will be established where no resources will be excavated (**Figure 3**). Berms maybe be constructed from the windrowed grubbing and subsoil material and placed within the buffer area inside the lease boundary.
- Water accumulation within the quarry site from precipitation and overland flow will be controlled using the mitigation measures mentioned in **Section 4.3 & Section 4.4**
- The quarry floor will be kept above the local ground water table and lower than perimeter berms in the lease buffer zone. This will help contain surface water within the quarry site and direct it through appropriate drainage channels and filtration methods (silt screening, hay bales etc.)

4.6 Occupation

The occupations required for the MCI quarry site are listed below and classified as per the National Occupational Classification (NOC, 2021).

Normal operation of the quarry requires 7 employees up to a maximum of 16 employees annually to during peak operational levels. Fluctuations in product demands may lead to a change in the number of required employees and annual production rates. The required labor force to operate the Watsons Pond quarry are currently employed by MCI or available as needed on a seasonal basis, and no new employees will be required.

Operation

- 1 Scale House Attendant (75110)
- 1 Quarry Manager (82020) / HSE Advisor (22232)
- 1 Quarry Supervisor/ Foreman (82020)
- 2-4 Heavy Equipment Operator – Loader/Excavator (73400)
- 1-5 Heavy Equipment Operator – Crusher/Screeener (73400)
- 1-4 Heavy Equipment Operator – Tandem or Semi Dump Trailers (73400)

4.7 Reclamation and Closure

Current quarry operations utilize existing equipment on site and are located mostly on private land issued to Marine Contractors. Closure of the quarry site will involve removal/disposal of equipment and rehabilitating the land back to its natural state prior to quarry development on Crown Land. Developed areas within private land will be rehabilitated to a standard during that timeframe which suits MCI's ownership and future use of the land.

During rehabilitation efforts preserved reclamation material will be utilized to create 30-degree slopes of all exposed quarry faces and create a uniform organic topping layer over all disturbed areas prior to hydroseeding to promote natural revegetation. Available stockpiles of previously removed grubbing, surficial soils and subsoil material will be utilized. Additional reclamation material may be imported to meet the volume requirements if required. Optimal restoration of the disturbed areas on rehabilitated quarry ground can be successfully done through direct seeding and tree planting by knowledgeable groups such as Forests Without Borders or Tree Canada if required.

MCI will actively undertake progressive rehabilitation of development areas as they are exhausted of all aggregate resources and not required for ongoing or future quarry operations. The northern quarry permit area once depleted of aggregate resource and will become utilized for ongoing operations and processed aggregate stockpiles.

The project will be rehabilitated under a reclamation and closure plan to be approved under a quarry lease issued by the Department of Industry, Energy and Technology with

reclamation security bonding in place. The reclamation volumes required, timeframes, timeline of hydroseeding and determined bonding costs for rehabilitation within the quarry will be detailed within the quarry lease plan document.

5.0 SCHEDULE

The proposed schedule for this project is as follows:

| | |
|---|-------------|
| Submission of Registration Document | May 2024 |
| Review of Submission Document by Government | July 2024 |
| Commencement of Construction and Operations | August 2024 |

6.0 APPROVAL OF THE UNDERTAKING

Table 1 on the following page contains a list of referral agencies, responses received to date, and possible permits required for the project, some of which are already in progress.

Table 1: Referral Agencies, Responses and Possible Permits Required

| Department/Regulatory Agency | Status | Possible Required Approvals/Permits or Comments |
|---|-------------------------------|---|
| Provincial Archaeology Office | Approved | |
| Municipal Affairs and Environment - Water Resources Management Division | Conditional Approval | |
| NAV Canada | Conditional Approval | Land Use Proposal Approval – Blasting |
| Environment and Climate Change - Natural Areas | Approved | |
| Environment and Climate Change - Environmental Assessment Division | Project Registration Required | Environmental Assessment Registration |
| Industry, Energy and Technology – Mines Branch | Approved | |
| Industry, Energy and Technology - Mineral Lands Division | Conditional Approval | Quarry Lease Plans to be Drafted After EA Release |
| Municipal and Provincial Affairs | Conditional Approval | City of Corner Brook Discretionary Use |
| Industry, Energy and Technology – Energy Development | Approved | |
| Digital Government & Service NL – Environmental Protection | Conditional Approval | |
| Transportation and Infrastructure | Approved | |
| Tourism, Culture, Arts and Recreation - Tourism | Approved | |
| Tourism, Culture, Arts and Recreation – Parks NL | Approved | |
| City of Corner Brook | Ongoing Review | Development Permit Required |
| Corner Brook Pulp and Paper Limited | Ongoing Review | Development within Timber Area |
| NL Hydro | Conditional Approval | No Blasting within 150m of Powerline Right of Way |
| Nalcor | Approved | |
| NL Power | Approved | |
| Fisheries, Forestry and Agriculture - Fisheries | Approved | |
| Fisheries, Forestry and Agriculture – Agriculture | Approved | |
| Fisheries, Forestry and Agriculture – Aquaculture | Approved | |
| Fisheries, Forestry and Agriculture - Forestry | Conditional Approval | Operating Permit & Commercial Cutting Permit |
| Fisheries, Forestry and Agriculture - Crown Lands | Approved | Granted Land in Application Area |
| Fisheries, Forestry and Agriculture - Land Management | Approved | |
| Fisheries, Forestry and Agriculture - Wildlife | Conditional Approval | |

7.0 FUNDING

Funding for the construction and operation of the project will be provided entirely by the proponent.

8.0 LIMITATIONS

This environmental registration document was prepared by NCD Consulting Ltd. in consultation with Marine Contractors Inc. for their use under the terms defined in a written contract between the two parties. The information included in this document was provided by the client and relates to the scope of this project exclusively. NCD Consulting Ltd. has collaborated with the client and utilized NCD's combined extensive knowledge in quarry development and potential environment related concerns to, as accurately as possible and with the information available at the time of drafting this document, layout the development of the site in a safe and environmentally sustainable manner.



Name: Mr. Eugene Savard, P.Tech, GSC
Position: Project Manager
Marine Contractors Inc.

May 7, 2024

Date